List of Publications of Prof. Dr. Martin Wolf

Papers peer reviewed (totally 4469 citations, h-index 33, accumulated impact factor points of 530.9 on 30th of September 2018)

1. Schwarz CE, Preusche A, Wolf M, Poets CF, Franz AR. Prospective observational study on assessing the hemodynamic relevance of patent ductus arteriosus with frequency domain near-infrared spectroscopy.BMC Pediatr. 2018 Feb 16;18(1):66. doi: 10.1186/s12887-018-1054-6. (IF=3.9)
2. Ulrich L, Ahnen L, Akarçay HG, Sanchez S, Jaeger M, Held G, Wolf M, Frenz M. Tissue oximetry by diffusive reflective visible light spectroscopy: Comparison of algorithms and their robustness. Journal of Biophotonics in press (IF=4.3)
3. Isler H, Germanier C, Ahnen L, Jiang J, Lindner S, Di Costanzo Mata A, Karen T, Sanchez Majos S, Wolf M, Kalyanov A. Optical properties of mice's stool in 550 to 1000nm wavelength range. Journal of Biophotonics in press (IF=4.3)
4. Kleiser S, Ostojic D, Nasseri N, Isler H, Bucher HU, Bassler D, Wolf M, Scholkmann F, Karen T. In vivo precision assessment of a near-infrared spectroscopy-based tissue oximeter (OxyPrem v1.3) in neonates considering systemic hemodynamic fluctuations. J Biomed Opt. 2018 Jun;23(6):1-10. doi: 10.1117/1.JBO.23.6.067003. (IF=2.4)
5. Nasseri N, Kleiser S, Wolf U, Wolf M. Tissue oximetry by diffusive reflective visible light spectroscopy: Comparison of algorithms and their robustness. Journal of Biophotonics 2018 11(9): UNSP e201700367 (IF=4.3)
6. Kleiser S, Ostojic D, Andresen B, Nasseri N, Isler H, Scholkmann F, Karen T, Greisen G, Wolf M. Comparison of tissue oximeters on a liquid phantom with adjustable optical properties: an extension. Biomed Opt Express. 2017 Dec 5;9(1):86-101. (IF=3.3)
7. Isler H, Kleiser S, Ostojic D, Scholkmann F, Karen T, Wolf M. Liquid blood phantoms to validate NIRS oximeters: Yeast versus nitrogen for deoxygenation. Adv Exp Med Biol 2018;1072:381-385. doi: 10.1007/978-3-319-91287-5. (IF=1.9)
8. Jiang J, Kalyanov A, Ahnen L, Lindner S, Di Costanzo Mata A, Wolf M, Sánchez Majos S. A new method based on virtual relative fluence detectors and software toolbox for handheld spectral optoacoustic tomography. Adv Exp Med Biol 2018;1072:357-361. doi: 10.1007/978-3-319-91287-5_57. (IF=1.9)
9. Jiang J, Ahnen L, Lindner S, Di Costanzo Mata A, Kalyanov A, Scholkmann F, Wolf M, Sánchez Majos S. Discrimination of complex activation patterns in near infrared optical tomography with artificial neural networks. Adv Exp Med Biol 2018;1072:313-318. doi: 10.1007/978-3-319-91287-5_50. (IF=1.9)
10. Kalyanov A, Germanier C, Ahnen L, Jiang J, Lindner S, Di Costanzo Mata A, Sánchez Majos S, Rudin M, Wolf M. Multispectral near-infrared optical tomography for cancer hypoxia study in mice. Adv Exp Med Biol 2018;1072:165-169. doi: 10.1007/978-3-319-91287-5_26. (IF=1.9)
11. Ostojic D, Kleiser S, Nasseri N, Isler H, Andresen B, Wabnitz H, Karen T, Scholkmann F, Wolf M. In vitro comparisons of near-infrared spectroscopy oximeters: impact of slow changes in scattering of liquid phantoms. Adv Exp Med Biol 2018;1072:375-379. doi: 10.1007/978-3-319-91287-5_60. (IF=1.9)
12. Scholkmann F, Velasco Herrera G, Karen T, Isler H, Ostojic D, Velasco Herrera VM, Wolf U, Wolf M. Synchronized oscillations of arterial oxygen saturation, cerebral tissue oxygenation and heart rate in preterm neonates: Investigation of long-term measurements with multiple Einstein's cross wavelet analysis. Adv Exp Med Biol 2018;1072:157-161. doi: 10.1007/978-3-319-91287-5_25. (IF=1.9)

13. Wyser D, Lambercy O, Scholkmann F, Wolf M, Gassert R. Wearable and modular functional near-infrared spectroscopy instrument with multidistance measurements at four wavelengths. Neurophotonics. 2017 Oct;4(4):041413. doi: 10.1117/1.NPh.4.4.041413. (IF=4.2)
14. Scholkmann F, Hafner T, Metz AJ, Wolf M, Wolf U. Effect of short-term colored-light exposure on cerebral hemodynamics and oxygenation, and systemic physiological activity. Neurophotonics. 2017 Oct;4(4):045005. doi: 10.1117/1.NPh.4.4.045005. (IF=4.2)
15. Quandt BM, Hufenus R, Weisse B, Braun F, Wolf M, Scheel-Sailer A, Bona GL, Rossi RM, Boesel LF. Optimization of novel melt-extruded polymer optical fibers designed for pressure sensor applications. Eur Polym J 2017; 88: 44-55. (IF=3.5)
16. Knols RH, Swanenburg J, De Bon D, Gennaro F, Wolf M, Kruger B, Bettex D, de Bruin ED. Investigating the Usability and Acute Effects of a Bedside Video Console to Prefrontal Cortical Activity Alterations: A Preclinical Study in Healthy Elderly. Frontiers in Systems Neuroscience 11:85. 2017
17. Lindner S, Pellegrini S, Henrion Y, Rae B, Wolf M, Charbon E. A High-PDE, Backside-Illuminated SPAD in 65/40-nm 3D IC CMOS Pixel With Cascoded Passive Quenching and Active Recharge. Ieee Electron Device Letters 2017; 38(11): 1547-1550. (IF=3.0)
18. Nasseri N, Kleiser S, Andresen B, Greisen G, Wolf M. Evaluation of near-infrared spectroscopic oximeters on a liquid phantom with adjustable oxygenation. European Journal of Pediatrics 2017; 175(11): 1588-1588. (IF=2.2)
19. Quandt BM, Braun F, Ferrario D, Rossi RM, Scheel-Sailer A, Wolf M, Bona GL, Hufenus R, Scherer LJ, Boesel LF. Body-monitoring with photonic textiles: a reflective heartbeat sensor based on polymer optical fibres. Journal of the Royal Society Interface 2017; 14(128). (IF=3.6)
20. Caldwell M, Scholkmann F, Wolf U, Wolf M, Elwell C, Tachtsidis I. Modelling confounding effects from extracerebral contamination and systemic factors on functional near-infrared spectroscopy. NeuroImage 2016;143: 91-105. (IF=6.4)
21. Nasseri N, Kleiser S, Ostojic D, Karen T, Wolf M. Quantifying the effect of adipose tissue in muscle oximetry by near infrared spectroscopy. Biomed. Opt. Express 2016;7(11): 4605-4619. (IF=3.3)
22. Kleiser S, Nasseri N, Andresen B, Greisen G, Wolf M. Comparison of tissue oximeters on a liquid phantom with adjustable optical properties. Biomed. Opt. Express 2016;7(8):2973-2992. (IF=3.3)
23. Kleiser S, Hyttel-Sorensen S, Greisen G, Wolf M. Comparison of Near-infrared oximeters in a liquid optical phantom with varying Intralipid and blood content. Adv Exp Med Biol. 2016;876:413-8. doi: 10.1007/978-1-4939-3023-4_52. (IF=2.0)
24. Eggenberger P, Wolf M, Schumann M, De Bruin ED. Exergame and balance training modulate prefrontal brain activity during walking and enhance executive function in older adults. Front. Aging Neurosci., 12 April 2016 | http://dx.doi.org/10.3389/fnagi.2016.00066 (IF=4.3)
25. Kleiser S, Pastewski M, Hapuarachchi T, Hagmann C, Fauchère JC, Tachtsidis I, Wolf M, Scholkmann F. Characterizing Fluctuations of Arterial and Cerebral Tissue Oxygenation in Preterm Neonates by Means of Data Analysis Techniques for Nonlinear Dynamical Systems. Adv Exp Med Biol. 2016;876:511-9. doi: 10.1007/978-1-4939-3023-4_64. (IF=2.0)
26. Nasseri N, Kleiser S, Reidt S, Wolf M. Local Measurement of Flap Oxygen Saturation: An Application of Visible Light Spectroscopy. Adv Exp Med Biol. 2016;876:391-7. doi: 10.1007/978-1-4939-3023-4_49 (IF=2.0).
27. Ahnen L, Wolf M, Hagmann C, Sanchez S. Near-Infrared Image Reconstruction of Newborns' Brains: Robustness to Perturbations of the Source/Detector Location. Adv Exp Med Biol. 2016;876:377-82. doi: 10.1007/978-1-4939-3023-4_47. (IF=2.0)

28. Stammwitz A, von Siebenthal K, Bucher HU, Wolf M. Can the Assessment of Spontaneous Oscillations by Near Infrared Spectrophotometry Predict Neurological Outcome of Preterm Infants? Adv Exp Med Biol. 2016;876:521-31. doi: 10.1007/978-1-4939-3023-4_65 (IF=2.0).
29. Hapuarachchi T, Scholkmann F, Caldwell M, Hagmann C, Kleiser S, Metz AJ, Pastewski M, Wolf M, Tachtsidis I. Simulation of Preterm Neonatal Brain Metabolism During Functional Neuronal Activation Using a Computational Model. Adv Exp Med Biol. 2016;876:111-20. doi: 10.1007/978-1-4939-3023-4_14. (IF=2.0).
30. Hyttel-Sorensen S, Pellicer A, Alderliesten T, Austin T, van Bel F, Benders M, Claris O, Dempsey E, Franz AR, Fumagalli M, Gluud C, Grevstad B, Hagmann C, Lemmers P, van Oeveren W, Pichler G, Plomgaard AM, Riera J, Sanchez L, Winkel P, Wolf M, Greisen G. Cerebral near infrared spectroscopy oximetry in extremely preterm infants: phase II randomised clinical trial. BMJ. 2015;350:g7635. doi: 10.1136/bmj.g7635. (IF=16.4: highly cited paper received enough citations to place it in the top 1% of its academic field based on a highly cited threshold for the field and publication year according to the Web of Science)
31. Riera J, Hyttel-Sorensen S, Bravo MC, Cabañas F, López-Ortego P, Sanchez L, Ybarra M, Dempsey E, Greisen G, Austin T, Claris O, Fumagalli M, Gluud C, Lemmers P, Pichler G, Plomgaard AM, van Bel F, Wolf M, Pellicer A. The SafeBoosC phase II clinical trial: an analysis of the interventions related with the oximeter readings. Arch Dis Child Fetal Neonatal Ed. 2015 Dec 8. pii: fetalneonatal-2015-308829. doi: 10.1136/archdischild-2015-308829. (IF=1.8).
32. Metz AJ, Wolf M, Achermann P, Scholkmann F. A New Approach for Automatic Removal of Movement Artifacts in Near-Infrared Spectroscopy Time Series by Means of Acceleration Data. Algorithms 2015, 8(4), 1052-1075; doi:10.3390/a8041052 (new journal, no IF)
33. Mata Pavia J, Scandini M, Lindner S, Wolf M (shared last author), Charbon E. A 1×400 backside-illuminated SPAD sensor with 49.7 ps resolution, 30 pJ/Sample TDCs fabricated in 3D CMOS technology for near-infrared optical tomography. IEEE Journal of Solid State Circuits 2015; 50(10):2406-2418. (IF=3.0)
34. Pugin F, Metz AJ, Wolf M, Achermann P, Jenni OG, Huber R. Local increase of sleep slow wave activity after three weeks of working memory training in children and adolescents. Sleep. 2015 Apr 1;38(4):607-14. (IF=5.1)
35. Vögeli S, Wolf M, Wechsler B, Gygax L. Housing conditions influence cortical and behavioural reactions of sheep in response to videos showing social interactions of different valence. Behav Brain Res. 2015 May 1;284:69-76. (IF=3.4)
36. Vögeli S, Wolf M, Wechsler B, Gygax L. Frontal brain activity and behavioral indicators of affective states are weakly affected by thermal stimuli in sheep living in different housing conditions. Front. Vet. Sci., 12 May 2015 | http://dx.doi.org/10.3389/fvets.2015.00009 (no IF yet)
37. Guldimann K, Vögeli S, Wolf M, Wechsler B, Gygax L. Frontal brain deactivation during a non-verbal cognitive judgement bias test in sheep. Brain Cogn. 2015 Feb;93:35-41. (IF=2.7)
38. Demel A, Feilke K, Schöning M, Wolf M, Poets CF, Franz AR. Healthy term and moderately preterm infants have similar cerebral oxygen saturation and cerebral blood flow volumes during early post-natal transition. Acta Paediatr. 2015;104(8):e330-6. doi: 10.1111/apa.13023. (IF=1.8)
39. Pauly A, Schöller K, Baumann L, Rossi R, Dustmann K, Ziener U, deCourten D, Wolf M, Boesel L, Scherer L. ATRP-based synthesis and characterization of light-responsive coatings for transdermal delivery systems. Science and Technology of Advanced Materials (STAM). 2015;16(3): 34604-34604. (IF=2.6)
40. Ulrich S, Nussbaumer-Ochsner Y, Vasic I, Hasler E, Latshang TD, Kohler M, Muehlemann T, Wolf M, Bloch KE. Cerebral oxygenation in patients with obstructive sleep apnea. Effects of hypoxia at altitude and of acetazolamide. Chest 2014; 146(2): 299-308. (IF=5.9)

41. Karen T, Wolf M, Nef R, Haensse D, Bucher HU, Schulz G, Fauchère JC. Changes in cerebral oxygenation during early postnatal adaptation in newborns delivered by vacuum extraction measured by near-infrared spectroscopy. BMC Pediatr. 2014 Jan 27;14:21. doi: 10.1186/1471-2431-14-21. (IF=1.9)
42. Demel A, Wolf M, Poets CF, Franz AR. Effect of different assumptions for brain water content on absolute measures of cerebral oxygenation determined by frequency-domain near-infrared spectroscopy in preterm infants: an observational study. BMC Pediatr. 2014 Aug 19;14(1):206. doi: 10.1186/1471-2431-14-206. (IF=1.9)
43. Krehel M, Wolf M, Boesel LF, Rossi RM, Bona GL, Scherer LJ. Development of a luminous textile for reflective pulse oximetry measurements. Biomed Opt Express. 2014 Jul 9;5(8):2537-47. doi: 10.1364/BOE.5.002537. (IF=3.5)
44. Schöller K, Küpfer S, Baumann L, Hoyer PM, de Courten D, Marti D, Vetushka A, Rossi RM, Wolf M, Bruns N, Scherer LJ. From membrane to skin: Aqueous permeation control through light-responsive amphiphilic polymer conetworks. Advanced Functional Materials 2014; 24(33): 5194-5201. (IF=9.8)
45. Mata Pavia J, Wolf M, Charbon E. Single-photon avalanche diode imagers applied to near-infrared imaging. IEEE Journal of Selected Topics in Quantum Electronics 2014; 20(6): 3800908 (IF=4.1)
46. Vögeli S, Lutz J, Wolf M, Wechsler B, Gygax L. Valence of physical stimuli, not housing conditions, affects behaviour and frontal cortical brain activity in sheep. Behavioural Brain Research 2014; 267: 144–155. (IF=3.3)
47. Holper L, Gross A, Scholkmann F, Humphreys BK, Meier ML, Wolf U, Wolf M, Hotz-Boendermaker S. Physiological effects of mechanical pain stimulation at the lower back measured by functional near-infrared spectroscopy and capnography. J Integr Neurosci. 2014;13(1):121-42. (IF=1.1)
48. Holper L, Scholkmann F, Wolf M. The relationship between sympathetic nervous activity and cerebral hemodynamics and oxygenation: A study using skin conductance measurement and functional near-infrared spectroscopy. Behav Brain Res. 2014 Aug 15;270:95-107. doi: 10.1016/j.bbr.2014.04.056. (IF=3.4)
49. Demel A, Feilke K, Wolf M, Poets CF, Franz AR. Correlation between skin, bone, and cerebrospinal fluid layer thickness and optical coefficients measured by multidistance frequency-domain nearinfrared spectroscopy in term and preterm infants. J. Biomed. Opt. 2014; 19(1), 017004. (IF=2.9)
50. Mata Pavia J, Wolf M, Charbon E. Measurement and modeling of microlenses fabricated on single-photon avalanche diode arrays for fill factor recovery. Opt Express 2014; 22(4): 199370. (IF=3.5)
51. Holper L, Wolf M, Tobler PN. Comparison of functional near-infrared spectroscopy and electrodermal activity in assessing objective versus subjective risk during risky financial decisions. NeuroImage 2014; 84: 833-42. (IF=6.3)
52. Scholkmann F, Klein SD, Gerber U, Wolf M, Wolf U. Cerebral hemodynamic and oxygenation changes induced by inner and heard speech: a study combining functional near-infrared spectroscopy and capnography. J. Biomed. Opt. 2014; 19(1), 017002. (IF=2.9)
53. Nasseri N, Zysset C, Büthe L, Kleiser S, Tröster G, Wolf M. Evaluation of a textile-based near infrared spectroscopy system in calf muscle oxygenation measurements. Adv Exp Med Biol 2014; 812:355-60. (IF=1.8)
54. Metz AJ, Pugin F, Huber R, Achermann P, Wolf M. Changes of Cerebral Tissue Oxygen Saturation at Specific Sleep Transitions in Adolescents. Adv Exp Med Biol 2014; 812:279-85. (IF=1.8)
55. Holper L, ten Brincke RHW, Wolf M, Murphy RO. fNIRS derived hemodynamic signals and electrodermal responses in a sequential risk-taking task. Brain Res. 2014;1557:141-54. (IF=2.9)

56. Schöller K, Baumann L, Hegemann D, De Courten D, Wolf M, Ross RM, Scherer LJ. Preparation of Light-responsive membranes by a combined surface grafting and postmodification process. J Vis Exp. 2014 Mar 21;(85). (IF=1.2)
57. Scholkmann F, Metz A, Wolf M. Measuring tissue hemodynamics and oxygenation by continuous-wave functional near-infrared spectroscopy – How robust are the different calculation methods against movement artifacts? Physiol Meas. 2014;35: 717–734. (IF=1.5)
58. Pugin F, Metz AJ, Stauffer M, Wolf M, Jenni OG, Huber R. Working memory training shows immediate and long-term effects on cognitive performance in children. Version 2. F1000Res. 2014 Apr 2 [revised 2014 Nov 27];3:82. doi: 10.12688/f1000research.3665.2. eCollection 2014. (No IF)
59. Metz AJ, Pugin F, Huber R, Achermann P, Wolf M. Brain tissue oxygen saturation increases during the night in adolescents. Adv Exp Med Biol. 2013;789:113-9. doi: 10.1007/978-1-4614-7411-1_16. (IF=1.8)
60. Scholkmann F, Holper L, Wolf U, Wolf M. A new methodical approach in neuroscience: assessing inter-personal brain coupling using functional near-infrared imaging (fNIRI) hyperscanning. Frontiers in Human Neuroscience 2013; 7 (813). (IF=2.9)
61. Scholkmann F, Wolf M. A general equation for the differential pathlength factor of the frontal human head depending on wavelength and age. J. Biomed. Opt. 2013; 18(10): 105004. (IF=2.9)
62. Baumann L, de Courten D, Wolf M, Rossi R, Scherer, Lukas. Light-responsive caffeine transfer through porous polycarbonate. ACS Appl. Mater. Interfaces 2013; 5: 5894–5897. (IF=5.0)
63. Zimmermann R, Braun F, Achtnich T, Lambercy O, Gassert R, Wolf M. Silicon photomultipliers for improved detection of low light levels in miniature near-infrared spectroscopy instruments. Biomed Opt Express 2013; 659-666. (IF=3.2)
64. Hyttel-Sorensen S, Austin T, van Bel F, Benders M, Claris O, Dempsey E, Fumagalli M, Greisen G, Grevstad G, Hagmann C, Hellstrom-Westas L, Lemmers P, Lindschou Hansen J, Naulaers G, van Oeveren W, Pellicer A, Pichler G, Roll C, Skoog M, Winkel P, Wolf M, Gluud C. SafeBoosC: A phase II randomised clinical trial on cerebral near infrared spectroscopy plus a treatment guideline versus treatment as usual for extremely preterm infants during the first three days of life: study protocol for a randomized controlled trial. Trials 2013; 14:120 (IF=2.5)
65. Hyttel-Sorensen S, Kleiser S, Wolf M, Greisen G. Calibration of a prototype NIRS oximeter against two commercial devices on a blood-lipid phantom. Biomed Opt Express. 2013 Aug 14;4(9):1662-72. (IF=3.2)
66. Pellicer A, Greisen G, Benders M, Claris O, Dempsey E, Fumagalli M, Gluud C, Hagmann C, Hellström-Westas L, Hyttel-Soerensen S, Lemmers P, Naulaers G, Pichler G, Roll C, C van Bel F, van Oeveren W, Skoog M, Wolf M, Austin T, and the SafeBoosC Trial Group. The SafeBoosC phase II randomised clinical trial: a treatment guideline for targeted near-infrared derived cerebral tissue oxygenation versus standard treatment in extremely preterm infants. Neonatology 2013;104(3):171-178. (IF=2.6)
67. Holper L, Jäger N, Scholkmann F, Wolf M. Error detection and error memory in spatial navigation as reflected by electrodermal activity. Cogn Process (2013) 14:377-389. (IF= 1.6)
68. Zysset C, Nasseri N, Büthe L, Münzenrieder N, Kinkeldei T, Petti L, Kleiser S, Salvatore GA, Wolf M, Tröster G. Textile integrated sensors and actuators for near-infrared spectroscopy. Opt Express. 2013;21(3):3213-24. (IF=3.6) also selected for publication in the Virtual Journal for Biomedical Optics
69. Zimmermann R, Marchal-Crespo L, Edelmann J, Lambercy O, Fluet MC, Riener R, Wolf M, Gassert R. Detection of motor execution using a hybrid fNIRS-biosignal BCI: a feasibility study. J Neuroeng Rehabil 2013; 10:4. (IF=3.3)

