

MP Newsletter



Institute Retreat 2016: Blaubeuren

We are happy to announce that this year's retreat will be an intense trip to **Blaubeuren** within the so called Swabian jungle only 1,5 h away.

We plan to stay in the University's guest house **Heinrich-Fabri-Institut** to hold the "*On the Tracks of Brain and Sleep*" conference.

The conference will be embedded in a "*walk'n'talk*" in the beautiful hiking surrounding including, a camp fire barbecue, Blitz-talks in the wilderness and lots of other fun activities (depending on the weather). The retreat lasts for three days from the morning of Wednesday to the evening of Friday. Since we do not have the Sardinian climate the retreat will take place at the beginning of September. You will be able to vote on three dates via doodle soon.

Suggestions for a keynote speaker are still being considered, so if you have a suited speaker we are happy to hear your suggestion. The travel to and back from the retreat site might be by a hired bus which everyone is encouraged to take. We require your feedback if you like this option or if you rather plan to take own transportation to get on site (e.g. if you are planning to stay longer or arrive earlier). A detailed program will be announced in due time. We are open for further suggestions and other activities and if you are planning to stay for the following weekend to extend the retreat.

— Albrecht Vorster and Freddy Weber!

Philosophy Corner @Colloquium

by MONI SCHÖNAUER

Exciting news for the Institute's Colloquium: We will now regularly hold a Philosophy Corner @Colloquium!

Susanne Diekelmann kicked off this section with a talk about the thought experiment *What Mary didn't know?* In this experiment, Frank Jackson puts the concept of physicalism - the view that the universe, including all that is mental, is entirely physical - to a test. He poses the following problem: If someone who has always lived in a black-and-white environment and has, therefore, never seen color before, would know every detail there is to know about the physical process of color vision, will they still learn something new when they enter a colorful environment and see colors for the first time? The essential question here is whether qualia, the subjective, qualitative properties of experiences, exist as something separate from the purely physical. During the lively discussion that followed Susi's introduction to the problem, we assessed our deep-rooted beliefs about the human mind and brain and considered how Jackson's assumption as well as our own taking on the matter can be reconciled with what we know from our working experience.

Next to reflecting on deeply philosophical questions like "Are there such things as qualia? What evidence do and can we have?" talks in the Philosophy Corner @Colloquium could be aimed at discussing ethics in science, integrity in research as well as contemporary issues like reproducibility, that are not strictly topics of research in the institute, but are nonetheless very relevant to our day to day work in the sciences.

If you have ideas for talks in this section or feel that a topic of interest should be discussed, please don't

hesitate to contact Andreas Ray or Monika Schönauer who organize the Colloquium!

Frühlingsfest - Why not?

by CARLOS OYANEDEL

After the big success of the Christmas Royale last year, the Creativity Section of the Communication Committee decided to organise a new get-together evening in order to keep our internal institute connections high (or tight, depending on how you would like to see it, and handle them). Anyways, there are plenty of reasons why we would like to do something like that - let's call it *Frühlingsfest* - but the main reason is to welcome the new season: the lovely spring. Spring refers not only to one of the convention calendar season, but also to different ideas, like re-growth, rejuvenation, renewal, we start getting more active, motivated, the sun is shining, and all the good vibes involved synchronise, just like the cortex and hippocampus during SWS, in a way to keep ourselves in a - more or less - constant state of happiness. Then...

What do we offer: A get-together evening, with live music, drinks, nice atmosphere (optional), BBQ (optional), games (optional), talks (most likely), and more.

When: **Friday the 13th of May**, starting at 19 hrs. *Where:* Silcherstr. Seminar Room

If you are interested in participate in the organization, please send us an email! Looking forward to share a new evening together.

TFTTT: The Fantastic Table Tennis Tournament

by ANDREAS RAY

Table tennis is a fun sport and we are lucky to have a table at the Institute (Silcherstraße) - let's use it! Unfortunately, we do not have a lot

of free space and there is no dedicated area available for the table that is accessible by everyone. Therefore, I came up with the idea of setting up a tournament. The tournament will take place on a few evenings over a period of several weeks in the Silcherstraße building. Of course, tournament means competition - one of us will be "The grand-master of table tennis of the Institute" at the end - but the main idea is to get together and have fun! As we learned in a very enlightening talk in Sardinia, doing sports, having fun and training hand-eye coordination together are some of the main factors that drive scientific output [1].

