

Curriculum Vitae



Personal information

Dr. med. Dr. rer. nat. **Broser, Philip Julian**
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philip.broser@icloud.com
German, 10.10.1976
Bad Soden, Germany
married, three children

Current Position

1.04.2015 - ongoing
Consultant pediatric neurologist (OAmbf) with focus on
Epilepsy, Neuro-Muscular-Diseases,
Clinical Neurophysiology (Electro Myography),
Nerve and Muscle Ultrasound Imaging & Gait Laboratory.

Head of clinical Neurophysiology Unit
Department Neuropediatrics,
Ostschweizer Kinderspital, Sankt Gallen, Switzerland

Previous positions

1.01.2014 - 31.03.2015
Pediatrician, Neuropediatric Outpatient Clinic and
Neurosurgical Epilepsy Monitoring Unit
University Children's Hospital, Tübingen, Germany

1.08.2010 - 31.12.2013
Pediatric Specialist Trainee
University Children's Hospital, Tübingen, Germany

7.08.2008 - 31.7.2010
Pediatric Specialist Trainee
Institute of Child Health and Royal London Hospital, United Kingdom

1.08.2007 - 31.08.2008
Senior House Officer
East Kent University NHS Trust, Canterbury, United Kingdom

01.06.2003 - 31.07.2007
Project Leader 'Digital Neuroanatomy'
Max Planck Institute for Medical Research, Heidelberg

Education and training

01.09.2016

Pediatric Neurology Registration (Schwerpunkt Neuropädiatrie)

20.2.2014

Pediatric Specialist Registration (Facharzt für Kinderheilkunde)

24.11.2008

Dr. med. (**Summa Cum Laude**)

'Axonal arbor plasticity of the developing neocortex'

Max Planck Institute for Medical Research, Heidelberg

Prof. Sakmann

01.06.2003 - 09.10.2006

Dr. rer. nat. (**Summa Cum Laude**)

'Morphological image operators for quantitative Neurobiology'

Max Planck Institute for Medical Research, Heidelberg

Prof. Sakmann

15.04.1997 - 20.02.2006

Medical Approval

University of Heidelberg

15.04.1997 - 15.05.2002

Diploma in Mathematics

'Simulation von Strömungen in Blutgefäßen'

('Simulation of flow in blood vessels')

University of Heidelberg

1993 - 1996

Abitur (general university-level graduation)

Max-Beckmann-Schule, Frankfurt/Main

Certificates

01/2020

DEGUM-Stufe I, 'Muskel und Nervenultraschall'

10.11.2018

'Nerven und Muskel Sonographie', SGKN/SSNC, Bern

23.03.2018

'Faehigkeitsausweis Elektroneuromyographie', SGKN/SSNC, Bern

10.07.2017

'EMG (Electro Myography) - Zertifikat', DGKN, Darmstadt

14.07.2016

'EP (Evoked Potentials) - Zertifikat', DGKN, Darmstadt

28.05.2015

'EEG - Zertifikat', DGKN, Darmstadt

28.02.2015

'Qualifikation zur fachgebundenen genetischen Beratung', Stuttgart

15-17.9 / 21-24.10.2014

'Fachdidaktischen Basisqualifikation für Lehrende in der Medizin', Tübingen

Further education

04/2018, 11/2018

'Nerven und Muskel Sonographie', Muensterlingen, Ch.

27 - 28.04.2016

'Single Fibre EMG', Muskelzentrum , St. Gallen, Ch.

22 - 22.6.2013

'Grundkurs Paediatrische Echokardiographie', Tübingen.

Memberships

Schweizerische Gesellschaft für Neuropädiatrie, German Chamber of Physicians, Deutsche Gesellschaft für Kinderheilkunde, Deutsche Gesellschaft für klinische Neurophysiologie (DGKN), Royal College of Paediatrics and Child Health, Schweizerische Gesellschaft für Kinderheilkunde

Head of DGKN - commission: „Neuropädiatrie, Neurophysiologische Diagnostik, EMG und Nervensonographie bei Kindern“

Deputy head : Themenblock Nervensystem, Joint Medical Master, University of Sankt Gallen (HSG)

Awards and Distinctions

2. Preis der Anna-Müller-Grocholski Stiftung 2018 verliehen durch die Schweizerische Gesellschaft für Neuropädiatrie, für die Arbeit 'Single-Fibre EMG Analysis of the maturation of the neuromuscular endplate during reinnervation after traumatic nerve injury.'