70. Baumann L, Hegemann D, de Courten D, Wolf M, Rossi RM, Meier WP, Scherer LJ. Tuning the resistance of polycarbonate membranes by plasma-induced graft surface modification. Applied Surface Science 2013; 268: 450– 457. (IF=2.1)
71. Gygax L, Reefmann N, Wolf M, Langbein J. Prefrontal cortex activity, sympatho-vagal reaction and behaviour distinguish between situations of feed reward and frustration in dwarf goats. Behav Brain Res. 2013 Feb 15;239:104-14. (IF=3.4)
72. Marchal-Crespo L, Zimmermann R, Lambercy O, Edelmann J, Fluet MC, Wolf M, Gassert R, Riener R. Motor execution detection based on autonomic nervous system responses. Physiol Meas. 2013;34(1):35-51. (IF=1.7)
73. Hyttel-Sørensen S, Austin T, van Bel F, Benders M, Claris O, Dempsey EM, Fumagalli M, Gluud C, Hagmann C, Hellström-Westas L, Lemmers P, Naulaers G, Oeveren Wv, Pellicer A, Pichler G, Roll C, Støy LS, Wolf M, Greisen G. Clinical use of cerebral oximetry in extremely preterm infants is feasible. Dan Med J. 2013; 60(1): A4533 (IF=0.75)
74. Holper L, Goldin AP, Shalóm DE, Battro AM, Wolf M, Sigman M. The teaching and the learning brain: a cortical hemodynamic marker of teacher-student interactions in the Socratic dialog. International Journal of Educational Research 2013; 59:1-10. (IF=0.9) (**one of the top 5 most highly cited papers**)
75. Scholkmann F, Wolf M, Wolf U. The Effect of Inner Speech on Arterial CO_2 and Cerebral Hemodynamics and Oxygenation: A Functional NIRS Study. Adv Exp Med Biol. 2013;789:81-7. (IF=1.8)
76. Metz AJ, Biallas M, Jenny C, Muehlemann T, Wolf M. The effect of basic assumptions on the tissue oxygen saturation value of near infrared spectroscopy. Adv Exp Med Biol. 2013;765:169-75. (IF=1.8)
77. Muehlemann T, Holper L, Wenzel J, Wittkowski M, Wolf M. The effect of sudden depressurization on pilots at cruising altitude. Adv Exp Med Biol. 2013;765:177-83. (IF=1.8)
78. Scholkmann F, Schraa O, van Wijk R, Wolf M. The effect of venous and arterial occlusion of the arm on changes in tissue hemodynamics, oxygenation, and ultra-weak photon emission. Adv Exp Med Biol. 2013;765:257-64. (IF=1.8)
79. Holper L, Scholkmann F, Wolf M. Between-brain connectivity during imitation measured by fNIRS. Neuroimage. 2012; 63(1):212-22. (IF=6.6)
80. Pizza F, Biallas M, Kallweit U, Wolf M (shared last co-authorship), Bassetti CL. Cerebral hemodynamic changes in stroke during sleep disordered breathing. Stroke. 2012 Jul;43(7):1951-3. (IF=6.4)
81. Holper L, Kobashi N, Kiper D, Scholkmann F, Wolf M, Eng K. Trial-to-trial variability differentiates motor imagery during observation between low versus high responders: a functional near-infrared spectroscopy study. Behav Brain Res. 2012 Apr 1;229(1):29-40. (IF=3.4)
82. Scholkmann F, Gerber U, Wolf M, Wolf U. End-tidal CO_2: An important parameter for a correct interpretation in functional brain studies using speech tasks. Neuroimage. 2012; 66C:71-79. (IF=6.6)
83. Holper L, Scholkmann F, Shalom DE, Wolf M. Extension of mental preparation positively affects motor imagery as compared to motor execution: a functional near-infrared spectroscopy study. Cortex 2012 ;48(5):593-603. (IF=4.1)
84. Biallas M, Trajkovic I, Hagmann C, Scholkmann F, Jenny C, Holper L, Beck A, Wolf M. Multimodal recording of brain activity in term newborns during photic stimulation by near-infrared spectroscopy and electroencephalography. J. Biomed. Opt. 2012; 17(8): 086011. (IF=2.9)
85. Lehmann H, Pollara L, Spichtig S, Kühn S, Wolf M. Head exposure system for a human provocation study to assess the possible influence of UMTS-like electromagnetic fields on cerebral blood circulation using near infrared imaging. Bioelectromagnetics 2012; 33(2): 124-133 (IF=2.6)

86. Spichtig S, Scholkmann F, Chin L, Lehmann H, Wolf M. Assessment of intermittent UMTS electromagnetic field effects on blood circulation in the human auditory region using a near-infrared imaging system. Bioelectromagnetics 2012; 33(1): 40-54. (IF=2.6)
87. Biallas M, Trajkovic I, Haensse D, Marcar V, Wolf M. Reproducibility and sensitivity of detecting brain activity by simultaneous electroencephalography and near-infrared spectroscopy. Exp Brain Res. 2012;222(3):255-264. (IF=2.4)
88. Spichtig S, Scholkmann F, Chin L, Lehmann H, Wolf M. Assessment of Potential Short-Term Effects of Intermittent UMTS Electromagnetic Fields on Blood Circulation in an Exploratory Study, Using Near-Infrared Imaging. Adv. Exp. Med. Biol. 2012;737:83-8. (IF=1.8)
89. Biallas M, Trajkovic I, Scholkmann F, Hagmann C, Wolf M. How to conduct studies with neonates combining near-infrared imaging and electroencephalography? Adv. Exp. Med. Biol. 2012;737:111-7. (IF=1.8)
90. Trajkovic I, Reller C, Wolf M. Modelling and Filtering of Physiological Oscillations in Near-Infrared Spectroscopy by Time-Varying Fourier Series. Adv. Exp. Med. Biol. 2012;737:307-13. (IF=1.8)
91. Zimmermann BB, Roche-Labarbe N, Surova A, Boas DA, Wolf M, Grant PE, Franceschini MA The Confounding effect of systemic physiology on the hemodynamic response in newborns. Adv. Exp. Med. Biol. 2012;737:103-9. (IF=1.8)
92. Caicedo A, Naulaers G, Lemmers P, Van Bel F, Wolf M, Van Huffel S. Detection of Cerebral Autoregulation by Near-Infrared Spectroscopy in Neonates: Performance Analysis of Measurement Methods. J. Biomed. Opt. 2012; 17(11), 117003 (IF=2.9)
93. Caicedo A, Naulaers G, Wolf M, Lemmers P, Van Bel F, Ameye L, Van Huffel S. Assessment of the Myogenic and Metabolic Mechanism Influence in Cerebral Autoregulation Using Near-Infrared Spectroscopy. Adv. Exp. Med. Biol. 2012;737:37-44. (IF=1.8)
94. Dommer L, Jäger N, Scholkmann F, Wolf M, Holper L. Between-brain coherence during joint n-back task performance: A two-person functional near-infrared spectroscopy study. Behav Brain Res. 2012;234(2):212-22. (IF=3.4)
95. Holper L, Kobashi N, Kiper D, Scholkmann F, Wolf M, Eng K. Trial-to-trial variability differentiates motor imagery during observation between low versus high responders: A functional near-infrared spectroscopy study. Behav Brain Res. 2012;229(1):29-40. (IF=0.7)
96. Lanzi S, Borrani F, Wolf M, Gojanovic B, Malatesta D. Effects of prior short multiple sprint exercises with different inter-sprint recoveries on the slow component of oxygen uptake during high-intensity exercise. Appl Physiol Nutr Metab. 2012;37(6):1080-1090. (IF=2.4)
97. Weinzirl J, Wolf M, Nelle M, Heusser P, Wolf U. Colored light and brain and muscle oxygenation. Adv Exp Med Biol. 2012;737:33-6. (IF=1.8)
98. Scholkmann F, Boss J, Wolf M. An efficient algorithm for automatic peak detection in noisy periodic and quasi-periodic signals. Algorithms, 2012;5:588-603. (new journal)
99. Muehlemann TL, Reefmann N, Wechsler B, Wolf M (shared last co-authorship), Gygax L. In vivo functional near-infrared spectroscopy measures mood-modulated cerebral responses to a positive emotional stimulus in sheep. Neuroimage 2011; 54(2):1625-33. (IF=6.8)
100. Arri SJ, Muehlemann T, Biallas M, Bucher HU, Wolf M. The precision of cerebral oxygenation and hemoglobin concentration measurements in neonates measured by near-infrared spectroscopy. J. Biomed. Opt. 2011; 16, 047005. (IF=3.5)
101. Jenny C, Biallas M, Trajkovic, Fauchère JC, Bucher HU, Wolf M. Reproducibility of cerebral tissue oxygen saturation measurements by near infrared spectroscopy in newborn infants J. Biomed. Opt. 2011; 16(9): 097004. (IF=3.5)
102. Trajkovic I, Scholkmann F, Wolf M. Estimating and validating the interbeat intervals of the heart using near-infrared spectroscopy on the human forehead. J. Biomed. Opt. 2011; 16(8): 087002. (IF=3.5)
103. Wolf U, Toronov V, Choi JH, Gupta R, Michalos A, Gratton E, Wolf M. Correlation of functional and resting state connectivity of cerebral oxy-, deoxy-, and total hemoglobin

concentration changes measured by near-infrared spectrophotometry. J. Biomed. Opt. 2011; 16(8): 087013. (IF=3.5)

104. Holper L, Shalóm DE, Wolf M, Sigman M. Understanding inverse oxygenation responses during motor imagery: a functional near-infrared spectroscopy study. Eur J Neurosci. 2011 Jun;33(12):2318-28 (IF=3.4)
105. Hornung R, Spichtig S, Baños A, Stahel M, Zimmermann R, Wolf M. Frequency domain near-infrared spectroscopy of the uterine cervix during regular pregnancies. Lasers in Medical Science Lasers Med Sci. 2011; 26(2):205-12. (IF=2.6)
106. Holper L, Wolf M. Single-trial classification of motor imagery differing in task complexity: a functional near-infrared spectroscopy study. J Neuroeng Rehabil. 2011;8(1):34 (IF=2.1)
107. Wolf M, von Bonin D, Wolf U. Speech therapy changes blood circulation and oxygenation in the brain and muscle: A near-infrared spectrophotometry study. Adv Exp Med Biol. 2011; 701:21-5. (IF=2.0)
108. Spichtig S; Piccirelli M; Vorburger RS, Wolf M. Near-infrared imaging sensor with improved handling and direct localization in simultaneous magnetic resonance imaging measurements. Journal of Innovative Optical Health Sciences 2011, 4(2), 191-198. (IF=0.6)
109. Caicedo A, De Smet D, Vanderhaegen J, Naulaers G, Wolf M, Lemmers P, Van Bel F, Ameye L, Van Huffel S. Impaired cerebral autoregulation using near-infrared spectroscopy and its relation to clinical outcomes in premature infants. Adv Exp Med Biol. 2011;701:233-9. (IF=2.0)
110. Weinzirl J, Wolf M, Heusser P, Nelle M, Wolf U. Effects of changes in colored light on brain and calf muscle blood concentration and oxygenation. ScientificWorldJournal. 2011 Jun 9;11:1216-25. (IF=1.5)
111. Wolf U, Scholkmann F, Rosenberger R, Wolf M, Nelle M. Changes in hemodynamics and tissue oxygenation saturation in the brain and skeletal muscle induced by speech therapy - a near-infrared spectroscopy study. ScientificWorldJournal. 2011 Jun 9;11:1206-15. (IF=1.5)
112. Zimmermann R, Marchal-Crespo L, Lambercy O, Fluet MC, Riener R, Wolf M, Gassert R. Towards a BCI for sensorimotor training: initial results from simultaneous fNIRS and biosignal recordings. Conf Proc IEEE Eng Med Biol Soc. 2011;2011:6339-43. (peer-reviewed conference proceedings IF=2.1)
113. Holper L, Wolf M. Motor imagery in response to fake feedback measured by functional near-infrared spectroscopy. Neuroimage 2010;50(1):190-197. (IF=6.8)
114. Holper L, Muehlemann T, Scholkmann F, Eng K, Kiper D, Wolf M. Testing the potential of a virtual reality neurorehabilitation system during performance of observation, imagery and imitation of motor actions recorded by wireless functional near-infrared spectroscopy (fNIRS). J Neuroeng Rehabil. 2010 Dec 2;7(1):57. (IF=2.1)
115. Pizza F, Biallas M, Wolf M. Werth E, Bassetti CL. Nocturnal cerebral hemodynamics in snorers and in patients with obstructive sleep apnea: a near-infrared spectroscopy study. Sleep. 2010 Feb 1;33(2):205-10. (IF=5.2)
116. Fauchère JC, Schulz G, Haensse D, Keller E, Ersch J, Bucher HU, Wolf M. Near-infrared spectroscopy measurements of cerebral oxygenation in newborns during immediate postnatal adaptation. J Pediatr. 2010;156(3):372-6. (IF=4.7)
117. Scholkmann F, Spichtig S, Muehlemann T, Wolf M. How to detect and reduce movement artifacts in near-infrared imaging using moving standard deviation and spline interpolation. Physiol Meas. 2010 Mar 22;31(5):649-662. (IF=1.9)
118. Jeger V, Jakob SM, Fontana S, Wolf M, Zimmermann H, Exadaktylos AK 500 ml of blood loss does not decrease non-invasive tissue oxygen saturation (StO2) as measured by near infrared spectroscopy - A hypothesis generating pilot study in healthy adult women. J Trauma Manag Outcomes. 2010 May 13;4(1):5. [Epub ahead of print] (New journal, no IF)
119. De Smet D, Jacobs J, Ameye L, Vanderhaegen J, Naulaers G, Lemmers P, van Bel F, Wolf M, Van Huffel S. The partial coherence method for assessment of impaired cerebral

autoregulation using near-infrared spectroscopy: potential and limitations. Adv Exp Med Biol. 2010;662:219-24. (IF=2.0)
120. Holper L, Biallas M, Wolf M. Task Complexity relates to Activation of Cortical Motor Areas during Uni- and Bimanual Performance: A Functional NIRS Study. NeuroImage 2009; 15;46(4):1105-13. (IF=6.8)
121. Lai N, Zhou H, Saidel GM, Wolf M, McCully K, Gladden LB, Cabrera ME. Modeling oxygenation in venous blood and skeletal muscle in response to exercise using near infrared spectroscopy. J Appl Physiol. 2009; 106(6):1858-74. (IF=3.7)
122. Matzinger B, Wolf M, Baños A, Fink D, Hornung R. Optical properties, physiologic parameters and tissue composition of the human uterine cervix as a function of hormonal status. Lasers Surg Med 2009; 24(4):561-6. (IF=3.5)
123. Pizza F, Biallas M, Wolf M, Valko PO, Bassetti CL. Periodic leg movements during sleep and cerebral hemodynamic changes detected by NIRS. Clin Neurophysiol. 2009 Jul;120(7):1329-34. (IF=3.4)
124. Stahel MC, Wolf M, Baños A, Hornung R. Optical properties of the breast during spontaneous and birth control pill-mediated menstrual cycles. Lasers Med Sci. 2009;24(6):901-7. (IF=1.7)
125. Spichtig S, Hornung R, Brown DW, Haensse D, Wolf M. Multifrequency frequency-domain spectrometer for tissue analysis. Rev Sci Instrum. 2009; 80(2):024301. (IF=1.4)
126. Baenziger O, Keel M, Bucher HU, Wolf M. Oxygen extraction index measured by near infared spectroscopy – a parameter for monitoring tissue oxygenation? Adv Exp Med Biol 2009; 645: 161-166. (IF=2.0)
127. Fauchère JC, Dame C, Vonthein R, Koller B, Arri S, Wolf M, Bucher HU. An approach to use recombinant erythropoietin for neuroprotection in very preterm infants. Pediatrics. 2008;122(2):375-82. (IF=5.0)
128. Rothmaier M, Selm B, Spichtig S, Haensse D, Wolf M. Photonic textiles for pulse oximetry. Opt. Express 2008; 17, 12973-12986 (IF=3.7)
129. Muehlemann T, Haensse D, Wolf M. Wireless miniaturized in-vivo near infrared imaging. Opt. Express 2008; 16, 10323-10330 (IF=3.7)
130. Karen T, Morren G, Haensse D, Bauschatz A, Bucher HU, Wolf M. Hemodynamic response to visual stimulation in newborn infants using functional near infrared spectroscopy. Human Brain Mapping 2008;29(4):453-60. (IF=6.2)
131. Wolf U, Wolf M, Choi JH, Paunescu LA, Michalos A, Gratton E. Regional differences of hemodynamics and oxygenation in the human calf muscle detected by near infrared spectrophotometry. J Vasc Interv Radiol. 2007 Sep;18(9):1094-101. (IF=2.7)
132. Baños A, Wolf M, Grawe C, Stahel M, Haensse D, Fink D, Hornung R. Frequency domain near-infrared spectroscopy of the uterine cervix during cervical ripening. Lasers Surg Med 2007 Sep;39(8):641-6. (IF=3.5)
133. Baenziger O, Stolkin F, Keel M, von Siebenthal K, Fauchere JC, Das Kundu S, Dietz V, Bucher HU, Wolf M. The influence of the timing of cord clamping on postnatal cerebral oxygenation in preterm neonates - a randomized controlled trial. Pediatrics 2007 Mar;119(3):455-9. (IF=3.7).
134. Wolf M, Haensse D, Morren G, Froehlich J. Do GSM 900MHz signals affect cerebral blood circulation? A near-infrared spectrophotometry study. Opt. Express 2006; 14:6128-6141. (IF=3.8)
135. Wolf M, Keel M, Dietz V, von Siebenthal K, Bucher HU, Baenziger O. Do slow and small oxygen changes affect the cerebral cytochrome oxidase redox state measured by near-infrared spectroscopy? Adv. Exp. Med. Biol. 2006;578: 245-50. (IF=2.0)
136. Brown DW, Haensse D, Bauschatz A, Wolf M. NIRS Measurement of Venous Oxygen Saturation in the Adult Human Head. Adv. Exp. Med. Biol. 2006;578: 251-6. (IF=0.6).

137. Haensse D, Szabo P, Brown D, Fauchère J, Niederer P, Bucher H, Wolf M. A new multichannel near infrared spectrophotometry system for functional studies of the brain in adults and neonates. Opt. Express 2005;13:4525-4538. (IF=3.8)
138. von Siebenthal K, Keel M, Fauchère JC, Dietz V, Haensse D, Wolf U, Helfenstein U, Bänziger O, Bucher HU, Wolf M. Variability of cerebral haemoglobin concentration in very preterm infants during the first 6 hours of life. Adv. Exp. Med. Biol. 2005;566: 91-97. (IF=0.6).
139. Szabo P, Wolf M, Bucher HU, Haensse D, Fauchère JC, Arlettaz R. Assessment of jaundice in preterm neonates: comparison between clinical assessment, two transcutaneous bilirubinometers and serum bilirubin values. Acta Paediatrica 2004;93:1491-95. (IF=1.1)
140. Szabo P, Wolf M, Bucher HU, Fauchère JC, Haensse D, Arlettaz R. Detection of hyperbilirubinaemia in jaundiced full-term neonates by eye or by bilirubinometer? Eur J Pediatr Pediatr 2004;163: 722–727. (IF=1.2)
141. Safonova LP, Michalos A, Wolf U, Wolf M, Hueber DM, Choi JH, Gupta R, Polzonetti C, Mantulin WW, Gratton E. Age-correlated changes in cerebral hemodynamics assessed by near-infrared spectroscopy. Archives of Gerontology and Geriatrics 2004;39(3):207-25. (IF=0.7).
142. Morren G, Wolf M, Lemmerling P, Wolf U, Choi JH, Gratton E, De Lathauwer L, Van Huffel S. Detection of fast neuronal signals in the motor cortex from functional near infrared spectroscopy measurements using independent component analysis. Med Biol Eng Comput 2004, 42: 92-99. (IF=1.2)
143. Choi JH, Wolf M, Toronov V, Wolf U, Polzonetti C, Hueber D, Safonova LP, Gupta R, Michalos A, Mantulin WW, Gratton E. Noninvasive determination of the optical properties of the adult brain: Near-infrared spectroscopy approach. J. Biomed. Opt. 2004, 9(1): 221-229. (IF=3.5)
144. Safonova LP, Michalos A, Wolf U, Choi JH, Wolf M, Mantulin WW, Hueber DM, Gratton E. Diminished cerebral circulatory autoregulation in obstructive sleep apnea investigated by near-infrared spectroscopy. Sleep Research Online (www.sro.org) 2003, 5(4): 123-132. (new journal, no IF)
145. Wolf M, Wolf U, Choi JH, Toronov V, Paunescu LA, Michalos A, Gratton E. Fast cerebral functional signal in the 100ms range detected in the visual cortex by frequency-domain near-infrared spectroscopy. Psychophysiology 2003, 40(4): 521-528. (IF=3.0)
146. Wolf M, Franceschini MA, Paunescu LA, Toronov V, Michalos A, Wolf U, Gratton E, Fantini S. Absolute frequency-domain pulse oxymetry of the brain: Methodology and measurements. Adv. Exp. Med. Biol. 2003; 530: 61-74. (IF=0.6)
147. Wolf M, Keel M, Dietz V, von Siebenthal K, Teller J, Bucher HU, Baenziger O. The influence of a clear layer on near infrared spectrophotometry: Comparison of measurements in a liquid neonatal head phantom to babies in vivo. Adv. Exp. Med. Biol. 2003; 530: 75-84. (IF=0.6)
148. Wolf U, Wolf M, Choi JH, Levi M, Choudhury D, Hull S, Coussirat D, Paunescu LA, Safonova LP, Michalos A, Mantulin WW, Gratton E. Localized irregularities in hemoglobin flow and oxygenation in the calf muscle in patients with peripheral vascular disease detected by near-infrared spectrophotometry. Vasc. Surg. 2003, 37(5): 1017-1026. (IF=3.1)
149. Wolf M, Wolf U, Choi JH, Gupta R, Safonova LP, Paunescu LA, Michalos A, Gratton E. Detection of the fast neuronal signal on the motor cortex using functional frequency domain near infrared spectroscopy. Adv. Exp. Med. Biol. 2003, 510: 193-197. (IF=0.6)
150. Wolf U, Wolf M, Choi JH, Paunescu LA, Michalos A, Safonova L, Gratton E. Mapping of hemodynamics with near infrared spectroscopy of the human calf tissue and the influence of the adipose tissue thickness. Adv. Exp. Med. Biol. 2003, 510: 225-230. (IF=0.6)
151. Wolf M, Wolf U, Choi JH, Gupta R, Safonova LP, Paunescu LA, Michalos A, Gratton E. Functional Frequency-domain Near-infrared Spectroscopy Detects Fast Neuronal Signal in the Motor Cortex. Neuroimage 2002, 17: 1868-1875. (IF=7.9)

