



Leuven ChildBrain conference 2019

Venue: Justus Lipsiuszaal (08.16), in Erasmushuis, Blijde-Inkomstraat 21, 3000 Leuven.

Tuesday 5th February

Time	Description
9:00 – 12:00	Pre-conference: Methodological demo sessions Raúl Granados Barbero, Sam van Bijnen, Simon Homölle, <i>Acquisition and application of head models in children brain data.</i>
12:00 – 13:30	Registration Lunch
13:30 – 13:45	Welcome
13:45 – 16:50	Atypical neurodevelopment
13.45	Prof. Fabio Richlan, ' <i>Development of the functional neuroanatomy of reading and dyslexia</i> '.
14.35	Gloria Romagnoli, ' <i>Language lateralisation and Brain asymmetries in typical and atypical neurodevelopment</i> '.
15:00 – 15:30	Coffee Break
15:30	Dr. Jolijn Vanderauwera & Dr. Astrid De Vos, ' <i>Emergence of the neural reading and auditory network in children with dyslexia</i> '.
16:20	Praghajeeth Raajhen, ' <i>Attention processes in children with attentional problems and in children with dysfluent reading skills as revealed using brain event-related potential</i> '.
16:40	Cecilia Mazzetti, ' <i>Methylphenidate normalizes patterns of premotor beta desynchronization in ADHD children in preparation to a cued target</i> '.
17:00 – 18:00	Poster session + reception



Wednesday 6th February

Time	Description
9:00 – 12:10	Typical neurodevelopment
9:00	Prof. Victoria Leong, ' <i>Parent-infant neural connectedness and early learning</i> '.
9:50	Thanh Vân Phan, ' <i>Structural brain connectivity algorithms for measuring the developing brains</i> '.
10:10 – 10:40	Coffee break
10:40	Dr. Elizabeth Huber, ' <i>The role of white matter in cognitive development</i> '.
11:30	Weiyong Xu, ' <i>Brain Responses to Letters and Speech Sounds and Their Correlations with Cognitive Skills Related to Reading in Children</i> '.
11:50	Diandra Brkic, ' <i>Network topology in dyslexia</i> '.
12:10 – 13:30	Lunch
13:30 – 17:00	Methodological advances for pediatric neuroimaging
13:30	Prof. Jens Haueisen, ' <i>Dry multipin electrodes for EEG</i> '.
14:20	Marios Antonakakis, ' <i>Combined EEG/MEG source analysis for presurgical epilepsy diagnosis using calibrated realistic volume conductor models</i> '.
14:40 - 15:10	Coffee Break
15:10	Prof. Dante Mantini, ' <i>Studying frequency-dependent functional interactions in the human brain using high-density EEG</i> '.
16:00	Simon Homölle, ' <i>Improving EEG source modelling using 3-D scanned electrode locations and head geometry</i> '.
16:20	Amit Jaiswai, ' <i>Comparison of beamformer implementations and development of a beamforming pipeline for robust source localization in MEG</i> '.
16:40	Maria Carla Piastra, ' <i>Sensitivity to realistic head models of SNR maps of cortical and subcortical sources in EEG and MEG</i> '.
18:30	Social activity + dinner



Thursday 7th February

Time	Description
9:00 – 12:00	Future perspectives
9:00	Prof. Frederic Maes, <i>'Deep learning for neuroimaging research'</i>
9:50	Ehsan Darestani Farahani, <i>'Amplitude modulated sounds elicit non-primary cortical responses from sources beyond the auditory pathway'</i>
10:10 – 10:40	Coffee break
10:40	Prof. Mc Laughlin, <i>'Transcutaneous alternating current stimulation (tACS)'</i>
11:30	Prof. Matthew Brookes, <i>'Wearable Magnetoencephalography: The next generation in paediatric functional brain imaging.'</i>
12:20	Concluding session by ChildBrain coordinator Paavo Leppänen
12:30 – 13:00	Lunch



Key Publications of the invited speakers:

Fabio Richlan - <https://ccns.sbg.ac.at/people/richlan/>

-Martin, A., Kronbichler, M., & **Richlan**, F. (2016). *Dyslexic brain activation abnormalities in deep and shallow orthographies: A meta-analysis of 28 functional neuroimaging studies*. Human Brain Mapping. <https://doi.org/10.1002/hbm.23202>

-Martin, A., Schurz, M., Kronbichler, M., & **Richlan**, F. (2015). *Reading in the brain of children and adults: A meta-analysis of 40 functional magnetic resonance imaging studies*. Human Brain Mapping, 36(5), 1963–1981. <https://doi.org/10.1002/hbm.22749>

Jolijn Vanderauwera - <https://www.kuleuven.be/wieiswie/en/person/00085485>

-**Vanderauwera**, J., Wouters, J., Vandermosten, M., & Ghesquière, P. (2017). *Early dynamics of white matter deficits in children developing dyslexia*. Developmental Cognitive Neuroscience, 27. <https://doi.org/10.1016/j.dcn.2017.08.003>

Astrid De Vos - <https://www.kuleuven.be/wieiswie/en/person/00079083>

-**De Vos**, A., Vanvooren, S., Vanderauwera, J., Ghesquière, P., & Wouters, J. (2017). *A longitudinal study investigating neural processing of speech envelope modulation rates in children with (a family risk for) dyslexia*. Cortex, 93. <https://doi.org/10.1016/j.cortex.2017.05.007>

Victoria Leong - <https://www.psychol.cam.ac.uk/people/vvec2>

-**Leong**, V., Byrne, E., Clackson, K., Harte, N., Lam, S., & Wass, S. (2017). *Speaker gaze changes information coupling between infant and adult brains*. Proceedings of the National Academy of Sciences of the USA (PNAS) <https://doi.org/10.1073/pnas.1702493114>

-Wass, S.V., Noreika, V., Georgieva, S., Clackson, K., Brightman, L., Nutbrown, R., Santamaria, L., & **Leong**, V. (2018). *Parental neural responsivity to infants' visual attention: how mature brains influence immature brains during social interaction*. PloS Biology. <https://journals.plos.org/plosbiology/article?id=10.1371/journal.%20pbio.2006328>

Elizabeth Huber - https://www.researchgate.net/scientific-contributions/2144431355_Elizabeth_Huber

-**Huber**, E., Donnelly, P.M., Rokem, A., Yeatman J.D., *Rapid and widespread white matter plasticity during an intensive reading intervention*. December 2018 Nature Communications 9(1) DOI: 10.1038/s41467-018-04627-5

-**Huber**, E., Donnelly, P.M., Rokem, A., Yeatman J.D., *Reading intervention induces change in white matter and behavior*. August 2017 Journal of Vision 17(10):1104 DOI: 10.1167/17.10.1104



Jens Haueisen - <https://www.tu-ilmenau.de/bmti/fachgebiete/biomedizinische-technik/prof-dr-ing-habil-jens-haueisen/>

-Fiedler, P., Muhle, R., Griebel, S., Pedrosa, P., Fonseca, C., Vaz, F., ... **Haueisen**, J. (2018). *Contact Pressure and Flexibility of Multipin Dry EEG Electrodes*. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 26(4), 750–757.

<https://doi.org/10.1109/TNSRE.2018.2811752>

-Fiedler, P., Pedrosa, P., Griebel, S., Fonseca, C., Vaz, F., Supriyanto, E., ... **Haueisen**, J. (2015). *Novel Multipin Electrode Cap System for Dry Electroencephalography*. Brain Topography, 28(5), 647–656. <https://doi.org/10.1007/s10548-015-0435-5>

Dante Mantini - <https://www.neuroscience.ox.ac.uk/research-directory/dante-mantini>

-Liu, Q., Farahibozorg, S., Porcaro, C., Wenderoth, N., & **Mantini**, D. (2017). *Detecting large-scale networks in the human brain using high-density electroencephalography*. Human Brain Mapping, 38(9), 4631–4643. <https://doi.org/10.1002/hbm.23688>