doIT Software Award, NeuRA - Neuron Reconstruction Algorithm, Team Work, 2005

First in Hessen and fifth in the federal competition '**Jugend forscht**' in the specialist area chemistry with the work: 'Die Polymerase Kettenreaktion - PCR', 1997

Additional information

Appointment offer received

W3 Neuropediatrics, University of Kiel: declined 03/2020

Selected Publications

P. J. Broser, T. Middelmann, D. Sometti, and C. Braun. Optically pumped magnetometers disclose magnetic field components of the muscular action potential. (*Submitted to Journal of Electromyography and Kinesiology*), Preprint: <https://www.biorxiv.org/content/10.1101/2020.07.30.228882v1>, (2020)

C. Jenny, J. Luetschg, and P. J. Broser. Change in cross-sectional area of the median nerve with age in neonates, infants and children analyzed by high-resolution ultrasound imaging. *European Journal of Paediatric Neurology*, 2020

P. J. Broser and Juerg Luetschg. Die Bedeutung Neurophysiologischer Methoden in der Abklaerung neuropaediatrischer und neuromuskulaerer Erkrankungen. *Monatsschrift Kinderheilkunde*, 2019

P. J. Broser and Juerg Luetschg. Elektroneurografische und elektromyografische Diagnostik in der Neuropaediatric. *Klinische Neurophysiologie*, 2019

P. J. Broser, S. Knappe, D. S. Kajal, N. Noury, O. Alem, V. Shah, and C. Braun. Optically Pumped Magnetometers for Magneto-Myography to Study the Innervation of the Hand. *IEEE Trans Neural Syst Rehabil Eng*, 26(11):2226–2230, Nov 2018

D. Zieglgaensberger and P. Broser. Epilepsie-Behandlung - Grundsätze der medikamentösen Therapie. *InFo Neurologie u. Psychiatrie*, 33:95–101, 2018

P. Broser and O. Maier. Fruehe infantile epileptische Enzephalopathien (Early Infantile Epileptic Encephalopathies). *Epileptologie*, 33:95–101, 2016

P. Broser, V. Moor, and C. Braun. A non-magnetic rotating disk stimulator for the study of neuromagnetic correlates of sensorimotor interaction. *IEEE Trans Neural Syst Rehabil Eng*, Mar 2015

M. Ginger, P. Broser, and A. Frick. Three-dimensional tracking and analysis of ion channel signals across dendritic arbors. *Front Neural Circuits*, 7:61, 2013

P. J. Broser, S. Groeschel, T. K. Hauser, K. Lidzba, and M. Wilke. Functional MRI-guided probabilistic tractography of cortico-cortical and cortico-subcortical language networks in children. *Neuroimage*, 63(3):1561–1570, Nov 2012

P. J. Broser and C. Braun. Hydraulic driven fast and precise nonmagnetic tactile stimulator for neurophysiological and MEG measurements. *IEEE Trans Biomed Eng*, 59(10):2852–2858, Oct 2012

P. Broser, F. Vargha-Khadem, and C. A. Clark. Robust subdivision of the thalamus in children based on probability distribution functions calculated from probabilistic tractography. *Neuroimage*, 57(2):403–415, Jul 2011

P. J. Broser, D. J. Wallace, V. Grinevich, P. Osten, and Sakmann B. Critical period plasticity of axonal arbours of layer 2/3 pyramidal neurons in rat somatosensory cortex: layer specific reduction of projections into deprived cortical columns. *Cerebral Cortex*, 18(7), 2008

M. Oberlaender, R. Bruno, B. Sakmann, and P. Broser. Transmitted Light Brightfield Mosaic Microscopy for 3D Tracing of Single Neuron Morphology. *J Biomedical Optics*, 12(6), 2007

Practical Courses

16.01.1997 - 16.02.1997, Village hospital of Vina del Mar, Chile.

02.03.1998 - 13.03.1998, DLR, Köln, Flight physiology.

21.08.1996 - 27.09.1996, Metabolic laboratory of Hoechst AG.

Personal interests & Other Activities

Former member of the municipal council of the village Dussslingen (Gemeinderat).
Playing the Piano, Electronics and microcontroller programming for model airplane control, Snowboarding, Swimming.