152. Wolf M, Wolf U, Toronov V, Michalos A, Paunescu LA, Choi JH, Gratton E. Different Time Evolution of Oxyhemoglobin and Deoxyhemoglobin Concentration Changes in the Visual and Motor Cortex during Functional Stimulation: A Near Infrared Spectroscopy Study. Neuroimage 2002, 16: 704-712. (IF=7.9)
153. Wolf M, von Siebenthal K, Keel M, Dietz V, Baenziger O, Bucher HU. Comparison of Three Methods to Measure Absolute Cerebral Hemoglobin Concentration in Neonates by Near Infrared Spectrophotometry. J Biomed Opt. 2002, 7: 221-227. (IF=2.3) (was also selected for the April 15, 2002 issue of the Virtual Journal of Biological Physics Research).
154. Toronov V, Webb A, Choi JH, Wolf M, Safonova L, Wolf U, Gratton E. Study of local cerebral hemodynamics by frequency-domain near-infrared spectroscopy and correlation with simultaneously acquired functional magnetic resonance imaging. Optics Express 2001; 9(8): 417-427. (IF=2.0)
155. Toronov V, Webb A, Choi JH, Wolf M, Michalos A, Gratton E, Hueber D. Investigation of human brain hemodynamics by simultaneous near-infrared spectroscopy and functional magnetic resonance imaging. Medical Physics 2001, 28(4): 521-527. (IF=2.3)
156. Keller E, Wolf M, Martin M, Schuknecht B, Yonekawa Y. Estimation of cerebral oxygenation and hemodynamics in cerebral vasospasm using indocyanine green (ICG) dye dilution and near infrared spectroscopy. J Neurosurg Anesthesiol 2001;13(1):43-8. (IF=0.7)
157. Wolf M, von Siebenthal K, Keel M, Dietz V, Bucher HU, Baenziger O. Tissue Oxygen Saturation Measured by Near Infrared Spectrophotometry Correlates to Arterial Oxygen Saturation During Induced Oxygenation Changes in Neonates. Physiological Measurement 2000, 21: 481-491. (IF=1.0)
158. Wolf M, Greisen G, Liem KD, Brun NC, Keel M, Baenziger O, von Siebenthal K, Bucher HU. Comparison of cerebral blood flow, its reliability and its CO_2-response in neonates in three centers: A near-infrared spectrophotometry study. Prenatal and Neonatal Medicine 2000, 5: 329-335. (IF=0.385)
159. Teller J, Wolf M, Keel M, Bucher HU, Fanconi S, Baenziger O. Can near infrared spectroscopy of the liver monitor tissue oxygenation? Eur J Pediatr. 2000, 159(7): 549. (IF=1.2)
160. Teller J, Schwendener K, Wolf M, Keel M, Bucher HU, Fanconi S, Baenziger O. Continuous monitoring of liver oxygenation with near infrared spectroscopy during naso-gastric tube feeding in neonates. Schweiz Med Wochenschr 2000, 130: 652-6. (IF=0.3)
161. Toronov V, Franceschini MA, Filiaci M, Fantini S, Wolf M, Michalos A, Gratton E. Near-infrared study of fluctuations in cerebral hemodynamics during rest and motor stimulation: temporal analysis and spatial mapping. Med Phys. 2000, 27(4): 801-15. (IF=2.3)
162. Wolf M, Weber O, Keel M, Golay X, Scheidegger M, Bucher HU, Kollias S, Boesiger P, Baenziger O. Comparison of cerebral blood volume measured by near infrared spectroscopy and contrast enhanced magnetic resonance imaging. Adv Exp Med Biol 1999, 471: 767-774. (IF=0.6)
163. Wolf M, Keel M, Dietz V, von Siebenthal K, Bucher HU, Baenziger O. The influence of a clear layer on near-infrared spectrophotometry measurements using a liquid neonatal head phantom. Phys Med Biol 1999, 44: 1743-1753. (IF=1.8)
164. Baenziger O, Moenkhoff M, Morales CG, Waldvogel K, Wolf M, Bucher HU, Fanconi S. Impaired Chemical Coupling of Cerebral Blood Flow is Compatible with Intact Neurological Outcome in Neonates with Perinatal Risk Factors. Biol Neonate 1999, 75: 9-17. (IF=1.1)
165. Dietz V, Wolf M, Keel M, von Siebenthal K, Baenziger O, Bucher HU. CO_2-reactivity of cerebral blood volume in healthy term new borns. Biol Neonate, 1999, 75: 85-90. (IF=1.1)
166. Keel M, Wolf M, Baenziger O, Dietz V, von Siebenthal K, Bucher H-U. Regional differences of cerebral hemoglobin concentration in preterm infants measured by near infrared spectrophotometry. Technol Health Care 1999, 7(1): 63-73. (IF=0.6)

167. von Siebenthal K, Beran J, Wolf M, Keel M, Dietz V, Kundu S, Bucher HU. Cyclical fluctuations in blood pressure, heart rate and cerebral blood volume in preterm infants. Brain & Development 1999, 21: 529-534. (IF=1.0)
168. Wolf M, Keel M, Schenk D, Dietz V, von Siebenthal K, Wolf U, Baenziger O, Bucher HU. Comparison of Absolute Cerebral Haemoglobin Concentration in Neonates Measured Directly and by the Oxygen Swing Method Both Based on Near Infrared Spectrophotometry. Adv Exp Med Biol 1998, 454: 125-129. (IF=0.6)
169. Wolf M, Baenziger O, Keel M, Dietz V, von Siebenthal K, Bucher HU. Cerebral Blood Flow Measurements by Near Infrared Spectroscopy in Reflectance Mode are Valid in Neonates. J Cereb Blood Flow Metab 1998, 18: 698-700. (IF=5.5)
170. Wolf M, Evans P, Bucher HU, Dietz V, Keel M, Strebel R, von Siebenthal K. The Measurement of Absolute Cerebral Haemoglobin Concentration in Adults and Neonates. Adv Exp Med Biol 1997, 428: 219-227. (IF=0.6)
171. Wolf M, Duc G, Keel M, Niederer P, von Siebenthal K, Bucher HU. Continuous Noninvasive Measurement of Cerebral Arterial and Venous Oxygen Saturation at the Bedside in Mechanically Ventilated Neonates. Crit Care Med 1997, 25: 1579-1582. (IF=3.5)
172. Wolf M, Bucher HU, Dietz V, Keel M, von Siebenthal K, Duc G. How to Evaluate Slow Oxygenation Changes to Estimate Absolute Cerebral Haemoglobin Concentration by Near Infrared Spectrophotometry. Adv Exp Med Biol 1997, 411: 495-501. (IF=0.6)
173. Jenni O, von Siebenthal K, Wolf M, Keel M, Duc G, Bucher HU. Effect of Nursing in the head elevated tilt position (15º) on the incidence of bradycardic and hypoxemic episodes in preterm infants. Pediatrics 1997, 100: 622-625. (IF=3.7)
174. Wolf M, Brun N, Greisen G, Keel M, von Siebenthal K, Bucher H. Optimising the methodology of calculating the cerebral blood flow of newborn infants from near infra-red spectrophotometry data. Med Biol Eng Comput 1996, 34(3): 221-6. (IF=1.2)
175. Wolf M, Keel M, von Siebenthal K, Bucher HU, Geering K, Lehareinger Y, Niederer P. Improved Monitoring of Preterm Infants by Fuzzy Logic. Technology and Health Care 1996, 4: 193-201. (IF=0.6)
176. Wolf M, Bucher HU, Keel M, von Siebenthal K, Duc G. Estimation of Cerebral Blood Volume and Transit Time in Neonates from Quick Oxygen Increases Measured by Near-Infrared Spectrophotometry. Adv Exp Med Biol 1996, 388: 93-100. (IF=0.6)
177. Jenni OG, Wolf M, Hengartner M, von Siebenthal K, Keel M, Bucher HU. Impact of central, obstructive and mixed apnea on cerebral hemodynamics in preterm infants. Biol Neonate 1996, 70: 91-100. (IF=1.1)
178. von Siebenthal K, Keel M, Dietz V, Wolf M, Martin X, Bucher HU. Retinopathy of prematurity and induced changes in arterial oxygen saturation with near infrared spectrophotometry: a retrospective cohort study. J Biomed Optics 1996, 1(4): 414-417. (IF=3.5)
179. Bucher HU, Moser T, von Siebenthal K, Keel M, Wolf M, Duc G. Sucrose reduces pain reaction to heel lancing in preterm infants: a placebo-controlled, randomized and masked study. Pediatr Res 1995, 38(3): 332-5. (IF=3.3)
180. Jenni O, Bucher H, von Siebenthal K, Wolf M, Keel M, Duc G. Cyclical variations in cerebral blood volume during periodic breathing. Acta Paediatrica 1994, 83: 1095-1096. (IF=1.6)
181. Bucher HU, Wolf M, Keel M, von Siebenthal K, Duc G. Effect of aminophylline on cerebral haemodynamics and oxidative metabolism in premature infants. Eur J Pediatr 1994, 153(2): 123-8. (IF=1.2)
182. Bucher HU, Keel M, Wolf M, von Siebenthal K, Duc G. Artifactual pulse-oximetry estimation in neonates. Lancet 1994, 343: 1135-6. (IF=13.3)
183. Minder R, Wolf M, Leidner JR. The Sun as Source of Radiation. Chimia 1988, 42: 124-128. (IF=0.6)

Review papers (peer reviewed)

1. Quandt BM, Scherer LJ, Boesel LF, Wolf M, Bona GL, Rossi RM. Body-monitoring and health supervision by means of optical fiber-based sensing systems in medical textiles. Adv Healthc Mater. 2015 Feb 18;4(3):330-55. doi: 10.1002/adhm.201400463. (IF=4.9)
2. Scholkmann F, Kleiser S, Metz AJ, Zimmermann R, Mata Pavia J, Wolf U, Wolf M. A review on continuous wave functional near-infrared spectroscopy and imaging instrumentation and methodology. NeuroImage 2014; 85:6-27. (IF=6.3) Top 5 downloaded paper of Neuroimage and 19th top downloaded paper of Elsevier Publishing in 2014.
3. Wolf M, Naulaers G, van Bel F, Kleiser S, Greisen G. A review of near infrared spectroscopy for term and preterm newborns. J Near Infrared Spec 2012; 20, 43-55 (**invited review** special issue on NIR spectroscopy, IF=1.7)
4. Greisen G, Leung T, Wolf M. Has the time come to use near-infrared spectroscopy as a routine clinical tool in preterm infants undergoing intensive care? Philos Transact Royal S A 2011; 369(1955):4440-51. (IF=2.6)
5. Wolf M, Greisen G. Advances in near- infrared spectroscopy to study the brain of the preterm and term neonate. Clin Perinatol. 2009;36(4):807-34. (**invited review** IF=1.7)
6. Pichler G, Wolf M, Roll C, Weindling MA, Greisen G, Wardle SP, Zaramella P, Naulears G, Pellicer A, Austin T, Bartocci M, Urlesberger B. Recommendations to increase validity and comparability of peripheral measurements with near infrared spectroscopy in neonates. Neonatology 2008;94(4):320-2. (IF=1.7)
7. Wolf M, Morren G, Haensse D, Karen T, Wolf U, Fauchère JC, Bucher HU. Near infrared spectroscopy to study the brain: an overview. Opto-Electron Rev 2008; 16 (4), 413-419. (IF=1.0)
8. Wolf M, Ferrari M, Quaresima V. Progress of near infrared spectroscopy and imaging instrumentation for brain and muscle clinical applications. J. Biomed. Opt. 2007; 12, 062104. (IF=3.5: highly cited paper received enough citations to place it in the top 1% of its academic field based on a highly cited threshold for the field and publication year according to the Web of Science)
9. Maxion-Bergemann S, Wolf M, Bornhoft G, Matthiessen PF, Wolf U. Complementary and alternative medicine costs - a systematic literature review. Forsch Komplementarmed. 2006;13 Suppl 2:42-5. (IF=1.1)
10. Wolf U, Maxion-Bergemann S, Bornhoft G, Matthiessen PF, Wolf M. Use of complementary medicine in Switzerland. Forsch Komplementarmed. 2006;13 Suppl 2:4-6. (IF=1.1)
11. Gratton E, Toronov V, Wolf U, Wolf M, Webb A. Measurement of brain activity by near-infrared light. J Biomed Opt. 2005 Jan-Feb;10(1):11008. (IF=3.5)

Conference Proceedings

1. Ostojic D, Kleiser S, Nasseri N, Isler H, Scholkmann F, Karen T, Wolf M. Hemoglobin spectra affect measurement of tissue oxygen saturation. (**invited paper)** in SPIE in press.
2. Scholkmann F, Gerber U, Wolf M, Klein S, Wolf U. The Strong Influence of CO2 on Cerebral Hemodynamics and Oxygenation During Functional Near-Infrared Spectroscopy (FNIRS) Studies. Optical Society of America, Miami, Fl, US Biomedical Optics (BIOMED) 2012 OSA Technical Digest paper: JM3A.30
3. Ostojic D, Kleiser S, Nasseri N, Isler H, Scholkmann F, Karen T, Wolf M. Hemoglobin spectra affect measurement of tissue oxygen saturation. Proc SPIE in press.
4. Mata Pavia J, Charbon E, Wolf M. 3D Near-Infrared Imaging Based on a Single-Photon Avalanche Diode Array Sensor: A New Perspective on Reconstruction Algorithms. Optical Society of America, Miami, Fl, USA Biomedical Optics (BIOMED) 2012 OSA Technical Digest paper: BW1A.5

5. Mata Pavia J, Charbon E, Wolf M. 3D Near-infrared Imaging based on a Single-photon Avalanche Diode Array Sensor, Conferences on Biomedical Optics (ECBO), Munich, Germany, 2011 (**invited paper** in SPIE 2011; 8088: 808811-1-808811-6).
6. Mata Pavia J, Niclass C, Favia C, Wolf M, Charbon E. 3D Near-infrared Imaging based on a SPAD Image Sensor. Proceedings of the International Image Sensor Workshop (IISW), Ōnuma Quasi-National Park, Hokkaido, Japan, 2011
7. Spichtig S, Lehmann H, Scholkmann F, Chin L, Wolf M. Do UMTS Electromagnetic Fields (EMF) Affect the Blood Circulation of the Human Brain? A Near-Infrared Imaging Study. 23. FGF Workshop (in Cooperation with the Ministry for Environment Baden/Württemberg) Radiofrequency Fields and Health – Conclusions after 17 years work of the Special Topic: Radiofrequency Electromagnetic Fields and Brain Physiology – What is the Connection? Stuttgart, Germany (2009)
8. Wolf M. Functional brain activity studies using near-infrared imaging. Seminar on Optical Imaging in Medicine organized by the Polish Academy of Sciences in Warsaw, Poland (2009) (Lecture notes of the ICB seminar on Optical Methods in Medical Diagnosis).
9. Trajkovic I, Reller C, Loeliger HA, Wolf M. Modelling and Filtering Almost Periodic Signals by Time-Varying Fourier Series with Application to Near Infrared Spectroscopy. 17th European Signal Processing Conference, Glasgow, Scotland (2009) (peer-reviewed **paper**)
10. Mühlemann Th, Haensse D, Wolf M. Ein drahtloser Sensor für Nahinfrarot-Imaging. 2. Dresdner Medizintechnik Symposium, Dresden, Germany (2008). (**paper** in R. Poll, J. Füssel, E. Koch. 2. Dresdner Medizintechnik Symposium, TUDpress 2008: 10-13).
11. Mühlemann Th, Haensse D, Wolf M. Ein drahtloser Sensor für die bildgebende in-vivo Nahinfrarotspektroskopie. Annual Conference of the Austrian, German and Swiss Societies of Biomedical Engineering (2006). (**paper** in proceedings, received the Poster Award of the Max Anliker Foundation).
12. Wolf M, Morren G, Haensse D, Karen T, Brown D, Stammwitz A, Fauchère JC, Bucher HU. Near infrared spectroscopy and imaging bring new light in medicine. Seminar on Optical Imaging in Medicine organized by the Polish Academy of Sciences in Warsaw, Poland (2005) (**Review** in Lecture notes of the ICB seminar on Optical Methods in Medical Diagnosis, by Maniewski R, Nilsson G, Rinneberg H. 2005, 97-104).
13. Choi JH, Wolf M, Toronov VY, Michalos A, Gratton E. Spatio-temporal analysis of the cerebral spontaneous oscillation. Photonics West, San Jose CA, USA 2004 (**paper** in SPIE 2004; 5330: 29-37).
14. Haensse D, Szabo P, Fauchère JC, Bucher HU, Wolf M. Cerebral oxygenation changes in response to tactile stimulation in term neonates measured by non-invasive functional near-infrared spectroscopy. Optical Techniques in Neuroscience at the Optical Society of America Biomedical Topical Meetings, Miami FL, USA 2004. (**paper** in OSA Biomedical Topical Meetings Technical Digest, 2004).
15. Wolf M, Wolf U, Choi JH, Safonova L, Gupta R, Toronov V, Michalos A, Paunescu LA, Gratton E. Functional fast neuronal signals in the visual and motor cortex detected by frequency-domain near-infrared spectroscopy. Optical Techniques in Neuroscience at the Optical Society of America Biomedical Topical Meetings, Miami FL, USA 2002. (**paper** in OSA Biomedical Topical Meetings Technical Digest, 2002; 205-207).
16. Choi JH, Wolf M, Wolf U, Polzonetti C, Safonova LP, Gupta R, Michalos A, Mantulin WW, Gratton E. Noninvasive determination of optical properties of adult brain with frequency-domain near-infrared spectroscopy. Biomedical Optical Spectroscopy, Imaging & Diagnostics at the Optical Society of America Biomedical Topical Meetings, Miami FL, USA 2002. (**paper** in OSA Biomedical Topical Meetings Technical Digest, 2002; 144-147).
17. Safonova LP, Michalos A, Hueber DM, Wolf U, Wolf M, Choi JH, Gupta R, Polzonetti C, Barbieri B, Mantulin WW, Gratton E. Age correlated changes in cerebral hemodynamics assessed by near-infrared spectroscopy. Biomedical Optical Spectroscopy, Imaging &

Diagnostics at the Optical Society of America Biomedical Topical Meetings, Miami FL, USA 2002. (**paper** in OSA Biomedical Topical Meetings Technical Digest, 2002; 149-151).

18. Morren M, Wolf M, Wolf U, Choi JH, Gratton E, van Huffel S. Extraction of fast neuronal changes from multichannel, functional near infrared spectroscopy signals using independent component analysis. BiOS, SPIE, San Jose CA, USA 2002 (**paper** in SPIE 2002, 4623: 68-76).
19. Toronov V, Webb AG, Choi JH, Wolf M, Safonova LP, Wolf U, Gratton E. Functional cerebral activation detected by frequency-domain near-infrared spectroscopy. Optical Technologies in Biophysics and Medicine SPIE, Saratov, Russia 2001 (**paper** in SPIE 2002, 4707: 92-96).
20. Toronov V, Webb A, Jee Hyun Choi, Wolf M, Gratton E. Simultaneous assessment of human brain functional hemodynamics by magnetic resonance and near-infrared imaging. Medical Imaging, San Diego CA, USA 2001 (**paper** in SPIE 2001, 4320: 861-7).
21. Paunescu LA, Michalos A, Choi JH, Wolf U, Wolf M, Gratton E. In vitro correlation between reduced scattering coefficient and hemoglobin concentration of human blood determined by near-infrared spectroscopy. Photonics West, SPIE, San Jose CA, USA 2001 (**paper** in SPIE 2001, 4250: 319-326).
22. ToronovV, Webb A, Choi JH, Wolf M, Gratton E, Hueber D. Simultaneous functional magnetic resonance and near infared imaging of the adult brain. Photonics West, SPIE, San Jose CA USA 2001 (**paper** in SPIE 2001, 4250: 380-382).
23. Wolf M, Toronov V, Wolf U, Paunescu LA, Michalos A, Gratton E. Maps of cerebral hemoglobin concentration changes obtained by near-infrared spectroscopy, characterization of phase shifts among locations. Optical Society of America Biomedical Topical Meetings, Miami FL, USA 2000. (**paper** in OSA Biomedical Topical Meetings Technical Digest, 2000; 416-418).
24. Toronov V, Fantini S, Franceschini MA, Filiaci M, Wolf M, Gratton E. Temporal analysis of fluctuations in cerebral hemodynamics revealed by near-infrared spectroscopy. Optical Technologies in Biophysics and Medicine SPIE, Saratov, Russia 1999 (**paper** in SPIE 2000, 4001: 224-227).
25. Michalos A, Paunescu LA, Wolf M, Wolf U, Toronov V, Franceschini MA, Fantini S, Gratton E. Assessment of cerebral oxygenation and hemodynamics in obstructive sleep apnea syndrome. Optical Society of America Biomedical Topical Meetings, Miami FL, USA 2000. (**paper** in OSA Biomedical Topical Meetings Technical Digest, 2000: 163-165).
26. Franceschini MA, Toronov V, Filliaci ME, Wolf M, Michalos A, Gratton E, Fantini S. Real-time video of brain activation in human subjects using a non-invasive near-infrared technique. Optical Society of America Biomedical Topical Meetings, Miami FL, USA 2000. (**paper** in OSA Biomedical Topical Meetings Technical Digest, 2000: 265-267).
27. Paunescu LA, Wolf U, Wolf M, Michalos A, Gratton E. Scattering coefficient-hemoglobin concentration relation determined by frequrency-domain spectroscopy during venous occlusion. Optical Society of America Biomedical Topical Meetings, Miami FL, USA 2000. (**paper** in OSA Biomedical Topical Meetings Technical Digest, 2000: 363-365).
28. Wolf U, Wolf M, Toronov V, Michalos A, Paunescu LA, Gratton E. Detecting cerebral function slow and fast signals by frequency-domain near-infrared spectroscopy using two different sensors. Optical Society of America Biomedical Topical Meetings, Miami FL, USA 2000. (**paper** in OSA Biomedical Topical Meetings Technical Digest, 2000: 427-429).
29. Toronov V, Wolf M, Michalos A, Gratton E, Webb A, Hueber D, Fantini S. Analysis of cerebral hemodynamic fluctuations measured simultaneously by magnetic resonance imaging and near-infrared spectroscopy. Optical Society of America Biomedical Topical Meetings, Miami FL, USA 2000. (**paper** in OSA Biomedical Topical Meetings Technical Digest, 2000: 461-463).

30. Wolf M, Baenziger O, Keel M, Dietz V, von Siebenthal K, Bucher HU. Testing near infrared spectrophotometry using a liquid neonatal head phantom. Europto, Stockholm, Sweden 1998 (**paper** in SPIE 1998; 3566: 79-86).
31. Wolf M, Lehareinger Y, Stettler B, et al. Improved Monitoring of Preterm Infants with Fuzzy Logic. First ICSC International Symposium on Fuzzy Logic Zurich, Switzerland 1995. (**paper** in proceedings 1995:C94-C96)
32. Wolf M, Bucher H-U, Keel M, Duc G. Cerebral CO_2-Response in Neonates Studies by Near Infrared Spectroscopy. Fetal and Neonatal Physiological Measurements Nordweijkerhood, The Netherlands 1999. (**paper** in Excerpta Medica 1991; International Congress Series 967:77-81).

Other Publications

1. Wolf M. Successful Biomedical Photonics Meeting 2010 of the Biomedical Photonics Network and the Swisslaser.Net in Bern. Bulletin of the Swiss Society for Optics and Microscopy 2010; 21-22.
2. Wolf M, Walt H. Annual Meeting 2007 of the Biomedical Photonics Network. Bulletin of the Swiss Society for Optics and Microscopy 2007; 21-22.
3. Wolf M. Biomedical Photonics Yearly Meeting 2006 at the EPFL. Bulletin of the Swiss Society for Optics and Microscopy 2006; 4: 15-16.
4. Wolf M. Biomedical Photonics Yearly Meeting. Bulletin of the Swiss Society for Optics and Microscopy 2005; 4: 14-15.
5. Wolf M, Wolf U, Walt H. The biomedical photonics network. Biomedical Photonics Network : A new workgroup at the SSOM. Bulletin of the Swiss Society for Optics and Microscopy 2005; 2: 6-7.
6. Wolf M. Biomedical Photonics Network : A new workgroup at the SSOM. Bulletin of the Swiss Society for Optics and Microscopy 2004; 2: 5-6 and title page.
7. Wolf M. Imaging of brain function by near infrared spectrophotometry. Habilitation University Zurich 2003.
8. Wolf M. The Measurement of the Oxygenation Status of the Newborn Infant. Ph. D. Thesis ETH 1996; No 11698.
9. Wolf M. Die Messung der Sauerstoffversorgung mit der Pulsoxymetrie. Script of seminary at the Institute of Biomedical Engineering, ETH Zurich.
10. Wolf M. Near infrared spectrophotometry and imaging for non-invasive funtional assessment of tissue. Wissenschaftliche Kurzberichte 1997, Swiss Federal Office for Education and Science: 361.
11. Wolf M, Keel M, Schenk D, Dietz V, von Siebenthal K, Baenziger O, Bucher HU. Comparison of Absolute Cerebral Haemoglobin Concentration in Neonates Measured Directly and by Oxygen Swing Method Both Based on Near Infrared Spectrophotometry. Newsletter of the EU Cost Shared Project on NIRS & Imaging of Biological Tissue 1997(1):3-4.
12. Bucher HU, Keel M, Wolf M, Dietz V, von Siebenthal K. Response to CBV to changes in arterial CO2 in high risk preterm infants: Intraindividual variation and association with intracranial haemorrhage. Near Infrared Spectrophotometry & Imaging of Biological Tissue 1996; Newsletter of the EU Concerted Action (6):20-21.
13. Wolf M, Steinberg F. The Measurement of Tumor Blood Flow. Near Infrared Spectrophotometry & Imaging of Biological Tissue 1995; Newsletter of the EU Concerted Action (4):5.
14. Lehareinger Y, Wolf M, Niederer P Medizin und Technik: Eine Forschungs- und Innovationsausstellung der ETH Zürich, Diagnose Projekt 1.