-Liu, Q., Ganzetti, M., Wenderoth, N., & **Mantini**, D. (2018). *Detecting Large-Scale Brain Networks Using EEG: Impact of Electrode Density, Head Modeling and Source Localization*. Frontiers in Neuroinformatics, 12, 4. <https://doi.org/10.3389/fninf.2018.00004>

Ehsan Darestani Farahani - <https://www.kuleuven.be/wieiswie/en/person/00100203>

-**Farahani**, E. D., Wouters, J. & van Wieringen, A. *Contributions of non-primary cortical sources to auditory temporal processing*. In review

-**Farahani**, E. D., Goossens, T., Wouters, J., & van Wieringen, A. (2017). *Spatiotemporal reconstruction of auditory steady-state responses to acoustic amplitude modulations: Potential sources beyond the auditory pathway*. NeuroImage, 148, 240–253.

<https://doi.org/10.1016/j.neuroimage.2017.01.032>

Frederik Maes - <https://www.kuleuven.be/wieiswie/en/person/00007203>

-Stamile, C., Kocevar, G., Cotton, F., **Maes**, F., Sappey-Marinié D., Van Huffel, S. *Multiparametric Non-Negative Matrix Factorization for Longitudinal Variations Detection in White-Matter Fiber*.

Bundles Institute of Electrical and Electronics Engineers (IEEE) Journal of Biomedical and Health Informatics; 2017; Vol. 21; iss. 5; pp. 1393 - 1402

Myles Mc Laughlin - <https://www.kuleuven.be/wieiswie/en/person/00043883>

-Khatoun, A., Breukers, J., Op de Beeck, S., Nica, I. G., Aerts, J.M., Seynaeve L., Haeck T., Asamoah B., **Mc Laughlin**, M., *Using high-amplitude and focused transcranial alternating current stimulation to entrain physiological tremor*. Nature Publishing Group Scientific Reports; 2018; Vol. 8; iss. 1; pp. -

-Asamoah B*, Khatoun A*, **Mc Laughlin** M. *Joint 1st author. *tACS motor system effects can be caused by transcutaneous stimulation of peripheral nerves*, Nature Communications. Accepted Nov, 2018.



Practical Information:

Arriving in Leuven:

Coming to Leuven, Louvain in French, from Zaventem airport (BRU) should not take more than fifteen minutes by train. You can buy the tickets there, keep in mind that the Ticket Vending Machines only accept coins or cards, but there is also a regular ticket window, see opening hours.

http://www.brusselsairport.be/en/passngr/to_from_brussels_airport/train/

<http://www.belgianrail.be/jp/sncb-nmbs-routeplanner/query.exe/en>

Once you are at Leuven train station you will notice that there are two ways out, take the exit named Centrum to go to the city centre.

Mobility and transportation:

Unless you have a car or motorbike, the best ways to travel around Leuven are:

By bike: In this link you will find information about renting a bike:

<http://www.kuleuven.be/velo/fietspunteng.html>

By bus: <https://www.delijn.be/en/> this is the official website to check routes and to find all the information. Tickets can be bought at different places around Leuven, there are daily tickets, ten trip ticket... You will find all the information regarding bus tickets and where to buy them here:

<https://www.delijn.be/en/vervoerbewijzen/verkooppunten/voorverkooppunt-in-uw-buurt.html> (type Leuven in the search box)

The venue where the conference is held is the room Justus Lipsiuszaal (08.16), in Erasmushuis, Blijde-Inkomstraat 21, 3000 Leuven.

Accommodation:

There are several hotels nearby, within 200m, making it easy to go on foot everyday. Some of them are:

Hotel Binnenhof: <https://www.hotelbinnenhof.be/>

Martin's Klooster Hotel: <https://www.martinshotels.com/en/hotel/klooster-hotel>

Theater Hotel: <https://lodge-hotels.be/nl/hotels/b/theater-hotel-leuven>

Hotel ibis Leuven Centrum (Not to be confused with IBIS Leuven Budget): <http://ibis-leuven-centrum.hotel-rez.com/index.htm>