That said, if you are interested in taking part, please send a mail to tabletennismp@rews.de before the end of April. I will send more information to those interested via that mailing list.

By the way, if any of you are interested in helping with the organisation of this tournament (and potential future ones), that would be greatly appreciated.

[1] Spetter, M., Hallschmid, M.: "Goal-directed research - Boosting our productivity by simple and efficient means", Annual retreat of the IoMPaBN, Arzachena, Italy, 2015

New people in the Institute

by MAARTJE SPETTER

Again, in this section our idea is to welcome the new colleagues that join the Institute during the last 6 months. This time we are happy to welcome 4 new people.



September 2015

who: Janna Holst, Research Assistant, Alte HNO Building.
Research focus: In the team of Boris Kotchoubey, Janna is working as a research assistant with EEG recordings. Meanwhile she is writing her Master thesis in Psychology about children with ADHD, exploring the delay of gratification in these children.

December 2015



who: Florian Helmhold, PhD-student, Alte HNO Building.
Research focus: Florian will be part of the neurorehabilitation and -prosthetics team, supervised by Ander Ramos, and will design and implement novel interfacing modalities

and strategies for the stimulation, detection and processing of neural signals for human medical needs in rehabilitation and restoration of movement capabilities. Previously he studied physics at the RWTH Aachen and biophysics at the TU-Munich. He did an internship in synthetic biology and nanotechnology with H.Dietz and F. Simmel and in P. Fromherz's Lab at the MPI of Biochemistry. Following this Florian worked at the Natural and Medical Sciences Institute (NMI) at the University of Tübingen developing neuron-silicon-interfaces with G. Zeck and later helping to commercialise these devices for scientific applications at Multi Channel Systems in Reutlingen. Next to science he likes to repair and build things in his housing project, or you can find him on the water (surfing and diving) or in the mountains (for climbing, snowboarding and mountaineering). And yes, as a physicist, he did watch all StarTrek episodes, but his role model is MacGyver ... except for the haircut.

February 2016



who: Isabella Nopper, PhD-student, Alte HNO Building.
Research focus: Previously Isabella worked at the Clinics in Bad Aibling, Germany where she investigated gross motor sequence learning and sleep spindle density. In her new research in collaboration with Boris Kotchoubey she will focus on sleep-screening in patients with disorders of consciousness. The overall aim of her project is to investigate to which content sleep in patients with vegetative (VS) and minimally conscious state (MCS) can contribute to the consolidation of learning processes, this study will also be conducted at the Schoen Klinik in Bad Aibling,

Germany.

March 2016



who: Iñaki Ortego Isasa, Post-doc, Alte HNO Building.

Research focus: Iñaki will mainly focus on the design, characterization and optimization of different radiation systems (antennas) for implanted applications and also the design and fabrication of flexible electronics using Inkjet Printing Technology in collaboration with Ander Ramos. He wants to focus his research on the characterization of the central nervous system and brain, using different models for simulations and measurements. Iñaki got his engineering degree with honours in telecommunication with intensification diploma of bioengineering at the School of Engineering of San Sebastián, University of Navarra (Spain) in 2010. He also did a research internship at the Chalmers University of Technology in Goteborg (Sweden) in 2009 and at the Engineering College of Copenhagen in 2007. In 2014 he got his PhD from Tecnun-CEIT, University of Navarra in collaboration with Queen Mary University of London. His PhD-thesis was entitled "Characterization and Optimization of Wireless Links for Implanted Applications and Inkjet Printing Technology Feasibility Study". In 2015, Iñaki co-founded MyRuns Technology S.L Company, where he leads the research and development area of the company. MyRuns is an expert on the design of RFID systems, especially RFID tags. Recently, Myruns Company won the Toribio Etxeberria prize in the

category of best technological new centre of the Basque Country. Next to his passion for biomedicine and neuroscience he loves to play and compose music, travel, play sports (e.g. football and basketball), and volunteer.