15. Wolf M. Quality Criteria for the Measurement of Cerebral Blood Flow. Near Infrared Spectrophotometry & Imaging of Biological Tissue 1994; Newsletter of the EU Concerted Action (3):5.
16. Bucher HU, Keel M, Wolf M, Duc G. Diagnose von Hirnschäden bei Neugeborenen mit Ultraschall und Infrarotspektroskopie. Heureka, 1992 project number 54.
17. Bucher HU, Keel M, Wolf M, Duc G. Diagnostic des dommages cérébraux chez le nouveau-né à l'aide de l'ultrasonographie et de la spectroscopie à infra-rouge. Heureka, 1992 project number 54.

Books

1. Wolf M, Bucher HU, Rudin, M, van Huffel S, Wolf U, Harrison DK, Bruley DF. Oxygen transport to tissue XXXIII. Springer New York, Dordrecht, Heidelberg, London, 2012: Advances in Experimental Medicine and Biology, Vol. 737

Professional Society Conferences

a) Organization of Conferences by Prof. Dr. Martin Wolf

1. Member of the Scientific Committee of the conference of the International Society on Oxygen Transport to Tissue July. 1st – 5th 2018 in Seoul, South Korea.
2. Member of the Committee of the Optical Society of America Biophotonics Congress: Biomedical Optics, April 3rd – 6th 2018, Hollywood, FL, USA
3. Co-organizer of the annual conference of the Biomedical Photonics Network at the EMPA St. Gallen, Switzerland 2018.
4. Member of the Scientific Committee of the conference of the International Society on Oxygen Transport to Tissue Aug. 19th – 23rd 2017 in Halle, Germany
5. Co-organizer of the annual conference of the Biomedical Photonics Network at the University of Bern, Switzerland 11th of Dec. 2017.
6. Member of the program committee 1st Mexican Symposium on NIRS Neuroimaging (MexNIRS) 20th - 21st of Oct. 2017 Puebla, Mexico.
7. Organizer of the annual conference of the Biomedical Photonics Network at the University Hospital Zurich, Switzerland 29th of Nov. 2016.
8. Organizer of the annual conference of the Biomedical Photonics Network at the University of Applied Science in Biel, Switzerland 11th of Dec. 2015.
9. Scientific organising committee of the conference of the International Society on Oxygen Transport to Tissue June 28nd – July 3rd 2014 in London, UK.
10. Organizer of the "Near-infrared spectroscopy and imaging" session at the Gordon Research Conference on Brain Metabolism and Blood Flow, USA 2012.
11. Organizing committee of the conference "Functional Near Infrared Spectroscopy", University College, London, UK 2012.
12. Member of the program committee of the Biomedical Optics BIOMED topical meeting of the Optical Society of America, Miami, Fl, USA 2012.
13. Scientific committee of the Conferences on Biomedical Optics (ECBO), Munich, Germany 2011
14. Principal Organizer of the Pre- Meeting Course on "Oxygen Transport" at the European Society of Paediatric Research Conference, Newcastle, UK 2011.
15. Organizer of the annual conference of the Biomedical Photonics Network in Neuchâtel at the CSEM, Switzerland 2011.
16. President of the International Society on Oxygen Transport to Tissue Meeting in Switzerland in 2010.
17. Organizer of the annual conference of the Biomedical Photonics Network in Bern, Switzerland 2010.
18. Principal Organizer of the Heraeus-Workshop "Optical Imaging of Brain Function" funded by the Heraeus Foundation, Bad Honnef, Germany 2009.
19. Organizer of the annual conference of the Biomedical Photonics Network in St. Gallen, Switzerland 2009.
20. Member of the organizing committee of the Conference of the International Society on Oxygen Transport to Tissue in Sapporo, Japan 2008.
21. Organizer of the annual conference of the Biomedical Photonics Network in Lausanne, Switzerland 2008.
22. Principal organizer of the workshop (peer-reviewed) "The state of the art in non-invasive near infrared optical imaging of human cortical brain function" Organization of Human Brain Mapping conference in Chicago, USA 2007.

23. Principal Organizer of the Pre-Congress-Course on “Microcirculation and Oxygen Transport” for young investigators at the Congress of the European Society of Paediatric Research, Prague, Czech Republic 2007.
24. Principal Organizer of the annual conference “Progress in Biomedical Photonics” of the Biomedical Photonics Network in Zurich, Switzerland 2007.
25. Member of the international organizing committee of the Conference of the International Society on Oxygen Transport to Tissue in Louisville, KY, USA in 2006
26. Co-organizer of the annual conference of the Biomedical Photonics Network in Ecole Polytechnique Fédéral Lausanne, Switzerland 2006.
27. Member of the scientific committee of the Annual Conference of the Austrian, German and Swiss Societies of Biomedical Engineering in Zurich, Switzerland 2006.
28. Member of the scientific committee of the Conference of the European Society of Pediatric Research in Barcelona, Spain 2006.
29. Principal Organizer of the Heraeus-Workshop "Optical Imaging of Brain Function" funded by the Heraeus Foundation, Bad Honnef, Germany 2005.
30. Principal Organizer of the annual conference of the Biomedical Photonics Network, Bern, Switzerland 2005.
31. Principal Organizer of the “Engelberg Lectures” on Biomedical Photonics of the Swiss Society for Optics and Microscopy, Engelberg, Switzerland, 2005.
32. Principal Organizer of the founding conference of the Biomedical Photonics Network in Zurich, Switzerland 2004.
33. Host and local organizer of the final meeting of the EU concerted action on “Near Infrared Spectroscopy and Imaging”, Lucerne, Switzerland 1996.

b) Chairpersonship of Prof. Dr. Martin Wolf

1. Annual conference of the Biomedical Photonics Network at the University Hospital Zurich, Switzerland 29th of Nov. 2016.
2. Annual conference of the Biomedical Photonics Network 11th of Dec. 2015 at the University of Applied Science in Biel, Switzerland.
3. Brain Oxygenation Session: Conference of the International Society on Oxygen Transport to Tissue June 28nd – July 3rd 2014 in London, UK.
4. Together with Prof. Dr. Daniel Eberli Stem Cell Research, Regenerative Medicine, and Advanced Technologies session at the 13th day of Clinical Research 12th June 2014, Center for Clinical Research, Unversity of Zurich, Zurich, Switzerland
5. Together with Prof. Dr. Daniel Eberli Stem Cell Research, Regenerative Medicine, and Advanced Technologies session at the 12th day of Clinical Research 4th April 2013, Center for Clinical Research, Unversity of Zurich, Zurich, Switzerland
6. Session 6 oral presentations at the conference of the International Society on Oxygen Transport to Tissue June 22nd - 26th 2013 in Hanover, NH, USA
7. Oxygen Transport modelling and NIRS session of the conference of the International Society on Oxygen Transport to Tissue 2012 in Bruges, Belgium
8. New Spectroscopic Techniques and Application session Biomedical Optics BIOMED topical meeting of the Optical Society of America, Miami, FL, USA 2012.
9. Near-infrared spectroscopy and imaging session at the Gordon Research Conference on Brain Metabolism and Blood Flow, USA 2012.
10. Circulation session, European Society of Paediatric Research Conference 2011, Newcastle, UK.
11. Tissue oxygen methodology I: NIRS. Session of the conference of the International Society on Oxygen Transport to Tissue 2011 in Washington, USA

12. New Methods and Techniques for Brain Imaging Session of the Conferences on Biomedical Optics (ECBO), Munich, Germany 2011
13. Human Head Models Session of the Conferences on Biomedical Optics (ECBO), Munich, Germany 2011
14. Key organs: Brain session, of the Theo Murphy international scientific meeting on "Making light work: illuminating the future of biomedical optics" of the Royal Society, Chicheley Hall, United Kingdom 2010
15. Afternoon session, Seminar on Optical Imaging in Medicine organized by the Polish Academy of Sciences in Warsaw, Poland 2009
16. "NIRS" session of the conference of the International Society on Oxygen Transport to Tissue in Cleveland, USA in 2009
17. Morning session of the annual conference of the Biomedical Photonics Network in St. Gallen, Switzerland 2009
18. "NIRS - clinical applications" session of the conference of the International Society on Oxygen Transport to Tissue in Sapporo, Japan in 2008.
19. "Tissue Engineering" session of the congress of the International Society on Oxygen Transport to Tissue in Louisville, USA Aug. 2006.
20. "Imaging and Image Processing" and "Sensors" sessions of the Annual Conference of the Austrian, German and Swiss Societies of Biomedical Engineering 2006 in Zurich, Switzerland
21. Annual conference of the Biomedical Photonics Network 2005 in Bern, Switzerland.
22. "Diagnostic Applications" day of the Engelberg Lectures of the Swiss Society for Optics and Microscopy in Engelberg, Switzerland, 2005.
23. "Oxygen measurements novel NIRS applications" session of the congress of the International Society on Oxygen Transport to Tissue in Bari, Italy Aug. 2004.
24. Poster session of the congress of the International Society on Oxygen Transport to Tissue in Bari, Italy Aug. 2004.
25. "Central Nervous System" session of the congress of the International Society on Oxygen Transport to Tissue in Rochester, USA Aug. 2003.
26. Scientific Search Committee of the Melvin H. Knisely Award of the International Society on Oxygen Transport to Tissue 2003.
27. "Functional Imaging Techniques: Brain Activation Studies" session of the congress of the International Society on Oxygen Transport to Tissue in Manchester, UK Aug. 2002.
28. "Microcirculation" session at the World Congress on Medical Physics and Biomedical Engineering in Nice, France 1997.

c) Invited Talks of Prof. Dr. Martin Wolf

1. **Keynote Lecture.** Conference of the Society for functional Near Infrared Spectroscopy, Oct. 5th – 8th 2018, Tokyo, Japan
2. A liquid phantom with adjustable oxygenation for evaluating and comparing near-infrared spectroscopy oximeters. SPIE Photonics West, 26th of Jan to 3rd of Feb 2018, San Francisco, CA, USA
3. Licht in der Hirnforschung: Von optischen Methoden bis zu geisteswissenschaftlichen Betrachtungen. CLURR, University Hospital Zurich, 15th of Jan. 2018.
4. Measuring tissue oxygenation by near-infrared light: Achievements, challenges and solutions. Keynote talk at the conference of the International Society on Oxygen Transport to Tissue Aug. 19th – 23rd 2017 in Halle, Germany
5. NewBornCare: clinical monitoring based on vision and spectrospy. DATE conference, Lausanne, Switzerland 27th to 30th March 2017.
6. Near-infrared spectroscopy & imaging: A rapidly growing field. 7th Research Symposium: Brain and Development- an interdisciplinary approach, Au, Switzerland, 17th og Jan. 2017.

7. A new light in diagnostics of tissue with non-invasive near-infrared spectroscopy and imaging, Technical University Delft, The Netherlands, 15th of Sept. 2016.
8. Translational Imaging. Center for Experimental and Clinical Imaging Technologies (EXCITE) Symposium of Fingerprinting of Vascular Aging. ETH Zurich 10th Sept. 2016.
9. A new light in diagnostics of tissue with non-invasive near-infrared spectroscopy and imaging. Physikalisch-Technische Bundesanstalt, Berlin Germany, 31st of May - 1st of June 2016.
10. NewBornCare: clinical monitoring based on vision and spectrospy. Nano-Tera Annual Plenary Meeting, Lausanne, Switzerland 25th to 26th April 2016.
11. Assessment of tissue oxygenation by NIRS. Bowman Symposium and Hemodynamics Seminar, Winnipeg, Canada, 29th – 31st of Oct, 2015.
12. Untersuchung der Sauerstoffversorgung: Nahinfrarotspektroskopie, ihre Prinzipien und Anwendungen. 49. Atmungs- und Leistungsphysiologischen Arbeitstagung an der Universität/ETH Zürich 30.-31.Januar 2015.
13. Near-infrared spectroscopy and imaging: Technologic advances and applications. Politecnico di Milano, Milan, Italy, 25th of March 2015.
14. Health Monitoring. Nano-Tera Annual Plenary Meeting, Bern, Switzerland 4th to 5th May 2015.
15. Principles of NIRS: methodology & instrumentation. Pre Congress Course: Near-Infrared Spectroscopy. 1st Congress of joint European Neonatal Societies. Budapest, September 15th - 20th 2015.
16. How current near-infrared spectroscopy works and future perspectives. Minisymposium on NIRS in Neonatology, Newborn Research Zurich, University Hospital Zurich, Switzerland 30th of Nov. 2015.
17. Can low or high cerebral oxygenation be prevented in preterm infants? A multicenter randomized controlled phase II trial using NIRS. Annual conference of the Biomedical Photonics Network at the University of Applied Science in Biel, Switzerland 11th of Dec. 2015.
18. New insights into near-infrared spectrophotometry:NIRS research in neonatology. Seminar of Developmental Pediatrics at the Children'Hospital Zurich 8. April 2014.
19. Nahinfrarotspektroskopie- Basics der Oximetrie. Vortrag am "NIRS Workshop: Grundlagen zur klinischen Anwendung" 40. Jahrestagung der Gesellschaft für Neonatologie und Pädiatrische Intensivmedizin, Bonn, Germany, 26.-28. Juni 2014
20. A new light in diagnostics of tissue with non-invasive near-infrared spectroscopy & imaging. Doctoral Day, Medical University of Graz, Austria, 9th Dec. 2013
21. Der Weg von der Oximetrie zur Bildgebung mit Licht: die Nahinfrarotspektroskopie. Zukunftswege Neonatologie, Division of Neonatology, Medical University of Graz, Austria, 10th Dec. 2013
22. How to measure oxygenation by near infrared spectroscopy (NIRS)? Symposium on Neonatal Brain Monitoring University of Leuven, Belgium 7th June 2013
23. Intelligente Materialien helfen den Frühgeborenen, Techapéro of the National Research Program 62, Dübendorf, Switzerland 17th June 2013
24. Optical imaging of tissue: Current state and future of instrumental and methodological approaches. Conference of the International Society on Oxygen Transport to Tissue June 22nd - 26th 2013 in Hanover, NH, USA
25. Imaging deep tissue in three dimensions by near-infrared imaging. Saratov Fall Meeting of SPIE, Saratov, Russia 25th – 28th Sept. 2013.
26. Introduction to near-infrared spectroscopy and imaging (NIRS, NIRI). Preterm Brain conference, Zurich 21st – 22nd Feb 2013
27. Light to investigate the oxygenaton of tissue non-invasively: From near-infrared spectroscopy to imaging. Dept. of Clinical Chemistry, University Hospital Zuirch 3rd Dec. 2013

28. Towards non-invasive monitoring of cerebral and lung metabolism in preterm infants by optical methods. 4rd International Congress on Biophotonics, Jena, Germany (2012).
29. Tissue oxygenation in the light of non-invasive and continuous near-infrared spectroscopy and imaging (NIRS, NIRI). 4th Congress of the European Academy of Paediatric Societies, Istanbul, Turkey (2012).
30. Models of tissue oximetry and validation. Conference of the International Society on Oxygen Transport to Tissue Bruges, Belgium (2012).
31. Near infrared spectrophotometry and imaging to study the brain: An overview and outlook. International Conference on Advanced Laser Technologies, Thun, Switzerland (2012).
32. A new light in diagnostics of tissue with non-invasive near-infrared spectroscopy and imaging, ICFO-The Institute of Photonic Sciences, Barcelona, Spain (2012).
33. A new light in diagnostics of tissue with non-invasive near-infrared spectroscopy and imaging. Hans-Sigrist Symposium, University of Bern, Switzerland (2012).
34. Specific developments of the NIRS technology for use in the neurosciences. Bringing Multi-Channel NIRS-EEG to Clinical Practice. Seminar, University of Bern, Switzerland (2012).
35. Shining the light of non-invasive and continuous near-infrared spectroscopy and imaging (NIRS, NIRI) on clinical applications. Medical Physics and Bioengineering Lunchtime Seminar Series, University College London, UK (2012).
36. A new light in diagnostics of tissue with non-invasive near-infrared spectroscopy and imaging. Seminar at Institute of Applied Physics, University of Bern, Switzerland (2012).
37. A new light in diagnostics of tissue with non-invasive near-infrared spectroscopy & imaging. Institute Plasma and Laser Technologies, Uzbek Academy of Sciences, Tashkent, Uzbekistan (2012).
38. A new light in diagnostics of tissue with non-invasive near-infrared spectroscopy & imaging. Uzbek Academy of Medicine, Tashkent, Uzbekistan (2012).
39. Near-infrared spectroscopy and imaging: a new light in diagnostics. Innovate for health event, CSEM Zurich, Technopark Zurich, Switzerland (2011).
40. Clinical application of near-infrared spectroscopy and imaging in neonates. Saratov Fall Meeting of SPIE, Saratov, Russia (2011).
41. How to non-invasively image oxygenation in tissue in humans. Zurich Center for Integrative Human Physiology, Zurich, Switzerland (2011).
42. Shining Light on Function and Oxgenation of the Brain with Non-Invasive Near-Infrared Spectroscopy and Imaging. Institute of Neuroinformatics, ETHZ, Zurich, Switzerland. (2011).
43. Biomedical Photonics in Switzerland. Scientific meeting of Photonics4Life Paris, France (2010).
44. 3D Messtechnik für medizinische Anwendungen. 50 Years Laser. (SSOM) & 3D Measuring (SLN) Workshop of the Swiss Society of Optics and Microscopy and the SwissLaser.Net, NTB Interstate University of Applied Sciences of Technology Buchs, Switzerland (2010).
45. A new light in diagnostics with non-invasive near-infrared spectroscopy and imaging. Talk at University of Delft, The Netherlands (2010).
46. A new light in brain investigation with non-invasive near-infrared spectroscopy and imaging, at the Symposium on "NIRS as a non-invasive tool for monitoring tissue oxygen saturation: Its application in cerebral and peripheral tissue" at the Catholic University Leuven, Belgium (2010).
47. A New Light in Oxygenation and Perfusion Assessment of Tissue with Non-Invasive Near-Infrared Spectroscopy and Imaging. Chinese University of Hong Kong, China (2010)
48. Near-infrared imaging to study tissue: State of the art and potential. Rochester Institute of Technology, NY, USA (2010).
49. Near-infrared imaging to study tissue: State of the art and potential. University of Rochester, NY, USA (2010).

50. Do UMTS Electromagnetic Fields (EMF) Affect the Blood Circulation of the Human Brain? A Near-Infrared Imaging Study. 23. FGF Workshop (in Cooperation with the Ministry for Environment Baden/Württemberg) Radiofrequency Fields and Health – Conclusions after 17 years work of the Special Topic: Radiofrequency Electromagnetic Fields and Brain Physiology – What is the Connection? Stuttgart, Germany (2009).
51. Functional brain activity studies using near-infrared imaging. Seminar on Optical Imaging in Medicine organized by the Polish Academy of Sciences in Warsaw, Poland (2009).
52. Techniques 1: Near-infrared spectroscopy and laser Doppler flowmetry. Part of the preconference workshop on Circulatory Assessment in the Newborn: Methodology and Clinical Application of European Society of Paediatric Research, Hamburg, Germany (2009).
53. Near-infrared imaging to study tissue: State of the art and potential. Politecnico di Milano, Italy (2009).
54. Near-infrared imaging to study tissue: State of the art and potential. University of Wisconsin, Milwaukee, USA (2009).
55. A review of studies of brain function in neonates. Heraeus-Workshop "Optical Imaging of Brain Function", Bad Honnef, Germany (2009).
56. A new light in brain research with non-invasive near-infrared imaging. Talk at the annual meeting of the Zurich Neuroscience Center, Zurich, Switzerland (2008).
57. Measuring brain function in neonates by NIRS and NIRI. At the congress of the International Society on Oxygen Transport to Tissue, Sapporo, Japan (2008).
58. 30 years of near-infrared spectroscopy and 21 years by Prof. Dave Delpy: A look back and forward. Talk at the honorary workshop for Prof. D. T. Delpy, London, UK (2008).
59. Neue Forschungsergebnisse aus der Neonatologie (New research in neonatology), Perinatology, University Hospital Zurich, Switzerland (2008).
60. Near-infrared imaging to study tissue: State of the art and potential. ARTORG, University of Bern, Switzerland (2008).
61. Near-infrared imaging to study tissue: State of the art and potential. Technical University Dresden, Germany (2008).
62. Ladungsträgertransfer an der Grenzfläche von toter und lebender Materie. Technical University Dresden, Germany (2008).
63. Nicht-invasive Messung der Sauerstoffversorgung und Durchblutung mit Nahinfrarot- und Diffusing-Wave-Spektroskopie, Emergency Medicine, Neurosurgery and Orthopedics, University Bern, Switzerland (2008).
64. Keynote lecture on “30 years of near infrared spectrophotometry and imaging: Where are we today?” at the ESPR meeting in Prague, Czech Republic (2007).
65. Tutorial on near infrared spectroscopy (NIRS): instrumentation, methods and future developments. Pre-Congress-Course at the ESPR meeting in Prague, Czech Republic (2007).
66. Near-infrared imaging to study tissue: State of the art and potential. University of Oldenburg, Germany (2007).
67. Near-infrared imaging to study brain tissue: State of the art and potential. University of Trento, Italy (2007).
68. Near-infrared imaging to study brain: State of the art and potential. Catholic University Leuven, Belgium 2007.
69. Near-infrared imaging: State of the art and potential. University of Michigan at Ann Arbor, MI, USA (2007).
70. A new light in brain research. **Hot Topics session** of BiOS at Photonics West, San Jose, USA (2006).
71. More light in medical research: Near infrared spectroscopy and imaging. Talk at he Biomedical Research Laboratory, University College London, UK (2006).

72. Den menschlichen Körperfunktionen auf der Spur - Ein neues Licht in der medizinischen Diagnostik durch Nahinfrarot-Spektroskopie und Imaging. Technical Society Zurich, Switzerland (2006).
73. Biomedical photonics brings new light in medical research. Photonics Day, Ecole Polytechnique Federal Lausanne, Switzerland. (2006).
74. A Light in Biomedical Engineering: Technical Development and Clinical Application of Near Infrared Spectroscopy and Imaging, Lunch-Talk of Biomedical Engineering Cluster, ETH, Zurich, Switzerland (2006).
75. Medical implants and device design. National University of Ireland, Galway (2006).
76. A new light in biomedical research. National University of Ireland, Galway (2006).
77. Biomedical photonics brings new light in brain research. "Swiss photonics future"-optics workshop of the Swiss Society for Optics and Microscopy, Davos, Switzerland (2005).
78. Near infrared spectroscopy and imaging bring new light in medicine. Seminar on Optical Imaging in Medicine organized by the Polish Academy of Sciences in Warsaw, Poland (2005) (**Review**).
79. Biomedical photonics brings new light in brain research. Seminar at the Institute for Empirical Research in Economics, University of Zurich, Zurich, Switzerland (2005).
80. Near-Infrared Spectroscopy as a Diagnostic Tool in Medicine. Clinic for Obstetrics, University Hospital Zurich, Switzerland (2005).
81. Near-infrared spectroscopy: State of the art and potential. The Institute of Photonic Sciences, Barcelona, Spain (2005).
82. Near-infrared spectroscopy & imaging. "Engelberg Lectures" on Biomedical Photonics of the Swiss Society for Optics and Microscopy, Engelberg, Switzerland (2005).
83. Near-Infrared Spectroscopy Sheds New Light on the Brain. Clinic for Neurology, University Hospital Zurich, Switzerland (2005).
84. Near-infrared spectroscopy in medicine". Seminar at the Center for Applied Photonics, University Konstanz, Germany, (2004).
85. Der Mensch in neuem Licht: Nichtinvasive Untersuchungen mit der Nahinfrarotspektroskopie. Inaugural lecture at the University of Zurich, (2004).
86. Light in neonatal research. Talk at the seminar at the Department of Gynecology/Obstetrics, where the highlights of the year 2004 are presented, University Hospital Zurich, (2004).
87. Optical methods in biology and medicine: Scientific background and Potential. Annual Meeting Swiss Society for Biomedical Engineering. ETH Zurich, (2004).
88. Die Nahinfrarotspektroskopie: Ein neues bildgebendes Verfahren in der Medizin. Seminar at Bookham Technology (Switzerland) AG, (2004).
89. Near-infrared spectroscopy in medicine: Functional Imaging of the Brain. Catholic University Leuven, Belgium, Department of Pediatrics, Prof. P. Casaer (2004).
90. Near-infrared spectroscopy in medicine: State of the art and potential. University of California Irvine, USA, Department of Biomedical Engineering, Prof. S. C. George (2004).
91. Die Nahinfrarotspektroskopie: Eine neue Methode in der Medizin. Technical University Ulm, Department of Electrical Engineering, Prof. J. P. Güttler (2004).
92. Near-infrared spectroscopy in medicine: State of the art and potential. Florida International University, Miami, USA, Dept. of Biomedical Engineering, Prof. R. Schoephoerster (2004).
93. Functional imaging of the brain by near-infrared spectroscopy. Professor of 3rd Postgraduate Course of the Section for Microcirculation on Near Infrared Spectroscopy at the 44th Annual Meeting of the European Society for Pediatric Research, Bilbao, Spain (2003) (**Review**).
94. Optische bildgebende Verfahren in der Medizin. Fachtagung : Mikrotechnik und Mikrosystemtechnik. Interstaatliche Hochschule für Technik (NTB), Buchs, Switzerland (2003) (**Review**).
95. Near-infrared spectroscopy in medicine: State of the art and potential. CSEM Centre Suisse d'Electronique et de Microtechnique SA, Dr. V. Neuman (2003).

96. Near-infrared spectroscopy in medicine. ETH Zurich, Foundation for Research on Information Technologies in Society (IT'IS). Prof. N. Kuster (2003).
97. Near-infrared spectroscopy in medicine: State of the art and potential. University of Texas at Arlington, USA, Department of Biomedical Engineering, Prof. K. Behbehani (2003).
98. Near-infrared spectroscopy in medicine: State of the art and potential. Clemson University, South Carolina, USA, Department of Bioengineering, Prof. R. Latour (2003).
99. Near-infrared spectroscopy in medicine: State of the art and potential. University of Berne, Switzerland, Institute of Applied Physics, Department of Biomedical Photonics, Prof. M. Frenz (2003).
100. Nahinfrarotspektroskopie: Eine Methode zur funktionellen Untersuchung des Gehirns. ETH Biomedical Engineering Laboratory, Prof. P. Niederer (2002).
101. Anwendung der Nahinfrarotspektroskopie zur Untersuchung der Hirnfunktion bei Neugeborenen. University Hospital Zurich, Switzerland, Department of Gynecology. Prof. H. Walt (2002).
102. Looking at the brain and muscle using near infrared spectroscopy. A frequency domain approach. University of California Irvine, USA, Beckman Laser Institute, Prof. B. Tromberg (2001).
103. Functional frequency-domain near infrared spectroscopy of the visual and motor cortex. University of Illinois at Urbana-Champaign, USA, Beckman Institute for Cognitive Neuroscience, Prof. G. Gratton and Prof. M. Fabiani (2001).
104. Wolf M, Wolf U, Toronov V, Michalos A, Paunescu LA, Choi JH, Gratton E. Correlation between oxyhemoglobin and deoxyhemoglobin concentration changes in the visual and motor cortex during stimulation and a review of fast functional changes: A near infrared spectroscopy study. International Society on Oxygen Transport to Tissue, Nijmegen, The Netherlands 2000 (**abstract**).
105. Looking at the brain and muscles using near infrared spectroscopy. A frequency domain approach. University of Texas at Austin, USA, Spectroscopy Laboratory, Prof. R. Richards-Kortum (2000).
106. The oxygenation state of the neonate as measured by near infrared spectroscopy. University of Pennsylvania, USA, Johnson Research Foundation, Prof. B. Chance (1997).
107. Wolf M, Dietz V, Keel M, von Siebenthal K, Strebel R, Bucher HU. Measuring cerebral blood flow in newborn infants by near infrared spectrophotometry. World Congress on Medical Physics and Biomedical Engineering, Nice, France 1997 as a chairman of the microcirculation session (**abstract**).

d) Invited Round-Tables by Prof. Dr. Martin Wolf

1. Technology-focused round-table at the 5th Light4Health 2014 held at the Institute of Photonic Sciences in Castelldefels, Barcelona, Spain, October 16, 2014.

e) Oral Presentations by Prof. Dr. Martin Wolf

1. Lindner S, Zhang C, Antolovic I, Kalyanov A. Jiang J, Ahnen L, di Costanzo A, Mata Pavia J, Sanchez Majos S, Charbon E, Wolf M. A Novel 32 x 32, 224 Mevents/s Time Resolved SPAD Image Sensor for Near-Infrared Optical Tomography. Postdeadline paper session of the Biophotonics Congress, Optical Society of America, April 02 - 06, 2018 Hollywod, FL, USA
2. Kalyanov A, Jiang J, Lindner S, Ahnen L, di Costanzo A, Mata Pavia J, Sanchez Majos S, Zhang C, Charbon E, Wolf M.Time Domain Near-Infrared Optical Tomography with Timeof-Flight SPAD Camera: The New Generation Biophotonics Congress, Optical Society of America, April 02 - 06, 2018 Hollywod, FL, USA

3. Kleiser S, Nasseri N, Andresen B, Greisen G, Wolf M. Comparison of near infrared spectroscopic tissue oximeters on a liquid phantom with adjustable oxygenation. Conference of the International Society on Oxygen Transport to Tissue July 10th – 14th 2016 in Chicagio, IL, USA
4. Ostojic D, Kleiser S, Nasseri N, Isler H, Karen T, Andresen B, Greisen G, Wabnitz H, Scholkmann F, Wolf M. In vitro comparisons of near-infrared spectroscopy oximeters: The impact of long-term changes in scattering properties of lipid phantoms on device comparisons. Conference of the International Society on Oxygen Transport to Tissue Aug. 19th – 23rd 2017 in Halle, Germany.
5. Wolf M. Brain oxygenation, perfusion and function: experience from the clinic. 37th Annual International Conference of the IEEE Engineering in Medicine and Biology Society, Milano, Italy 26th to 29th of august 2015.
6. Wolf M, Hyttel-Sorensen S, Pellicer A, Alderliesten T, Austin T, van Bel F, Benders M, Claris O, Dempsey E, Franz AR, Fumagalli M, Gluud C, Grevstad B, Hagmann C, Lemmers P, van Oeveren W, Pichler G, Plomgaard AM, Riera J, Sanchez L, Winkel P, Greisen G. Can low or high cerebral oxygenation be prevented in preterm infants? A multicenter randomized controlled phase II trial using NIRS. fNIRS conference Oct. 10th to 12th 2014 in Montreal, Canada.
7. Stammwitz A, von Siebenthal K, Bucher HU, Wolf M. Can the assessment of spontaneous oscillations by near infrared spectroscopy predict neurological outcome of preterm infants? Conference of the International Society on Oxygen Transport to Tissue June 28nd – July 3rd 2014 in London, UK.
8. Nasseri N, Zysset C, Büthe L, Kleiser S, Tröster G, Wolf M. Evaluation of a textile near infrared spectroscopy system in calf muscle oxygenation measurements. Conference of the International Society on Oxygen Transport to Tissue June 22nd - 26th 2013 in Hanover, NH, USA
9. Wolf M, Scherer L, Schöller K, Baumann L, de Courten D. Light responsive membrane enables novel sensor principle for non-invasive transdermal glucose measurement. Meeting of the National Research Program 62, Murten, Switzerland 30th -31st May 2013.
10. Scholkmann F, Wolf M, Wolf U. The effect of inner speech on arterial pCO_2, cerebral hemodynamics and oxygenation, FNIRS Congress, London, UK (2012).
11. Wolf M. Tumor oxygenation: A crucial but not yet measured biomarker. Yearly meeting of the Biomedical Photonics Network, Neuchâtel, Switzerland (2011)
12. Muehlemann T, Holper L, Wenzel J, Wittkowski M, Wolf M. The effect of sudden depressurization on pilots at cruising altitude. Conference of the International Society on Oxygen Transport to Tissue in Washington DC, USA (2011).
13. Jenny C, Biallas M, Trajkovic I, Wolf M. Reproducibility of cerebral tissue oxygen saturation measurements by near infrared spectroscopy in newborn infants. Congress of the International Society on Oxygen Transport to Tissue, Ascona, Switzerland (2010).
14. Spichtig S, Lehmann H, Scholkmann F, Chin L, Wolf M. Do UMTS Electromagnetic Fields (EMF) Affect the Blood Circulation of the Human Brain? A Near-Infrared Imaging Study. 23. FGF Workshop (in Cooperation with the Ministry for Environment Baden/Württemberg) Radiofrequency Fields and Health – Conclusions after 17 years work of the Special Topic: Radiofrequency Electromagnetic Fields and Brain Physiology – What is the Connection? Stuttgart, Germany (2009)
15. Wolf M. Functional brain activity studies using near-infrared imaging. Seminar on Optical Imaging in Medicine organized by the Polish Academy of Sciences in Warsaw, Poland (2009)
16. Wolf M, Morren G, Haensse D, Bucher HU. Non-invasive measurement of hematocrit in term neonates by near infrared spectrophotometry. At the congress of the European Society of Paediatric Research, Hamburg, Germany (2009).
17. Wolf M, Morren G, Haensse D, Bucher HU. Non-invasive measurement of hematocrit in term neonates by near infrared spectrophotometry. At the congress of the International Society on Oxygen Transport to Tissue, Cleveland, USA (2009).

18. Wolf M. Ein drahtloser Sensor für Nahinfrarot-Imaging. At the 2. Dresdener Medizintechnik-Symposium, Dresden, Germany (2008).
19. Wolf M. Measuring brain function in neonates by NIRS and NIRI. At the congress of the International Society on Oxygen Transport to Tissue, Sapporo, Japan (2008).
20. Baenziger O, Keel M, Bucher HU, Wolf M. Oxygen extraction index measured by near infared spectroscopy – a parameter for monitoring tissue oxygenation? International Society on Oxygen Transport to Tissue, Uppsala, Sweden, 2007 (abstract).
21. Wolf M. Keynote lecture on "Near infrared spectroscopy and imaging: State of the art and technical advances" at the ESPR meeting in Prague, Czechia (2007).
22. Muehlemann Th, Haensse D, Wolf M. A Wireless Near-Infrared Imaging Device. International Society on Oxygen Transport to Tissue, Louisville, KT, USA, 2006 (abstract).
23. Wolf M. A new light in brain research. Hot topics session of BiOS at Photonics West, San Jose, USA (2006).
24. Wolf M. Den menschlichen Körperfunktionen auf der Spur - Ein neues Licht in der medizinischen Diagnostik durch Nahinfrarot-Spektroskopie und Imaging. Technical Society Zurich, Switzerland (2006).
25. Wolf M. Biomedical photonics brings new light in medical research. Photonics Day, Ecole Polytechnique Federal Lausanne, Switzerland. (2006).
26. Wolf M. A Light in Biomedical Engineering: Technical Development and Clinical Application of Near Infrared Spectroscopy and Imaging, Lunch-Talk of Biomedical Engineering Cluster, ETH, Zurich, Switzerland (2006).
27. Wolf M. Medical implants and device design. National University of Ireland, Galway (2006).
28. Wolf M. A new light in biomedical research. National University of Ireland, Galway (2006).
29. Wolf M. Biomedical photonics brings new light in brain research. "Swiss photonics future"-optics workshop of the Swiss Society for Optics and Microscopy, Davos, Switzerland (2005).
30. Wolf M. Near-infrared spectroscopy & imaging. "Engelberg Lectures" on Biomedical Photonics of the Swiss Society for Optics and Microscopy, Engelberg, Switzerland (2005).
31. Wolf M. Light in neonatal research. Talk at the seminar at the Department of Gynecology/Obstetrics, where the highlights of the year 2004 are presented, University Hospital Zurich, (2004).
32. Wolf M. Biomedical Photonics. Mini-symposium on "BIOENGINEERING", ETH ETHZ, Zurich 2004.
33. Haensse D, Szabo P, Brown D, Diethelm C, Wolf M. Near infrared spectroscopy for induced cerebral oxygenation changes by tactile auditive and visual stimulation in term neonates. European Society for Pediatric Research, Stockholm, Sweden 2004 (abstract 272 in Ped Res 2004, 56: 510).
34. Wolf M, Keel M, Dietz V, von Siebenthal K, Bucher H U, Baenziger O. Do slow and small oxygen changes affect the cerebral cytochrome oxidase redox state measured by near-infrared spectroscopy? International Society on Oxygen Transport to Tissue, Bari, Italy, 2004 (abstract).
35. Haensse D, Szabo P, Fauchère JC, Bucher HU, Wolf M. Cerebral oxygenation changes in response to tactile stimulation in term neonates measured by non-invasive functional near-infrared spectroscopy. Optical Techniques in Neuroscience at the Optical Society of America Biomedical Topical Meetings, Miami FL, USA 2004. (paper in OSA Biomedical Topical Meetings Technical Digest, 2004).
36. Wolf M. Fuzzy Logik: Eine Methode der modernen Regeltechnik mit Algorithmen für die Intensivstation. Test lecture for habilitation at the University of Zurich, Switzerland 2004.
37. Wolf M, Wolf U, Haensse D, Szabo P, Fauchère JC, Bucher HU, Choi JH, Safonova LP, Gupta R, Toronov V, Michalos A, Paunescu LA , Niederer P, Gratton E. Near-infrared spectroscopy detects fast functional neuronal signals of the visual and motor cortex. World

Congress on Medical Physics and Biomedical Engineering, Sydney, Australia, 2003 (abstract).

38. Wolf U, Wolf M, Choi JH, Levi M, Choudhury D, Hull S, Coussirat D, Paunescu LA, Safonova LP, Michalos A, Mantulin WW, Gratton E. Maps of hemoglobin flow, concentration and oxygenation in human calf muscles with peripheral vascular disease detected by frequency-domain near infrared spectrophotometry. World Congress on Medical Physics and Biomedical Engineering, Sydney, Australia, 2003 (abstract).
39. von Siebenthal K, Fauchère JC, Dietz V, Keel M, Helfenstein U, Bänziger O, Bucher HU, Wolf M. Variability of cerebral haemoglobin concentration in very preterm infants during the first 6 hours of life. International Society on Oxygen Transport to Tissue, Rochester, USA, 2003 (abstract).
40. Wolf M, Wolf U, Choi JH, Safonova L, Gupta R, Toronov V, Michalos A, Paunescu LA, Gratton E. Fast functional neuronal signals of the visual and motor cortex measured by near-infrared spectroscopy. Organisation for Human Brain Mapping, New York, USA 2003 (abstract).
41. Wolf M, Toronov V, Wolf U, Choi JH, Safonova LP, Gupta R, Michalos A and Gratton E. Spatial correlation of cerebral hemoglobin concentration changes obtained by near-infrared spectroscopy during functional stimulation and rest. International Society on Oxygen Transport to Tissue, Manchester, UK, 2002 (abstract).
42. Wolf M, Wolf U, Choi JH, Safonova L, Gupta R, Toronov V, Michalos A, Paunescu LA, Gratton E. Functional fast neuronal signals in the visual and motor cortex detected by frequency-domain near-infrared spectroscopy. Optical Techniques in Neuroscience at the Optical Society of America Biomedical Topical Meetings, Miami FL, USA 2002. (paper in OSA Biomedical Topical Meetings Technical Digest, 2002; 205-207).
43. Wolf M, Wolf U, Choi JH, Guptal R, Safonova L, Paunescu LA, Michalos A, Gratton E. Detection of the fast neuronal signal of the motor cortex using functional frequency domain near infrared spectroscopy. International Society on Oxygen Transport to Tissue, Philadelphia PA, USA 2001 (abstract).
44. Wolf M, Franceschini MA, Paunescu LA, Toronov V, Michalos A, Wolf U, Gratton E, Fantini S. Absolute frequency-domain pulse oxymetry of the brain: Methodology and measurements. International Society on Oxygen Transport to Tissue, Hanover NH, USA 1999 (abstract).
45. Wolf M, Keel M, Dietz V, von Siebenthal K, Teller J, Bucher HU, Baenziger O. The influence of a clear layer on near infrared spectrophotometry: Comparison of measurements in a liquid neonatal head phantom to babies in vivo. International Society on Oxygen Transport to Tissue, Hanover NH, USA 1999 (abstract).
46. Wolf M, Baenziger O, Keel M, Dietz V, von Siebenthal K, Bucher HU. Testing near infrared spectrophotometry using a liquid neonatal head phantom. Europto, Stockholm, Sweden 1998 (paper in SPIE 1998; 3566: 79-86).
47. Wolf M, Weber O, Keel M, Golay X, Scheidegger M, Bucher HU, Kollias S, Boesiger P, Baenziger O. Comparison of cerebral blood volume measured by near infrared spectroscopy and contrast enhanced magnetic resonance imaging. International Society on Oxygen Transport to Tissue, Budapest, Hungary 1998 (abstract).
48. Wolf M, Keel M, Schenk D, Dietz V, von Siebenthal K, Baenziger O, Bucher HU. Comparison of Absolute Cerebral Haemoglobin Concentration in Neonates Measured Directly and by the Oxygen Swing Method Both Based on Near Infrared Spectrophotometry. Plenary Meeting of the EU cost shared project on NIRS & Imaging of Biological Tissue, Nice, France, 1997. (abstract)
49. Wolf M, Keel M, Schenk D, Dietz V, von Siebenthal K, Baenziger O, Bucher HU. Comparison of Absolute Cerebral Haemoglobin Concentration in Neonates Measured Directly and by the Oxygen Swing Method Both Based on Near Infrared Spectrophotometry. International Society on Oxygen Transport to Tissue, Milwaukee WI, USA 1997 (abstract).

50. Wolf M, Evans P, Bucher HU, Dietz V, Keel M, Strebel R, von Siebenthal K. The Measurement of Absolute Cerebral Haemoglobin Concentration in Adults and Neonates. International Society on Oxygen Transport to Tissue, Dundee, UK 1996 (abstract).
51. Wolf M, Bucher HU, Dietz V, Keel M, von Siebenthal K, Duc G. How to Evaluate Slow Oxygenation Changes to Estimate Absolute Cerebral Haemoglobin Concentration by Near Infrared Spectrophotometry. Fetal and Neonatal Physiological Measurements, Stoke-on-Trent, UK 1995 (abstract).
52. Wolf M, Bucher HU, Dietz V, Keel M, von Siebenthal K, Duc G. How to Evaluate Slow Oxygenation Changes to Estimate Absolute Cerebral Haemoglobin Concentration by Near Infrared Spectrophotometry. International Society on Oxygen Transport to Tissue, Pittsburgh PA, USA 1995 (abstract).
53. Wolf M, Lehareinger Y, Stettler B, et al. Improved Monitoring of Preterm Infants with Fuzzy Logic. First ICSC International Symposium on Fuzzy Logic Zurich, Switzerland 1995. (paper in proceedings 1995:C94-C96)
54. Wolf M, Bucher HU, Dietz V, Keel M, von Siebenthal K, Duc G. Report of the group of Zurich. Meeting of European Union Concerted Action on NIRS & Imaging of Biological Tissue, Rome, Italy 1995 (abstract 27).
55. Wolf M. Report of the group of Zurich. Meeting of European Union Concerted Action on NIRS & Imaging of Biological Tissue, Warsaw, Poland 1995 (abstract 9).
56. Wolf M, Bucher HU, Keel M, von Siebenthal K, Duc G. Estimation of Cerebral Blood Volume and Transit Time in Neonates from Quick Oxygen Increases Measured by Near-Infrared Spectrophotometry. International Society on Oxygen Transport to Tissue, Istanbul, Turkey 1994 (abstract).
57. Wolf M, Bucher HU, Dietz V, Keel M, von Siebenthal K, Duc G. Recurrent peaks in heart rate and blood pressure with drops in cerebral blood volume. Meeting of European Union Concerted Action on NIRS & Imaging of Biological Tissue, Bonn, Germany 1995 (abstract 30-31).
58. Wolf M, Duc G. The measurement of cerebral blood flow with NIRS. Inaugural Meeting of European Union Concerted Action on NIRS & Imaging of Biological Tissue, Chester, UK 1993 (abstract newsletter 1:28).
59. Wolf M. Die Messung der zerebralen Durchblutung beim Neugeborenen mit Infrarotspektrophotometrie. Methodik und Probleme. The day of research in Swiss Pediatrics, Bern, Switzerland 1992 (abstract).
60. Wolf M, Bucher H-U, Keel M, Duc G. Cerebral CO_2-Response in Neonates Studies by Near Infrared Spectroscopy. Fetal and Neonatal Physiological Measurements Nordweijkerhood, The Netherlands 1999. (paper in Excerpta Medica 1991; International Congress Series 967:77-81).

f) Posters Presented by Prof. Dr. Martin Wolf

1. Paiziev A, Wolf M, Kerimov F. Dorsiflexors muscle oxygenation during low, moderate, and maximal sustained isometric contractions. Conference of the International Society on Oxygen Transport to Tissue July 10th – 14th 2016 in Chicagio, IL, USA
2. Kleiser S, Nasseri N, Andresen B, Greisen G, Wolf M. Evaluation of near-infrared spectroscopic oximeters on a liquid phantom with adjustable oxygenation. European Academy of Paediatric Societies, Geneva, Switzerland, 21-25 Oct. 2016. (**Poster presentation**)
3. Mata Pavia J, Wolf M, Charbon E. High spatial resolution, time-resolved 3D near-infared imaging. Meeting of the National Competence Center for Biomedical Imaging (NCCBI), Zurich, Switzerland, 2011 (**abtract**)
4. Biallas M, Trajkovic I, Hagmann C, Scholkmann F, Holper L, Beck A, Jenny C, Wolf M. Multimodal recording of brain activity in term neonates during photic stimulation by near-

infrared imaging and electroencephalography. Conference of the European Society of Paediatric Research, Newcastle, UK, 2011 (**abtract**)