PhD-defense - A time to celebrate!

by MAARTJE SPETTER

Although the looking for Eastern-eggs and Christmas-parties are lots

of fun the main reason most of us are here is to lose the student and only get that PhD behind your name. This of course will be an enormous achievement and we think this needs more attention. Therefore we want to introduce a new item in the next newsletters where we announce upcoming PhD-defenses with date and short story about the content, or if you want to keep the dissertation date quiet we will announce past PhD-defenses with a short anecdote about what has happened. It would be great if doctoral advisors can encouraged their students to inform the Communication Committee

about their dissertation.

Easter Surprise

by EASTER BUNNY FAN

With the phrase "You never grow to old to hunt for easter eggs!", the mysterious Easter Bunny, started what it was a big success to bring our colleagues to play as the little kids we all have inside. Hidden in several places in CIN and Alte HNO buildings, chocolates were waiting to be found. We received several pictures, and we want to share them here:



Measurements in Science - Our Latest Publications

by B. KOTCHOUBEY

1. Ray AM, Sitaram R, Rana M, Pasqualotto E, Buyukturkoglu K, Guan C, Ang KK, Tejos C, Zamorano F, Aboitiz F, Birbaumer N, Ruiz S. A subject-independent pattern-based Brain-Computer Interface. *Frontiers in Behavioral Neuroscience*. Oct 2015.
2. Kotchoubey B, Pavlov YG., Kleber B. Music in research and rehabilitation of disorders of consciousness: Psychological and neurophysiological foundations. *Frontiers in Psychology*. Nov 2015.
3. Soekadar SR, Birbaumer N, Slutzky MW, Cohen LG. Brain-machine interfaces in neurorehabilitation of stroke. *Neurobiology of Disease*. Nov 2015.
4. Sprenger A, Weber FD, Machner B, Talamo S, Scheffmeier S, Bethke J, Helmchen C, Gais S, Kimmig H, Born J. Deprivation and recovery of sleep in succession enhances reflexive motor behavior. *Cerebral Cortex*. Nov 2015.
5. Buyukturkoglu K, Roettgers H, Sommer J, Rana M, Dietzsch L, Arian EB, Veit R, Malekshahi R, Kircher T, Birbaumer N, Sitaram R, Ruiz S. Correction: Self-regulation of anterior insula with real-time fmri and its behavioral effects in obsessive-compulsive disorder: A feasibility study. *PLoS One*. Dec 2015.
6. Liew SL, Rana M, Cornelsen S, Fortunato de Barros Filho M, Birbaumer N, Sitaram R, Cohen LG, Soekadar SR. Improving motor corticothalamic communication after stroke using real-time fmri connectivity-based neurofeedback. *Neurorehabilitation & Neural Repair*. Dec 2015.
7. Schirmer-Mokwa KL, Fard PR, Zamorano AM, Finkel S, Birbaumer N, Kleber BA. Evidence for enhanced interoceptive accuracy in professional musicians. *Frontiers in Behavioral Neuroscience*. Dec 2015.
8. Augurzy P, Kotchoubey B. Prosodic phrasing in the presence of unambiguous verb information ? ERP evidence from German. *Neuropsychologia*. Jan 2016.
9. Mayer K, Blume F, Wyckoff SN, Brokmeier LL, Strehl U. Neurofeedback of slow cortical potentials as a treatment for adults with Attention Deficit-/Hyperactivity Disorder. *Clinical Neurophysiology*. Feb 2016.
10. Real RG, Veser S, Erlbeck H, Riseti M, Vogel D, Müller F, Kotchoubey B, Mattia D, Kübler A. Information processing in patients in vegetative and minimally conscious states. *Clinical Neurophysiology* 2016, Feb;127(2):1395-1402.
11. Volpato C, Prats Sedano MA, Silvoni S, Segato N, Cavinato M, Merico A, Piccione F, Palmieri A, Birbaumer N. Selective attention impairment in amyotrophic lateral sclerosis. *Amyotroph Lateral Sclerosis & Frontotemporal Degeneration*. Feb 2016.

!!!This list is not exhaustive. We will always miss some publications (or have to shorten because of available space). But everyone is welcome to send us their new publications whenever they come out so we can include them!!!