5. Holper L, Muehlemann T, Wolf M. Motor imagery measured by wireless functional near-infrared spectroscopy (fNIRS). Congress of the International Society on Oxygen Transport to Tissue, Ascona, Switzerland 2010 (**abstract)**
6. Jenny C, Biallas M, Trajkovic I, Wolf M. Reproducibility of cerebral tissue oxygen saturation measurements by near infrared spectroscopy in newborn infants. European Society for Pediatric Research, Copenhagen, Danmark 2010 (**abstract)**
7. Wolf M, Egli K, Karen T, Barbaro R, Bauschatz AS, Bucher HU. Effects of Erythropoietin on cerebral blood circulation measured by near-infrared spectroscopy in preterm neonates. European Society for Pediatric Research, Barcelona, Spain, 2006 (**abstract**).
8. Morren G, Haensse D, Karen T, Bauschatz A, Brown D, Bucher HU, M. Wolf. Novel Multichannel Near Infrared Spectrophotometry System: Functional Studies of the Visual Cortex in Neonates. Optical Society of America Biomedical Topical Meetings, Fort Lauderdale, FL, USA 2006. (paper in OSA Biomedical Topical Meetings Technical Digest, 2006)
9. Wolf M, Morren G, Haensse D. Nicht-invasive Hämatokritbestimmung mit Nahinfrarotspektroskopie: Eine Feasibility Studie. Medtechevent of Swiss Innovation Agency in Bern, Switzerland 2006.
10. Morren G, Karen T, Haensse D, Bauschatz A, Brown D, Bucher HU, M. Wolf. Investigation of the hemodynamic response to flash visual stimulation in sleeping neonates using near infrared spectroscopy. European Society for Pediatric Research, Siena, Italy 2005(**abstract** 258 in Ped Res 2005, 58: 398).
11. Wolf M, Bauschatz AS, Fauchère JC, Bucher HU, Niederer P, Haensse D. Near infrared spectrophotometry detects the neuronal activation induced by tactile, auditive and visual stimulation in term neonates. European Society for Pediatric Research, Stockholm, Sweden 2004 (**abstract** 273 in Ped Res 2004, 56: 510).
12. Stammwitz A, von Siebenthal K, Wolf M, Bucher HU. Prediction of cerebral outcome at 24 months in preterm infants by NIRS in the first 24 hours after birth. European Society for Pediatric Research, Stockholm, Sweden 2004 (**abstract** 245 in Ped Res 2004, 56: 505).
13. Haensse D, Szabo P, Fauchère JC, Bucher HU, Wolf M. Tactile stimulation in term neonates measured by non-invasive functional near-infrared spectroscopy. Organisation for Human Brain Mapping, Budapest, Hungary 2004 (**abstract**).
14. Haensse D, Szabo P, Fauchère JC, Bucher HU, Niederer P, Wolf M. Near infrared spectroscopy for induced cerebral oxygenation changes by tactile stimulation in term neonates. European Society for Pediatric Research, Bilbao, Spain 2003 (**abstract** in Ped Res 2003, 54: 594).
15. Wolf M, Wolf U, Haensse D, Szabo P, Fauchère JC, Bucher HU, Choi JH, Safonova LP, Gupta R, Toronov R, Michalos A, Paunescu LA, Gratton E. Fast functional neuronal signals of the visual and motor cortex measured by near-infrared spectroscopy. Joining Forces Symposium, ETH Zurich Switzerland 2003 (**abstract**)
16. Wolf M, Toronov V, Wolf U, Choi JH, Safonova LP, Gupta R, Michalos A, Gratton E. Spatial coherence patterns of cerebral hemoglobin concentration changes obtained by near-infrared spectroscopy during functional stimulation and rest. Third Inter-Institute Workshop on Diagnostic Optical Imaging and Spectroscopy, National Institute of Health, Bethesda, MD, USA 2002 (**abstract**).
17. Wolf M, Wolf U, Toronov V, Paunescu LA, Michalos A, Franceschini MA, Fantini S, Gratton E. Fast cerebral functional signals in the 100 ms range detected by frequency-domain near-infrared spectroscopy. Human Brain Mapping Congress, San Antonio TX, USA 2000 (**abstract** in Neuroimage 2000; 11(5): S515)

18. Wolf M, Toronov V, Wolf U, Paunescu LA, Michalos A, Gratton E. Maps of cerebral hemoglobin concentration changes obtained by near-infrared spectroscopy, Characterization of phase shifts among locations. Optical Society of America Biomedical Topical Meetings, Miami FL, USA 2000. (**paper** in OSA Biomedical Topical Meetings Technical Digest, 2000; 416-418).

g) Other presentations (Co-authorship)

1. Scholkmann F, Kleiser S, Ostojic D, Isler H, Bassler D, Wolf M, Karen T. Cerebral hemodynamic response in preterm neonates to visual stimulation measured with functional near-infared spectroscopy: Classification according to subgroups. 14th Symposium of the Zurich Center for Integrative Human Physiology, 31st Aug. 2018 in Zurich, Switzerland. (**abstract, poster, best poster award)**
2. Proença M, Grossenbacher O, Dasen S, Moser V, Ostojic D, Lemkaddem A, Ferrario D, Lemay M, Wolf M, Fauchère JC, Karen T. Performance Assessment of a Dedicated Reflectance Pulse Oximeter in a Neonatal Intensive Care Unit. 40th Annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC'18), Honolulu, HI, USA, on July 17-21, 2018.
3. Isler H, Kleiser S, Ostojic D, Scholkmann F, Karen T, Wolf M. Liquid blood phantoms to validate NIRS oximeters: Yeast versus nitrogen for deoxygenation. Conference of the International Society on Oxygen Transport to Tissue Aug. 19th – 23rd 2017 in Halle, Germany. (**talk**)
4. Jiang J, Kalyanov A, Ahnen L, Lindner S, Di Costanzo Mata A, Wolf M, Sánchez Majosa S. A new method based on virtual relative fluence detectors and software toolbox for handheld spectral optoacoustic tomography. Conference of the International Society on Oxygen Transport to Tissue Aug. 19th – 23rd 2017 in Halle, Germany. (**poster, posterflash**)
5. Jiang J, Ahnen L, Lindner S, Di Costanzo Mata A, Kalyanov A, Scholkmann F, Wolf M, Sánchez Majosa S. Discrimination of complex activation patterns in near infrared optical tomography with artificial neural networks. Conference of the International Society on Oxygen Transport to Tissue Aug. 19th – 23rd 2017 in Halle, Germany. (**poster, posterflash**)
6. Kalyanov A, Germanier C, Ahnen L, Jiang J, Lindner S, Di Costanzo Mata A, Sánchez Majos S, Rudin M, Wolf M. Multispectral near-infrared optical tomography for cancer hypoxia study in mice. Conference of the International Society on Oxygen Transport to Tissue Aug. 19th – 23rd 2017 in Halle, Germany. (**talk**)
7. Scholkmann F, Velasco Herrera G, Karen T, Isler H, Ostojic D, Velasco Herrera VM, Wolf U, Wolf M. Synchronized oscillations of arterial oxygen saturation, cerebral tissue oxygenation and heart rate in preterm neonates: Investigation of long-term measurements with multiple Einstein's cross wavelet analysis. Conference of the International Society on Oxygen Transport to Tissue Aug. 19th – 23rd 2017 in Halle, Germany. (**talk**)
8. Ulrich L, Ahnen L, Held KG, Jaeger M, Sanchez Majos S, Akarcay HG, Wolf M, Frenz M. Spectral correction for handheld OA imaging by means of near-infrared optical tomography. European Conference on Biomedical Optics, May 2017, Munich, Germany. (**talk**)
9. Isler H, Schenk D, Bernhard J, Scholkmann F, Kleiser S, Ostojic D, Bassler D, Wolf M, Karen T. Optical properties of early stool from preterm infants: Important to consider for abdominal oximetry based on near-infrared spectroscopy. Congress of the joint European Neonatal Societies, 31st of Oct. 4th of Nov. 2017, Venice, Italy. (**poster**)
10. Kleiser S, Ostojic D, Nasseri N, Isler H, Bucher HU, Bassler D, Wolf M, Scholkmann F, Karen T. Precision assessment of a novel cerebral tissue oximeter and effects of fluctuations in systemic and cerebral physiological parameters. Congress of the joint European Neonatal Societies, 31st of Oct. 4th of Nov. 2017, Venice, Italy. (**talk**)

11. Schwarz CE, Preusche A, Wolf M, Poets CF, Franz AR. Hemodynamic relevance of patent ductus arteriosus in preterm infants assessed by cerebral oxygenation of frequency domain near-infrared spectroscopy; echcardiographic and Doppler-ultrasound paramters and NT-PROBP: A prospective observational study. Congress of the joint European Neonatal Societies, 31st of Oct. 4th of Nov. 2017, Venice, Italy. (**poster**)
12. Stachel H, Karen T, Schenk D, Bernhard J, Scholkmann F, Kleiser S, Ostojic D, Bassler D, Wolf M. Messung der optischen Eigenschaften des Mekoniums und des Abdomens von Frühgeborenen mittels Nah-Infrarotspektroskopie. Congress of the Gesellschaft für Neonatologie und pädiatrische Intensivemedizin. 8th -10th of June 2017, Dresden, Germany. (**poster**)
13. Stachel H, Wolf M, Schenk D, Bernhard J. A new device to measure abdominal oxygenation to prevent shock in preterm patients. Swiss Medtech Day, 13th June 2017, Bern, Switzerland. (**poster**)
14. Quandt BM, Wolf M, Rossi R, Boesel L. Photonic textiles for continuous health monitoring. Swiss Medtech Day, 13th June 2017, Bern, Switzerland. (**Presentation at science slam: 2nd price**)
15. Scholkmann F, Kleiser S, Wolf M. Variations of prefrontal cortex oxygenation – A long-term (15 days) single subject study using non-invasive cerebral oximetry based on near-infrared spectroscopy. Neuroscience Center Zurich (ZNZ) Symposium 14th Sept. 2017, UZH Zurich, Zurich, Switzerland. (**poster)**
16. Kleiser S, Ostojic D, Nasseri N, Isler H, Bucher HU, Bassler D, Wolf M, Scholkmann F, Karen T. Precision assessment of a novel cerebral tissue oximeter and effects of fluctuations in systemic and cerebral physiological parameters. 13th Symposium of the Zurich Center for Integrative Human Physiology, 1st Sept. 2017 in Zurich, Switzerland. (**abstract, poster**)
17. Ahnen L, Stachel H, Kleiser S, Hagmann C, Jiang J, Kalyanov A, Lindner S, Wolf M, Sanchez S. Near-infrared iamge reconstruction of newborn's brains: development and validation of the light sensor prototype. 16th day of Clinical Research 9th Feb. 2017 Center for Clinical Research, University of Zurich, Zurich, Switzerland (**abstract 3688, poster**)
18. Jiang J, Wolf M, Sanchez Majos S. A new method based on graphics processing units for fast near infrared optical tomography. Conference of the International Society on Oxygen Transport to Tissue July 10th – 14th 2016 in Chicagio, IL, USA. **(abstract, poster)**
19. Effect of short-term colored light-exposure on cerebral and systemic physiological activity: A study applying systemic physiology complemented (SPC) fNIRS brain imaging. Conference of the International Society on Oxygen Transport to Tissue July 10th – 14th 2016 in Chicagio, IL, USA. **(abstract, talk)**
20. Ahnen L, Wolf M, Hagmann C, Sanchez S. Near-Infrared Image Reconstruction of Newborns' Brains: Development and Validation of the Light Sensor. Conference of the International Society on Oxygen Transport to Tissue July 10th – 14th 2016 in Chicagio, IL, USA. **(abstract, poster)**
21. Scholkmann F, Wolf M. A new approach to assess the complex coupling between cardiovascular activity and cerebral tissue oxygenation in preterm neonates: Multiscale convergent-cross mapping. 12th Symposium of the Zurich Center for Integrative Human Physiology, 26th Aug. 2016 in Zurich, Switzerland. **(abstract, poster)**
22. Scholkmann F, Hafner T, Wolf M, Wolf U. Systemic physiology complemented near-infrared spectroscopy (SPC-fNIRS): A novel methodology to better understand brain physiology. 12th Symposium of the Zurich Center for Integrative Human Physiology, 26th Aug. 2016 in Zurich, Switzerland. (**abstract, poster)**
23. Ostojic D, Scholkmann F, Wolf M. A new approach to calculate arterial oxygen saturation from blood volume pulsations measured on the human forehead using near-infrared spectroscopy NIRS. 15th day of Clinical Research 31st March 2016 Center for Clinical Research, University of Zurich, Zurich, Switzerland (**abstract 3466, poster**)

24. Scholkmann F, Wolf M. A new approach to assess the complex coupling between cardiovascular activity and cerebral tissue oxygenation in preterm neonates: Multiscale convergent-cross mapping. 15th day of Clinical Research 31st March 2016 Center for Clinical Research, University of Zurich, Zurich, Switzerland (**abstract 3469, poster**)
25. Kalyanov A, Germanier C, Sanchez Majos S, Rudin M, Wolf M. Imaging of hypoxia in cancer by multispectral near-infrared tomography. 15th day of Clinical Research 31st March 2016 Center for Clinical Research, University of Zurich, Zurich, Switzerland (**abstract 3517, poster**)
26. Stachel H, Wolf M, Schenk D, Bernhard J. A new device to measure abdominal oxygenation to prevent shock in preterm patients. Swiss Medtech Day, 7th June 2016, Bern, Switzerland. (**poster**)
27. Mata Pavia J, Wyser D, Kalyanov A, Germanier C, Rudin M, Wolf M. Hypoxia measurements on mice with near-infrared optical tomography (NIROT). 14th day of Clinical Research 9th April 2015 Center for Clinical Research, University of Zurich, Zurich, Switzerland (**abstract 2222, poster**)
28. Scholkmann F, Hafner T, Klein S, Metz A, Wolf M, Wolf U. Short-time effects of colored light exposure on human body and brain physiology - a multimodal functional near-infrared spectroscopy study. Post-Doc-Day 21st May 2015, Life Science, University of Zurich and ETHZ Switzerland, Schloss Au, Wädenswil, Switzerland. **(poster)**
29. Lindner S, Zhang C, Mata Pavia J, Antolovic IM, Charbon E, Wolf M. A circuit architecture for high throughput biological imaging applications.. Meeting of the National Competence Center for Biomedical Imaging (NCCBI) at ETHZ, Zurich, Switzerland, 28th of August 2015 (**abtract, poster**)
30. Stachel H, Schenk D, Wolf M, Bernhard J. A new device to measure abdominal oxygenation to prevent shock in preterm patients. CTI Medtech Event 8th Sept. 2015, Bern, Switzerland. **(poster)**
31. Scholkmann F, Wolf M. Removing movement artifacts from functional near-infrared spectroscopy (fNIRS) neuroimaging signals: A new approach using time-frequency decomposition and adaptive local regression. Neuroscience Center Zurich (ZNZ) Symposium 11th Sept. 2015, ETH Zurich, Zurich, Switzerland. (**poster)**
32. Kalyanov A, Germanier C, Rudin M, Wolf M. Near-infrared optical tomography of hypoxia in cancer: a preclinical study. Biomedical Photonics Network Meeting 11th Dec. 2015, University of Applied Sciences, Biel, Switzerland. (**oral)**
33. Ostojic D, Scholkmann F, Wolf M. A new approach to calculate arterial oxygen saturation from blood volume pulsations measured on the human forehead using nea r-infrared spectroscopy NIRS. Biomedical Photonics Network Meeting 11th Dec. 2015, University of Applied Sciences, Biel, Switzerland. (**poster)**
34. Scholkmann F, Wolf M, Wolf U. New insights into the physiological origin of fluctuations in fNIRS signals – A new analysis based on systemic physiology complemented (SPC) fNIRS brain imaging (SPC-fNIRS). Biomedical Photonics Network Meeting 11th Dec. 2015, University of Applied Sciences, Biel, Switzerland. (**oral)**
35. Scholkmann F, Hafner T, Wolf M, Wolf U. How the brain and body reacts to visual stimulations of different colors: A study using systemic physiology complemented fNIRS brain imaging. Biomedical Photonics Network Meeting 11th Dec. 2015, University of Applied Sciences, Biel, Switzerland. (**oral)**
36. Stachel H, Schenk D, Wolf M, Bernhard J. A new device to measure abdominal oxygenation to prevent shock in preterm patients. Biomedical Photonics Network Meeting 11th Dec. 2015, University of Applied Sciences, Biel, Switzerland. (**poster)**
37. Wyser D, Lambercy O, Scholkmann F, Wolf M, Gasser R. A novel wearable fNIRS device for measuring human brain activity in non-clinical environments. Biomedical Photonics Network Meeting 11th Dec. 2015, University of Applied Sciences, Biel, Switzerland. (**poster)**

38. Scholkmann F, Wolf M. Removing movement artifacts from functional near-infrared spectroscopy (fNIRS) neuroimaging signals: A new approach using time frequency decomposition and adaptive local regression. 11th Symposium of the Zurich Center for Integrative Human Physiology, 11th Sept. 2015 in Zurich, Switzerland. (**abstract, poster)**
39. Ahmedov D, Flück D, Rasmussen P, Lundby C, Wolf M, Sarnthein J. Assessing the effect of fatigue on EEG-EMG coherence. 10th Symposium of the Zurich Center for Integrative Human Physiology, 29th Aug. 2014 in Zurich, Switzerland. (**abstract, poster)**
40. Lindner S, Mata Pavia J, Charbon E, Wolf M. Optimization of single photon avalanche diodes for application in near-infrared imaging. Meeting of the National Competence Center for Biomedical Imaging (NCCBI) at EPFL, Lausanne, Switzerland, 20th of August 2014 (**abtract, poster**)
41. Hapuarachchi T, Scholkmann F, Caldwell M, Hagmann C, Kleiser S, Metz AJ, Pastewski M, Wolf M, Tachtsidis I. Simulation of neonatal brain metabolism during functional neuronal activation using a computational model. Neuroscience Center Zurich Symposium 11th Sept. 2014, University of Zurich, Switzerland. (**abstract, poster**)
42. Scholkmann F, Wolf U, Wolf M. Very-low frequency fluctuations in cerebral hemodynamics and oxygenation measured with fNIRS – New insights into their origin using capnography and time-frequency coherence analysis. Neuroscience Center Zurich Symposium 11th Sept. 2014, University of Zurich, Switzerland. (**abstract, poster**)
43. Scholkmann F, Caldwell M, Hapuarachchi T, Wolf U, Wolf M, Tachtsidis I. The significance of systemic changes (blood pressure and PaCO2) in functional studies using NIRS – An investigation using a mathematical model of brain physiology. fNIRS conference Oct. 10th to 12th 2014 in Montreal, Canada. (**abstract, talk**)
44. Scholkmann F, Klein S, Wolf M, Wolf U. The effect of colored different light exposures on human cerebral hemodynamics and oxygenation, as well as end-tidal pCO_2 and skin conductance – A multimodal fNIRS study. fNIRS conference Oct. 10th to 12th 2014 in Montreal, Canada. (**abstract, poster**)
45. Scholkmann F, Kleiser S, Pastewski M, Hapuarachchi T, Hagmann C, Fauchère JC, Tachtsisdis I, Wolf M. Characterizing fluctuations of arterial and cerebral tissue oxygenation in preterm neonates by means of data analysis techniques for nonlinear dynamical systems. Conference of the International Society on Oxygen Transport to Tissue June 28nd – July 3rd 2014 in London, UK. (**abstract, talk**)
46. Hapuarachchi T, Scholkmann F, Caldwell M, Hagmann C, Kleiser S, Pastewski M, Wolf M, Tachtsisdis I. Simulation of neonatal brain metabolism using a computational model. Conference of the International Society on Oxygen Transport to Tissue June 28nd – July 3rd 2014 in London, UK. (**abstract, talk**)
47. Nasseri N, Kleiser S, Reidt S, Wolf M. Local measurement of tissue oxygen saturation, an application of visible light spectroscopy. Conference of the International Society on Oxygen Transport to Tissue June 28nd – July 3rd 2014 in London, UK. (**abstract, poster**)
48. Kleiser S, Hyttel-Sorensen S, Greisen G, Wolf M. The effect of intralipid- and blood content in a liquid optical phantom on oxygenation values of different near-infrared oximeters. Conference of the International Society on Oxygen Transport to Tissue June 28nd – July 3rd 2014 in London, UK. (**abstract, poster**)
49. Ahnen L, Sanchez S, Hagmann C, Wolf M. Near-infrared image reconstruction of newborns' brains: stability under perturbations of the source/detector location. Conference of the International Society on Oxygen Transport to Tissue June 28nd – July 3rd 2014 in London, UK. (**abstract, poster**)
50. Scholkmann F, Wolf M, Wolf U. Very-low frequency fluctuations in cerebral hemodynamics and oxygenation measured with fNIRS – New insights into their origin using the Stockwell-transform coherence and phase coupling analysis. Conference of the International Society on Oxygen Transport to Tissue June 28nd – July 3rd 2014 in London, UK. (**abstract, poster**)

51. Schwarz C, Preusche A, Baden W, Wolf M, Poets C, Franz A. Weder echokardiographische Parameter (EchoP) noch NT-proBNP erlauben eine verlässliche Abschätzung der zerebralen Sauerstoffsättigung bei Frühgeborenen mit Verdacht auf persistierenden Ductus arteriosus Botalli (PDA). 40. Jahrestagung der Gesellschaft für Neonatologie und Pädiatrische Intensivemdizdin, Bonn, Germany, 26.-28. Juni 2014 (**abstract FV39, talk**)
52. Sanchez S, Mata Pavia J, Lindner S, Charbon E, Wolf M.Last generation near infrared imaging system. 13th day of Clinical Research 12th June 2014, Center for Clinical Research, Unversity of Zurich, Zurich, Switzerland (**abstract 2222, poster**)
53. Scholkmann F, Kleiser S, Pastewski M, Hapuarachchi T, Hagmann C, Fauchère JC, Wolf M. Using nonlinear data analysis and data mining to assess physiological changes in preterm infants measured with near-infrared spectroscopy, pulse oximetry and electrocardiography. 13th day of Clinical Research 12th June 2014, Center for Clinical Research, Unversity of Zurich, Zurich, Switzerland (**abstract 2216, poster**)
54. Mata Pavia J, Sanchez Majos S, Charbon E, Wolf M. Measurement and modeling of microlenses for sensitivity enhancement of novel near-infrared imager. 13th day of Clinical Research 12th June 2014, Center for Clinical Research, Unversity of Zurich, Zurich, Switzerland (**abstract 2245, poster**)
55. Metz AJ, Pugin F, Huber R, Achermann P, Wolf M. Changes of Cerebral Tissue Oxygen Saturation at Specific Sleep Transitions in Adolescents. Conference of the International Society on Oxygen Transport to Tissue June 22nd - 26th 2013 in Hanover, NH, USA. (**abstract, talk**)
56. Flück D, Bonne T, Jacobs RA, Sarnthein J, Wolf M, Lundby C. Why do we reach exhaustion when exercising? The effect of muscle and brain oxygenation. Biomedical Photonics Network Annual Meeting, 1st of Nov. 2013, Inselspital Bern, Switzerland (**abstract, talk**)
57. Sanchez S, Mata Pavia J, Wolf M. Time domain near infrared imaging system based on supercontinium laser and SPAD array for tumor oxygenation studies. Biomedical Photonics Network Annual Meeting, 1st of Nov. 2013, Inselspital Bern, Switzerland (**abstract, talk**)
58. Wolf U, Scholkmann F, Wolf M. pCO_2 as an important confounder in functional brain studies. Biomedical Photonics Network Annual Meeting, 1st of Nov. 2013, Inselspital Bern, Switzerland (**abstract, talk**)
59. Flück D, Bonne T, Jacobs RA, Sarnthein J, Wolf M, Lundby C. Why do we reach exhaustion when exercising? The effect of muscle and brain oxygenation. 9th Symposium of the Zurich Center for Integrative Human Physiology, 23rd Aug. 2013 in Zurich, Switzerland. (**abstract, talk**)
60. Scholkmann F, Holper L, Wolf U, Wolf M. An emerging paradigm in neuroscience: Assessing inter-brain coupling by functional near-infrared spectroscopy (fNIRS) or imaging (fNIRI) hyperscanning. Conference of the International Society on Oxygen Transport to Tissue June 22nd - 26th 2013 in Hanover, NH, USA (**abstract, talk**)
61. Egli C, Scholkmann F, Wolf M. A fresh look at functional near-infrared spectroscopy (fNIRS) signals – the local correlation approach. 12th day of Clinical Research 4th April 2013, Center for Clinical Research, Unversity of Zurich, Zurich, Switzerland (**abstract, poster**)
62. Zimmermann R, Braun F, Achtnich T, Lambercy O, Gassert R, Wolf M. Silicon photomultipliers bear potential for fNIRS instrumentation. Biomedical Photonics Network Annual Meeting, 1st of Nov. 2013, Inselspital Bern, Switzerland (**abstract, poster**)
63. Ostojic D, Kleiser S, Metz A, Pastewski M, Scholkmann F, Nassimsadat N, Wolf M. OxyPrem – A new wireless near-infrared spectroscopy (NIRS) device designed for measurements in neonates. Biomedical Photonics Network Annual Meeting, 1st of Nov. 2013, Inselspital Bern, Switzerland (**abstract, poster**)
64. Mata Pavia J, Charbon E, Wolf M. Measurement and modeling of microlenses mounted on single-photon avalanche diode array for a near-infrared imaging application. Biomedical

Photonics Network Annual Meeting, 1st of Nov. 2013, Inselspital Bern, Switzerland (**abstract, poster**)

65. Metz AJ, Scholkmann F, Achermann P, Wolf M. How to reduce movement artifacts in near-infrared spectroscopy (NIRS) time series using acceleration data – a new method. 12th day of Clinical Research 4th April 2013, Center for Clinical Research, Unversity of Zurich, Zurich, Switzerland (**abstract, poster**)
66. Quandt BM, Krehel M, Wolf M, Bona GL, Scherer LJ. Flexible polymer optical fibers for measurement of the pulse and blood oxygen saturation in reflection mode. Biomedical Photonics Network Annual Meeting, 1st of Nov. 2013, Inselspital Bern, Switzerland (**abstract, poster**)
67. Scholkmann F, Holper L, Wolf M Assessing inter-personal brain coupling using functional near-infrared imaging (fNIRI) hyperscanning: a new approach in neuroscience. 12th day of Clinical Research 4th April 2013, Center for Clinical Research, Unversity of Zurich, Zurich, Switzerland (**abstract, poster**)
68. Metz AJ, Pugin F, Huber R, Achermann P, Wolf M. Cerebral tissue oxygen saturation increases throughout the night in adolescents. Swiss Society for Sleep Research, Sleep Medicine and Chronobiology, Aarau, Switzerland 2013. (**abstract, poster**)
69. Metz AJ, Pugin F, Huber R, Achermann P, Wolf M. Cerebral haemodynamics and tissue oxygenation changes at specific sleep transitions in adolescents. Swiss Society for Sleep Research, Sleep Medicine and Chronobiology, Aarau, Switzerland 2013. (**abstract, poster**)
70. Pugin F, Metz AJ, Stauffer M, Rauch A, Jäncke L, Achermann P, Wolf M, Jenni O, Huber R. The effects of an intensive cognitive training on cognition and sleep EEG topography. Swiss Society for Sleep Research, Sleep Medicine and Chronobiology, Aarau, Switzerland 2013. (**abstract, poster**)
71. Mata Pavia J, Charbon E, Wolf M. 3D Near-Infrared Imaging Based on a Single-Photon Avalanche Diode Array Sensor: A New Perspective on Reconstruction Algorithms. Optical Society of America, Miami, Fl, USA 2012. (**abstract, talk**)
72. Scholkmann F, Gerber U, Wolf M, Klein S, Wolf U. The Strong Influence of CO2 on Cerebral Hemodynamics and Oxygenation During Functional Near-Infrared Spectroscopy (FNIRS) Studies. Optical Society of America, Miami, Fl, USA 2012. (**abstract, poster**)
73. Holper L, Scholkmann F, Wolf M. Between brain connectivity measured by wireless functional near infrared spectroscopy (fNIRS). NCCR Neuro Concluding Symposium and ZNZ Symposium, Zurich, Switzerland 2012. (**abstract, poster**)
74. S Scholkmann F, Mantel T, Trajkovic I, Wolf M. The dependence of the cerebral blood volume pulse amplitude on different body postures – a near infrared spectroscopy study. 11th Day of Clinical Research, Zurich, Switzerland 2012. (**abstract, poster**)
75. Demel A, Feilke K, Wolf M, Schöning M, Poets CF, Franz AR. Dynamics in Regional Cerebral Oxygenation Saturation (rcStO2) and Cerebral Blood Flow Volume (CBFV) in Moderately Preterm and Term Infants during the First Days of Life. Pediatric Academic Societies, Boston, MA, USA 2012. (**abstract, poster**)
76. Demel A, Schwarz C, Wolf M, Poets CF, Franz AR. Einfluss des Wassergehalts des Gehirns (WGG) auf die nahinfrarotspektroskopische Bestimmung der Konzentrationen von Oxy- (O2Hb) und Deoxyhämoglobin (HHb). Gesellschaft für Neonatologie und pädiatrische Intensivmedizin Konferenz, Hamburg, Germany 2012. (**abstract, poster**)
77. Hyttel-Sørensen S, Austin T, Benders M, Claris O, Dempsey G, Fumagalli M, Gluud C, Hagmann C, Hellström-Westas L, Lemmers P, Naulaers G, Pellicer A, Pichler G, Saem Støy L, van Bel F, van Oeveren W, Wolf M, Greisen G. Safeguarding the brains of our smalles children Safeboosc – the pilot study. 4th Congress of the European Academy of Paediatric Societies, Istanbul, Turkey 2012. (**abstract, poster**)

78. Holper L, Scholkmann F, Wolf M. Between-brain connectivity of premotor cortical signals during stimulus- versus self-paced imitation measured by fNIRS. Biomedical Photonics Network Meeting, Neuchâtel, Switzerland 2011. (**abstract, poster**)
79. Mata Pavia J, Charbon E, Wolf M. Towards the Design of a Single-photon Detector for Optical Tomography Applications. Biomedical Photonics Network Meeting, Neuchâtel, Switzerland 2011. (**abstract, poster**)
80. de Courten D, Baumman, L, Scherer L, Wolf M. Fiber Evanescent Wave Spectroscopy in the near Infrared for glucose sensing. Biomedical Photonics Network Meeting, Neuchâtel, Switzerland 2011. (**abstract, poster**)
81. Pugin F, Metz A, Stauffer M, Rauch A, Jäncke L, Achermann P, Wolf M, Jenni O, Huber R. Fuid intelligence test score correlates with sleep spindle activity in specific regions. Conference of the Zurich Centre for Integrative Human Physiology, Zurich, Switzerland 2011. (**abstract, poster**)
82. Metz AJ, Pugin F, Huber R, Jenni O, Jäncke L, Rauch A, Achermann P, Wolf M. Sleep in adolescence: The relation between brain tissue oxygen saturation and slow wave activity. Conference of the Zurich Centre for Integrative Human Physiology, Zurich, Switzerland 2011. (**abstract, poster**)
83. Metz AJ, Pugin F, Huber R, Jenni O, Jäncke L, Rauch A, Achermann P, Wolf M. Brain tissue oxygen saturation is related to slow wave activity in sleep: A multimodal study in adolescents. Biomedical Photonics Network Meeting, Neuchâtel, Switzerland 2011. (**abstract, poster**)
84. Zimmermann, R, Marchal-Crespo L, Lambercy O, Fluet MC, Riener R, Gassert R, Wolf M. What is you next move? Detecting movement intention for stroke rehabilitation. Meeting of the Neuroscience Center Zurich, Switzerland, 2011. (**abstract, poster**)
85. Demel A, Wolf M, Poets CF, Franz AR. Lower cerebral oxygen saturation in preterm compared with term infants during the first 24h hours of life. European Society of Paediatric Research Conference, Newcastle, UK, 2011. (**abstract, poster**)
86. Demel A, Feilke K, Wolf M, Schöning M, Poets CF, Franz AR. Dynamik der zerebralen Oxygenierung und Durchblutung bei Früh- und Neugeborenen. Forschungskolloquium at the University of Tübingen, Germany, 2011. (**abstract, poster**)
87. Zimmermann R, Marchal L, Lambercy O, Fluet MC, Riener R, Wolf M, Gassert R. Towards a BCI for Sensorimotor Training: Initial Results from Simultaneous fNIRS and Biosignal Recordings. 33rd Annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC'11), Boston, MA, USA, 2011. (**abstract, talk**)
88. Mata Pavia J, Charbon E, Wolf M. 3D Near-infrared Imaging based on a Single-photon Avalanche Diode Array Sensor, the Conferences on Biomedical Optics (ECBO), Munich, Germany, 2011 (**invited talk**).
89. Scholkman F, Wolf M. An improved method for automatic removal of movement artifacts in fNIRS signals. Conference of the International Society on Oxygen Transport to Tissue in Washington DC, USA (2011). (**abstract, talk**)
90. Metz AJ, Biallas M, Jenny C, Muehlemann T, Wolf M. The effect of basic assumptions on the tissue oxygen saturation value of near infrared spectroscopy. Conference of the International Society on Oxygen Transport to Tissue in Washington DC, USA (2011). (**abstract, talk**)
91. Scholkmann F, Klein S, Gerber U, Wolf M, Wolf U. Arts speech therapy effects and expiratory CO2, cerebral hemodynamics, oxygenation and HRV. Conference of the International Society on Oxygen Transport to Tissue in Washington DC, USA (2011). (**abstract, talk**)
92. Caicedo A, Naulaers G, Wolf M, Ameye L, Van Huffel S. Assessment of metabolic and myogenic activity in cerebral autoregulation for neonatal monitoring. Conference on Brain Monitoring and Neuroprotection, Amsterdam, the Netherlands 2011 (**abstract**).

93. Scholkmann F, Sieber OD, Holper L, Trajkovic I, Biallas M, Beck A, Wolf M. Using fractal dimension analysis to investigate hemodynamic signals measured with near-infrared spectroscopy on the human head. Biomedical Photonics Network Meeting Bern, Switzerland 2010 (**abstract, poster**).
94. Mata Pavia J, Niclass C, Wolf M, Charbon E. 3D near-infrared imaging based on a single-photon avalanche diode sensor. Biomedical Photonics Network Meeting Bern, Switzerland 2010 (**abstract, talk**).
95. Mata Pavia J, Niclass C, Charbon E, Wolf M. Optical tomography with a CMOS single-photon avalanche diode sensor (SPAD). Photonics Day EPFL, Lausanne, Switzerland 2010 (**abstract, poster**).
96. Demel A, Wolf M, Poets CF, Franz AR. Near-infrared-spectroscopy to determine cerebral oxygenation in neonates: Do absorption and scattering coefficients correlate with skin, bone, and cerebrospinalfluid thickness? European Society for Pediatric Research, Copenhagen, Danmark 2010 (abstract) (**abstract, poster**).
97. Reefmann N, Muehlemann T, Wolf M, Wechsler B, Gygax L. Simultaneous measurement of brain activity, physiology & behavior in large animals. Measuring Behavior conference, Eindhoven, The Netherlands (2010) (**paper** pages 38-40).
98. Weinzirl J, Wolf M, Heusser P, Wolf U. Colored light and brain and muscle oxygenation. Congress of the International Society on Oxygen Transport to Tissue, Ascona, Switzerland 2010 (**abstract**).
99. Biallas M, Trajkovic I, Scholkmann F, Hagmann C, Wolf M. How to conduct studies with neonates combining near‐infrared imaging and electroencephalography. International Society on Oxygen Transport to Tissue, Ascona, Switzerland (2010) (**abstract**).
100. Trajkovic I, Reller C, Wolf M. Modelling and Filtering of Physiological Oscillations in Near‐Infrared Imaging by Time‐Varying Fourier Series. International Society on Oxygen Transport to Tissue, Ascona, Switzerland (2010) (**abstract**).
101. Scholkmann F, Trajkovic I, Wolf M. Determining the pulse rate variability from near‐infrared spectroscopy measurements on the human forehead using adaptive heartbeat estimation algorithms. International Society on Oxygen Transport to Tissue, Ascona, Switzerland (2010) (**abstract**).
102. Scholkmann F, Spichtig S, Muehlemann T, Wolf M. Using a new algorithm to detect and reduce movement artifacts in near‐infrared imaging time series. International Society on Oxygen Transport to Tissue, Ascona, Switzerland (2010) (**abstract**).
103. Spichtig S, Scholkmann F, Chin L, Wolf M. Assessment of potential short‐term effects of intermittent UMTS electromagnetic fields on blood circulation in an exploratory study, using near‐infrared imaging. International Society on Oxygen Transport to Tissue, Ascona, Switzerland (2010) (**abstract**).
104. Caicedo A, Naulaers G, Wolf M, Lemmers P, van Bel F, Ameye L, Van Huffel S. Assessment of the Myogenic and metabolic mechanism influence in cerebral autoregulation using near‐infrared spectroscopy. International Society on Oxygen Transport to Tissue, Ascona, Switzerland (2010) (**abstract**).
105. Holper L, Muehlemann T, Wolf M. Motor imagery measured by wireless functional near‐infrared spectroscopy (fNIRS). International Society on Oxygen Transport to Tissue, Ascona, Switzerland (2010) (**abstract**).
106. Pizza F, Biallas M, Kallweita U, Wolf M, Bassetti CL. Nocturnal cerebral hemodynamics in acute stroke patients during sleep disordered breathing: a near infra‐red spectroscopy study. International Society on Oxygen Transport to Tissue, Ascona, Switzerland (2010) (**abstract**).
107. Caicedo A, Vanderhagen J, Naulaers G, Wolf M, Lemmers P, van Bel F, Ameye L, Van Huffel S. Impaired cerebral autoregulation and its relation to clinical outcomes in premature infants. 8th Belgian Day on Biomedical Engineering. Brussels, Belgium (2009) (**abstract**).

108. Wolf M, von Bonin D, Heusser P, Wolf U. Speech therapy changes blood circulation and oxygenation in the brain and muscle: A near-infrared spectrophotometry study. Congress of the International Society on Oxygen Transport to Tissue, Cleveland, USA (2009) (**abstract**).
109. Trajkovic I, Reller C, Loeliger HA, Wolf M. Modelling and Filtering Almost Periodic Signals by Time-Varying Fourier Series with Application to Near Infrared Spectroscopy. 17th European Signal Processing Conference, Glasgow, Scotland (2009) (**peer-reviewed paper**)
110. Spichtig S, Scholkmann F, Chin L, Wolf M. Do UMTS Fields Affect Blood Circulation of the Human Brain? A Near-Infrared Imaging Study. Biomedical Photonics Network Meeting St. Gallen, Switzerland (2009) (**abstract**).
111. Biallas M, Scholkmann F, Von der Grün C, Micholt AS, Lüchinger R, Marcar V, Haensse D, Wolf M. Detection of neuronal activity by near infrared imaging and EEG. Biomedical Photonics Network Meeting St. Gallen, Switzerland (2009) (**abstract**).
112. Wolf M, von Bonin D, Heusser P, Wolf U. Speech therapy changes blood circulation and oxygenation in the brain and muscle. Biomedical Photonics Network Meeting St. Gallen, Switzerland (2009) (**abstract**).
113. Biallas M, Scholkmann F, Von der Grün C, Micholt AS, Lüchinger R, Marcar V, Haensse D, Wolf M. Detection of neuronal activity by near infrared imaging and EEG. 8th Day of Clinical Research, University Hsopital Zurich, Switzerland (2009) (**abstract**).
114. Mühlemann Th. Haensse D, Wolf M. New applications of in vivo near infrared imaging in science and medicine. Biomedical Photonics Network Meeting at the EPMT, Lausanne, Switzerland (2008) (**invited talk**).
115. Wolf M, von Bonin D, Heusser P, Wolf U. Speech therapy changes blood circulation and oxygenation in the brain and muscle. Department of Clinical Research Day Universtiy Bern, Switzerland (2008) (**abstract**).
116. Fauchère JC, Dame C, Vonthein R, Arri SJ, Wolf M, Koller B, Bucher HU. Erythropoitin for Neuroprotection in preterm infants: feasibility and safety study. at the GNPI conference Zurich Switzerland (2008) (**abstract**).
117. Arri SJ, Ersch J, Mühlemann T, Haensse D, Fauchère JC, Bänziger O, Bucher HU, Wolf M. Effects of anaemia and red blood cell transfusion on cerebral oxygenation in premature infants as measured by near-infrared spectroscopy (NIRS). at the GNPI conference Zurich Switzerland (2008) (**abstract**).
118. Karen T, Wolf M, Nef R, Haensse D, Bucher HU, Schulz G, Fauchère JC. Vorhersagewert des CRIB-Scores bezüglich Mortalität und Morbidität bei Frühgeborenen < 32 0/7 SSW. at the GNPI conference Zurich Switzerland (2008) (**abstract**).
119. Mühlemann Th. Haensse D, Wolf M. A New Wireless Multichannel Near Infrared Imaging System. At the OSA conference St. Petersburg, FL, USA (2008) (**talk**).
120. Arri SJ, Ersch J, Mühlemann T, Haensse D, Fauchère JC, Bänziger O, Bucher HU, Wolf M. Effects of anaemia and red blood cell transfusion on cerebral oxygenation in premature infants as measured by near-infrared spectroscopy (NIRS). Day of clinical research, University Hospital Zurich, Switzerland (2008) (**talk**).
121. Arri SJ, Biallas M, Haensse D, Fauchère JC, Bucher HU, Wolf M. The precision of cerebral oxygenation and haemoglobin concentration measurements in neonates measured by near-infrared spectroscopy. at the ESPR meeting in Prague, Czechia (2007) (**talk**).
122. Fauchère JC, Dame C, Vonthein R, Arri SJ, Koller B, Wolf M, Bucher HU. Erythropoietin for neuroprotection in preterm infants: Feasibility and safety study. Zurich Center for Integrative Human Physiology, Zurich, Switzerland 2007 (**abstract**).
123. Mühlemann Th, Haensse D, Wolf M. A Wireless Near-Infrared Imaging Device. Zurich Center for Integrative Human Physiology, Zurich, Switzerland 2007 (**abstract**).
124. Arri SJ, Biallas M, Haensse D, Fauchère JC, Bucher HU, Wolf M. The precision of cerebral oxygenation and haemoglobin concentration measurements in neonates measured by near-

infrared spectroscopy. Zurich Center for Integrative Human Physiology, Zurich, Switzerland 2007 (**abstract**).

125. Wolf U, Hull S, Levi M, Gratton E, Wolf M. Hemoglobin flow and oxygenation in human calf muscle in patients with peripheral vascular disease, patients with risk factors and healthy subjects. Zurich Center for Integrative Human Physiology, Zurich, Switzerland 2007 (**abstract**).
126. Pizza F, Biallas M, Werth E, Valko P, Piccoli M, Wolf M, Bassetti C. Near Infrared Spectroscopy (NIRS) evidence for brain hemodynamic changes associated with periodic leg movement during sleep. Zurich Center for Integrative Human Physiology, Zurich, Switzerland 2007 (**abstract**).
127. Arri SJ, Biallas M, Haensse D, Fauchère JC, Bucher HU, Wolf M. The precision of cerebral oxygenation and haemoglobin concentration measurements in neonates measured by near-infrared spectroscopy. Biomedical Photonics Network, Zurich, Switzerland 2007 (**abstract**).
128. Pizza F1, Biallas M, Valco P, Siccoli M, Werth E, Wolf M, Bassetti CL. Changes in Nocturnal Cerebral Tissue Oxygenation and Hemodynamics in Stroke Patients during Sleep Apnea investigated by Near-Infrared Spectroscopy (NIRS). Biomedical Photonics Network, Zurich, Switzerland 2007 (**abstract**).
129. Arri SJ, Biallas M, Haensse D, Fauchère JC, Bucher HU, Wolf M. The precision of cerebral oxygenation and haemoglobin concentration measurements in neonates measured by near-infrared spectroscopy. Critical care medicine, Geneva, Switzerland 2007 (**abstract**).
130. Mühlemann Th, Haensse D, Wolf M. Ein drahtloser Sensor für die bildgebende in-vivo Nahinfrarotspektroskopie. Annual Conference of the Austrian, German and Swiss Societies of Biomedical Engineering 2006. (**paper** in proceedings, received the Poster Award of the Max Anliker Foundation).
131. Karen T, Wolf M, Nef R, Haensse D, Bucher HU, Schulze G, Fauchère JC. Changes in cerebral oxygenation as measured by near-infrared spectroscopy during early postnatal adaption in newborns delivered by vacuum extraction. European Society for Pediatric Research, Barcelona, Spain 2006 (**abstract**).
132. Morren G, Karen T, Bauschatz A, Haensse D, Brown D, Fauchère JC, Bucher HU, Wolf M. Near-infrared spectroscopy (NIRS) measures changes in local cerebral hemodynamics induced by visual stimulation in newborns. International Society on Oxygen Transport to Tissue, Brsibane, Australia 2005 (**abstract**).
133. Morren G, Karen T, Bauschatz A, Haensse D, Brown D, Fauchère JC, Bucher HU, Wolf M. Functional imaging of the human brain cortex using near-infrared spectroscopy (NIRS). 4th Day of Clinical Research, University Hospital Zurich 2005 (**abstract**).
134. Brown DW, Haensse D, Bauschatz A, Wolf M. Measurement of venous oxygen saturation with near-infrared spectroscopy. 4th Day of Clinical Research, University Hospital Zurich 2005 (**abstract**).
135. Brown DW, Haensse D, Bauschatz A, Wolf M. Venous Contribution to Tissue Oxygen Saturation in the Adult Human Head. International Society on Oxygen Transport to Tissue, Bari, Italy, 2004 (**abstract**).
136. Choi JH, Wolf M, Toronov VY, Michalos A, Gratton E. Spatio-temporal analysis of the cerebral spontaneous oscillation. Photonics West, San Jose CA, USA 2004 (**paper** in SPIE 2004; 5330: 29-37).
137. Haensse D, Szabo P, Fauchère JC, Bucher HU, Niederer P, Wolf M. Multichannel NIRS system for functional brainmapping of cerebral oxygenation changes and neural activity in preterm and term neonates. World Congress on Medical Physics and Biomedical Engineering, Sydney, Australia, 2003 (**abstract**).
138. Haensse D, Szabo P, Fellay J, Fauchère JC, Bucher HU, Niederer P, Wolf M. Artifact recognition for the automated processing of cerebral functional near infrared measurement

data in preterm and term neonates. World Congress on Medical Physics and Biomedical Engineering, Sydney, Australia, 2003 (**abstract**).

139. Wolf U, Wolf M, Choi JH, Levi M, Choudhury D, Hull S, Coussirat D, Paunescu LA, Safonova LP, Michalos A, Mantulin WW and Gratton E. Maps of hemodynamics and oxygenation in human calf muscles with peripheral vascular disease detected by frequency-domain near-infrared spectrophotometry. International Society on Oxygen Transport to Tissue, Manchester, UK, 2002 (**abstract**).
140. Michalos A, Safonova LP, Wolf U, Wolf M, Choi JH, Gupta R, Mantulin WW, Hueber DM, Barbieri B, Gratton E. Obstructive sleep apnea: Evaluation of brain oxygenation and hemodynamics by near-infrared spectroscopy. SLEEP conference of the American Academy of Sleep Medicine, USA 2002 (abstract SLEEP 25: A390-A391 547 Suppl. S, APR 15 2002)
141. Haensse D, Szabo P, Fauchère JC, Bucher HU, Niederer P, Wolf M. A new multichannel NIRS system for functional brainmapping of cerebral oxygenation changes in preterm and term neonates. International Society on Oxygen Transport to Tissue, Manchester, UK, 2002 (**abstract**).
142. Choi JH, Wolf M, Wolf U, Polzonetti C, Safonova LP, Gupta R, Michalos A, Mantulin WW and Gratton E. Noninvasive determination of optical properties of adult brain with frequency-domain near-infrared spectroscopy. Biomedical Optical Spectroscopy, Imaging & Diagnostics at the Optical Society of America Biomedical Topical Meetings, Miami FL, USA 2002. (**paper** in OSA Biomedical Topical Meetings Technical Digest, 2002; 144-147).
143. Safonova LP, Michalos A, Hueber DM, Wolf U, Wolf M, Choi JH, Gupta R, Polzonetti C, Barbieri B, Mantulin WW and Gratton E. Age correlated changes in cerebral hemodynamics assessed by near-infrared spectroscopy. Biomedical Optical Spectroscopy, Imaging & Diagnostics at the Optical Society of America Biomedical Topical Meetings, Miami FL, USA 2002. (**paper** in OSA Biomedical Topical Meetings Technical Digest, 2002; 149-151).
144. Michalos A; Safonova LP; Hueber DM; Wolf U; Wolf M; Choi JH; Gupta R; Polzonetti C; Barbieri B; Mantulin WW and Gratton E, Reduced cerebral Hemodynamic response in sleep disorders: A NIRS frequency-domain study. **(invited paper** in OSA Biomedical Topical Meetings Technical Digest, 2002).
145. Morren M, Wolf M, Wolf U, Choi JH, Gratton E, van Huffel S. Extraction of fast neuronal changes from multichannel, functional near infrared spectroscopy signals using independent component analysis. BiOS, SPIE, San Jose CA, USA 2002 (**paper** in SPIE in 2002, 4623: 68-76)
146. Michalos A, Safonova LP, Wolf U, Wolf M, Choi JH, Gupta R, Mantulin WW, Hueber DM, Barbieri B, Gratton E. Obstructive sleep apnea: Evaluation of brain oxygenation and hemodynamics by near-infrared spectroscopy. Sleep medicine, Chicago, USA 2002 (**abstract** in SLEEP 25: 547 Suppl. S APR 15 2002).
147. Toronov V, Webb AG, Choi JH, Wolf M, Safonova LP, Wolf U, Gratton E. Functional cerebral activation detected by frequency-domain near-infrared spectroscopy. Optical Technologies in Biophysics and Medicine SPIE, Saratov, Russia 2001 (**paper** in SPIE 2002, 4707: 92-96).
148. Wolf U, Wolf M, Choi JH, Paunescu LA, Michalos A, Safonova L, Gratton E. Mapping of hemodynamics with near infrared spectroscopy of the human calf tissue and the influence of the adipose tissue thickness. International Society on Oxygen Transport to Tissue, Philadelphia PA, USA 2001 (**abstract**).
149. Toronov V, Webb A, Jee Hyun Choi, Wolf M, Gratton E. Simultaneous assessment of human brain functional hemodynamics by magnetic resonance and near-infrared imaging. Medical Imaging, San Diego CA, USA 2001 (**paper** in SPIE 2001, 4320: 861-7).
150. Paunescu LA, Michalos A, Choi JH, Wolf U, Wolf M, and Gratton E. In vitro correlation between reduced scattering coefficient and hemoglobin concentration of human blood

determined by near-infrared spectroscopy. Photonics West, SPIE, San Jose CA, USA 2001 (**paper** in SPIE 2001, 4250: 319-326).

151. ToronovV, Webb A, Choi JH, Wolf M, Gratton E, Hueber D. Simultaneous functional magnetic resonance and near infared imaging of the adult brain. Photonics West, SPIE, San Jose CA USA 2001 (**paper** in SPIE 2001, 4250: 380-382).
152. Keller E, Wolf M, Martin M, Yonekawa Y. A new non-invasive method to estimate cerebral hemodynamics and oxygenation pattern in patients with cerebral vasospasm. 2nd price for the poster 7th International Conference on Cerebral Vasospasm, Interlaken, Switzerland 2000.
153. Toronov V, Fantini S, Franceschini MA, Filiaci M, Wolf M, Gratton E. Temporal analysis of fluctuations in cerebral hemodynamics revealed by near-infrared spectroscopy. Optical Technologies in Biophysics and Medicine SPIE, Saratov, Russia 1999 (**paper** in SPIE 2000, 4001: 224-227).
154. Franceschini MA, Toronov V, Filliaci ME, Wolf M, Michalos A, Gratton E, Fantini S. Real-time video of cerebral hemodynamics in the human brain using non-invasive optical imaging. Human Brain Mapping Meeting, San Antonio TX, USA 2001 (**abstract** in Neuroimage 2000; 11(5): S454)
155. Michalos A, Paunescu LA, Wolf M, Wolf U, Toronov V, Franceschini MA, Fantini S and Gratton E. Assessment of cerebral oxygenation and hemodynamics in obstructive sleep apnea syndrome. Optical Society of America Biomedical Topical Meetings, Miami FL, USA 2000. (**paper** in OSA Biomedical Topical Meetings Technical Digest, 2000: 163-165).
156. Franceschini MA, Toronov V, Filliaci ME, Wolf M, Michalos A, Gratton E, Fantini S. Real-time video of brain activation in human subjects using a non-invasive near-infrared technique. Optical Society of America Biomedical Topical Meetings, Miami FL, USA 2000. (**paper** in OSA Biomedical Topical Meetings Technical Digest, 2000: 265-267).
157. Paunescu LA, Wolf U, Wolf M, Michalos A, Gratton E. Scattering coefficient-hemoglobin concentration relation determined by frequency-domain spectroscopy during venous occlusion. Optical Society of America Biomedical Topical Meetings, Miami FL, USA 2000. (**paper** in OSA Biomedical Topical Meetings Technical Digest, 2000: 363-365).
158. Wolf U, Wolf M, Toronov V, Michalos A, Paunescu LA and Gratton E. Detecting cerebral function slow and fast signals by frequency-domain near-infrared spectroscopy using two different sensors. Optical Society of America Biomedical Topical Meetings, Miami FL, USA 2000. (**paper** in OSA Biomedical Topical Meetings Technical Digest, 2000: 427-429).
159. Toronov V, Wolf M, Michalos A, Gratton E, Webb A, Hueber D, Fantini S. Analysis of cerebral hemodynamic fluctuations measured simultaneously by magnetic resonance imaging and near-infrared spectroscopy. Optical Society of America Biomedical Topical Meetings, Miami FL, USA 2000. (**paper** in OSA Biomedical Topical Meetings Technical Digest, 2000: 461-463).
160. Keller E, Wolf M, Martin M, Yonekawa Y. A new non-invasive method to estimate cerebral hemodynamics and oxygenation pattern in patients with cerebral vasospasm. 2nd Conference on Cerebral Oxygenation Berlin, Germany 1999 (**abstract** in Neurochir., 1999, 60(1): 42)
161. Baenziger O, Stolkin F, Wolf M, Keel M, von Siebenthal K, Dietz V, Das-Kundu S, Bucher HU. The influence of placento-fetal transfusion (PFT) on the cerebral oxygenation of preterm neonates. European Society of Pediatric Research Annual Meeting, Copenhagen, Denmark 1999 (**abstract** in Ped. Res. 1999, 45, 63).
162. Keller E, Wolf M, Martin M, Yonekawa Y. A new non-invasive method to estimate cerebral hemodynamics and oxygenation pattern in patients with cerebral vasospasm. 3. Tagung Zerebrovask. Arbeitsgruppe Bern, Switzerland 1998 (**free presentation)**
163. Keel M, Dietz V, Schenk D, von Siebenthal K, Wolf M, Bucher HU. Sondenplatzierung an Frühgeborenen zur cerebralen Hämoglobinkonzentrationsmessung mit Nahinfrarotspektroskopie. Congress of the German-Austrain Society on Perinatology, Münster, Germany 1997 (**abstract**).

164. Bucher HU, Dietz V, Gasser K, Keel M, von Siebenthal K, Wolf M. Increase of cerebral haemoglobin concentration during the first 24 hours in preterm infants. European Society of Pediatric Research Annual Meeting, Szeged, Hungary 1997 (**abstract** in Ped Res 1997, 42: 390).
165. Schenk D, Wolf M, Bucher HU, Lehareinger Y, Niederer P. Alarm optimising by fuzzy logic in preterm infants monitoring. Computer Science Congress, Dortmund, Germany 1997 (**abstract** in Lecture Notes in Computer Science 1997, 1226: 574).
166. von Siebenthal K, Bucher H, Keel M, Dietz V, Helfenstein U, Wolf M, Duc G. Variability of total haemoglobin concentration (cHbc) during the first 6 hours of life in preterm infants. European Society of Pediatric Research Annual Meeting, Lyon, France 1996 (**abstract** in Ped Res 1996, 40: 552).
167. Bucher HU, Keel M, Wolf M, Dietz V, von Siebenthal K. Response of CBV to Changes in Arterial CO_2 in High Risk Preterm Infants: Interindividual Variation and Association with Intrcranial Haemogghage. Final meeting of European Union Concerted Action on NIRS & Imaging of Biological Tissue Lucerne, Switzerland 1996 (**abstract** Newsletter 20-21).
168. Bucher HU, Wolf M, Geering K, Lehareinger Y. Verbessertes Monitoring mit Fuzzy logic. Best poster at the congress of the Schweizer Gesellschaft für Intensivmedizin, Zurich, Switzerland 1995 (**abstract**).
169. Bucher HU, Jenni O, Wolf M, Keel M, von Siebenthal K, Duc G. Impact of central, obstructive and mixed apnea on cerebral haemodynamics in preterm infants. European Society of Pediatric Research Annual Meeting, Alicante, Spain 1995 (**abstract** in Pediatr Res 1995; 38: 427).
170. Lehareinger Y, Wolf M, Niederer P Medizin und Technik: Eine Forschungs- und Innovationsausstellung der ETH Zürich, Diagnose Projekt 1. (Poster)
171. von Siebenthal K, Keel M, Wolf M, Dietz V, Bucher HU, Duc G. Cyclic fluctuations in cerebral blood volume (CBV) and mean arterial blood pressure (MAP) in preterm infants. Pediatric week Holland (European Society of Pediatric Research) in Rotterdam, The Netherlands 1994 (**abstract** in Pediatr Res 1994, 36: A37).
172. Bucher HU, Jenni OG, von Siebenthal K, Wolf M, Keel M, Duc G. Effect of head elevated prone position (15°) on the incidence of apneas in preterm infants. Pediatric week Holland (European Society of Pediatric Research) in Rotterdam, The Netherlands 1994 (**abstract** in Pediatr Res 1994, 36: 9A).
173. Bucher HU, Moser T, von Siebenthal K, Wolf M, Keel M, Duc G. Sucrose reduces pain reaction to heel prick in preterm infants. A placebo controlled, randomized, and masked study. European Society of Pediatric Research Annual Meeting, Edinburgh, United Kingdom 1993 (**abstract** in Pediatr Res 1994, 35: 272).
174. Bucher HU, Wolf M, Keel M, Duc G. Aminophylline reduces cytochrome c oxidase in the brain of premature infants. European Society of Pediatric Research Annual Meeting Uppsala, Sweden (**abstract** in Pediatr Res 1992, 32: 613).
175. Bucher HU, Sundermann A, Keel M, Wolf M, Duc G. CO_2-reactivity of cerebral blood volume in healthy term neonates (**abstract** in Paediatr Neurol 1992).

Professional Activities

1. **Secretary** of the international fNIRS Society 2014 to date.
2. **Member of the committee** of the EXperimental and Clinical Imaging TEchnologies (EXCITE) Center Zurich, a collaboration between ETHZ, University Hospital Zurich and University of Zurich within the framework of the academic medicine 2014 to date.
3. **Director** of the Clinical Research Priority Program "Tumour Oxygenation", University Hospital Zurich 2012 to 2016 (www.to2.uzh.ch).

4. Member of **executive committee** of the collaborative project entitled "Safeguarding the brains of our smallest children - a feasibility randomised trial on near-infrared spectroscopy combined with treatment guideline in premature infants" 2012-2016.
5. **Member of the committee** of the Center for Imaging Sciences and Technologies ETHZ and University of Zurich 2011 to 2014.
6. **Past-President** of the International Society on Oxygen Transport to Tissue 2010-2011.
7. **President** of the International Society on Oxygen Transport to Tissue 2009-2010.
8. **President-elect** of the International Society on Oxygen Transport to Tissue 2008-2009.
9. **Member of the Executive Committee** of the International Society on Oxygen Transport to Tissue 2006 to 2008.
10. **Member of the board** of the Swiss Society for Optics and Microscopy SSOM 2005 to date.
11. **Member of the council** of the Circulation, Oxygen Transport and Haematology Section of the European Society of Pediatric Research 2005 to 2012.
12. **Co-founder** and **president** of the Biomedical Photonics Network, the Swiss society of professionals in Biomedical Optics since 2004.
13. **Co-chairperson** of the Scientific Search Committee of the Melvin H. Knisely Award of the International Society on Oxygen Transport to Tissue 2003.
14. **Member of the Executive Committee** of the International Society on Oxygen Transport to Tissue 2000 to 2003.
15. **Head** of the multi center study group of the EU concerted action on Near Infrared Spectroscopy and Imaging on the "Comparison of cerebral blood flow before and after a change in pCO_2 in neonates" 1994-1996.

Awards

1. **Scholkmann F**, Kleiser S, Ostojic D, Isler H, Bassler D, Wolf M, Karen T. Cerebral hemodynamic response in preterm neonates to visual stimulation measured with functional near-infared spectroscopy: Classification according to subgroups. Best poster award at 14th Symposium of the Zurich Center for Integrative Human Physiology, 31st Aug. 2018 in Zurich, Switzerland.
2. **Jiang J**, Ren W, Isler H, Kalyanov A, Lindner S, Di Costanzo Mata A, Rudin M, Wolf M. Validation and comparison of Monte Carlo method and finite element method in forward modeling for near infrared optical tomography. Britton Chance Award of the Conference of the International Society on Oxygen Transport to Tissue July 1st – 5th 2018 in Seoul, South Korea.
3. **di Costanzo-Mata A**, Jiang J, Lindner S, Ahnen L, Zhang C, Sánchez-Majos S, Kalyanov A, Charbon E, Wolf M. Time-resolved NIROT Pioneer system for imaging the oxygenation of the preterm brain. Duane Bruley Award of the Conference of the International Society on Oxygen Transport to Tissue July 1st – 5th 2018 in Seoul, South Korea.
4. **Scott Lindner** of the Biomedical Optics Research Laboratory received the best presentation Award of the Biomedical Photonics Network conference Dec. 11th 2017 in Bern, Switzerland.
5. **Scholkmann F**, Velasco Herrera G, Karen T, Isler H, Ostojic D, Velasco Herrera VM, Wolf U, Wolf M. Synchronized oscillations of arterial oxygen saturation, cerebral tissue oxygenation and heart rate in preterm neonates: Investigation of long-term measurements with multiple Einstein's cross wavelet analysis. Melvin H. Knisely Award of the Conference of the International Society on Oxygen Transport to Tissue Aug. 19th – 23rd 2017 in Halle, Germany.
6. **Isler H**, Kleiser S, Ostojic D, Scholkmann F, Karen T, Wolf M. Liquid blood phantoms to validate NIRS oximeters: Yeast versus nitrogen for deoxygenation. Britton Chance Award, Conference of the International Society on Oxygen Transport to Tissue Aug. 19th – 23rd 2017 in Halle, Germany.

7. **Jiang J**, Kalyanov A, Ahnen L, Lindner S, Di Costanzo Mata A, Wolf M, Sánchez Majosa S. A new method based on virtual relative fluence detectors and software toolbox for handheld spectral optoacoustic tomography. Duane Bruley Award of the Conference of the International Society on Oxygen Transport to Tissue Aug. 19th – 23rd 2017 in Halle, Germany.
8. **Kalyanov A**, Germanier C, Ahnen L, Jiang J, Lindner S, Di Costanzo Mata A, Sánchez Majos S, Rudin M, Wolf M. Multispectral near-infrared optical tomography for cancer hypoxia study in mice. Duane Bruley Award Conference of the International Society on Oxygen Transport to Tissue Aug. 19th – 23rd 2017 in Halle, Germany.
9. **Quandt BM**, Wolf M, Rossi R, Boesel L. Photonic textiles for continuous health monitoring. 2nd price for presentation at science slam: Swiss Medtech Day, 13th June 2017, Bern, Switzerland.
10. **Ahnen L** of the Biomedical Optics Research Laboratory received the Britton Chance Award of the International Society on Oxygen Transport to Tissue July 10th – 14th 2016 in Chicago, USA.
11. **Jiang J,** L Ahnen, A Kalyanov, S Lindner, M Wolf, S Sanchez MajosA New Method Based on Graphics Processing Units for Fast Near Infrared Optical Tomography. Bruley Award of the Conference of the International Society on Oxygen Transport to Tissue July 10th – 14th 2016 in Chicago, USA.
12. **Scholkmann F**, Kleiser S, Pastewski M, Hapuarachchi T, Hagmann C, Fauchère JC, Tachtsisdis I, Wolf M. Characterizing fluctuations of arterial and cerebral tissue oxygenation in preterm neonates by means of data analysis techniques for nonlinear dynamical systems. Lübbers Award of the conference of the International Society on Oxygen Transport to Tissue June 28nd - July 3rd 2014 in London, UK.
13. **Nasseri N**, Kleiser S, Reidt S, Wolf M. Local measurement of tissue oxygen saturation, an application of visible light spectroscopy. Bruley Award of the Conference of the International Society on Oxygen Transport to Tissue June 28nd - July 3rd 2014 in London, UK.
14. **Kleiser S**, Hyttel-Sorensen S, Greisen G, Wolf M. The effect of intralipid- and blood content in a liquid optical phantom on oxygenation values of different near-infrared oximeters. Bruley Award of the Conference of the International Society on Oxygen Transport to Tissue June 28nd - July 3rd 2014 in London, UK.
15. **Scholkmann F**, Wolf M, Wolf U. The effect of inner speech on arterial CO_2, cerebral hemodynamics and oxygenation – A functional NIRS study. Britton Chance Award of the International Society on Oxygen Transport to Tissue, Bruges, Belgium, 2012.
16. **Metz AJ**, Biallas M, Jenny C, Muehlemann T, Wolf M. The effect of basic assumptions on the tissue oxygen saturation value of near infrared spectroscopy. Duane F. Bruley Award of the International Society on Oxygen Transport to Tissue, Washington DC, USA, 2011.
17. **Scholkmann F**, Klein S, Gerber U, Wolf M, Wolf U. Arts speech therapy effects and expiratory CO_2, cerebral hemodynamics, oxygenation and HRV. Duane F. Bruley Award of the International Society on Oxygen Transport to Tissue, Washington DC, USA, 2011.
18. **Scholkmann F**, Spichtig S, Muehlemann Th, Wolf M won the best presentation Award of the "Centro Stefano Franschini" Award at the conference of International Society on Oxygen Transport to Tissue, Ascona, Switzerland 2010.
19. **Biallas M**, Trajkovic I, Scholkmann F, Hagmann C, Wolf M. How to conduct studies with neonates combining near‐infrared imaging and electroencephalography. Duane F. Bruley Award of the International Society on Oxygen Transport to Tissue, Ascona, Switzerland 2010.
20. **Trajkovic I**, Reller C, Wolf M. Modelling and Filtering of Physiological Oscillations in Near‐Infrared Imaging by Time‐Varying Fourier Series. Britton Chance Award of the International Society on Oxygen Transport to Tissue, Ascona, Switzerland 2010.
21. **Scholkmann F**, Spichtig S, Muehlemann Th, Wolf M won the Poster Award of the Heraeus the Seminar entitled "Optical Imaging of Brain Function" December 2009 in Bad Honnef, Germany funded by the "Wilhelm und Else Heraeus" foundation.

22. **Zimmermann B** won the Medal of ETH for his Master Thesis supervised by M. Wolf in 2009.
23. **Felix Scholkmann** won the Student International Award of the Industrie- und Handelskammer Bodensee-Oberschwaben for his Master Thesis supervised by M. Wolf in the Biomedical Optics Research Laboratory in 2008.
24. **Mühlemann Th**, Haensse D, Wolf M. Ein drahtloser Sensor für die bildgebende in-vivo Nahinfrarotspektroskopie. Poster Award of the Max Anliker Foundation at the Annual Conference of the Austrian, German and Swiss Societies of Biomedical Engineering 2006.
25. **Dr. D. W. Brown** of the Biomedical Optics Research Laboratory received the first Britton Chance Award of the International Society on Oxygen Transport to Tissue 2005.
26. Keller E, Wolf M, Martin M, Yonekawa Y. A new non-invasive method to estimate cerebral hemodynamics and oxygenation pattern in patients with cerebral vasospasm. Second price for the poster at the 7th International Conference on Cerebral Vasospasm, Interlaken, Switzerland 2000.
27. Jenni O, von Siebenthal K, Wolf M, Keel M, Duc G, Bucher HU. Effect of Nursing in the head elevated tilt position (15º) on the incidence of bradycardic and hypoxemic episodes in preterm infants. Pediatrics 1997, 100: 622-625. Award for the best scientific paper of the Gesellschaft für Neonatologie und Intensivmedizin 1998:
28. Melvin H. Knisely Award for **Wolf M** a young researcher with outstanding accomplishments of the International Society on Oxygen Transport to Tissue 1998.
29. Fred Bamatter award of the Schweizerischen Gesellschaft für Pädiatrie 1997, for excellent research in neonatology.
30. Bucher HU, Wolf M, Geering K, Lehareinger Y. Verbessertes Monitoring mit Fuzzy logic. The best poster at the congress of the Schweizer Gesellschaft für Intensivmedizin, Zurich, Switzerland 1995.