

MP NEWSLETTER

The latest news, activities, comments, info from our Institute

Institute Retreat 2017: Out of the jungle and into the Black Forest

By RETREAT ORGANIZERS

After an incredibly stressful vetting process, the location for this year's retreat has been confirmed!

From the **20th to 22nd of September**, all institute members will meet at the Lautenbachhof in Bad Teinach (lautenbach-hof.de).

This year, the goal is to explore your personal work within the bigger context of your group's field. To that end, the retreat will be organized as a series of mini-symposia, each of which will be led by the responsible PI or post doc. Group leaders are responsible for determining the structure and content of their mini-symposium, and are highly encouraged to explore a variety of communication formats. The only requirement is that all PhD students are involved in the planning and execution of their group's symposium.

The Lautenbachhof is a privately owned farm that is known for its gastronomy. It consists of a couple farmhouses that have been transformed for hospitality purposes. In spite of all of its rustic charms, the rooms have one small flaw: they generally have two

mattresses within one bed frame. We realize that sharing a bed with colleagues may make some people uncomfortable, so one mattress will be set up on the floor in advance to avoid awkwardness. To make up for it, all floor-sleepers will have access to a very cool hot tub* (see below).

We will send more information as the retreat approaches. In the mean time, we would be very happy to already receive confirmation of your attendance and any preferred sleeping arrangements (please send this info to Lany).

If you have any questions or concerns, please feel free to contact Lany (elaina.bolinger@uni-tuebingen.de), Niels N. (niels.niethard@uni-tuebingen.de), or Karsten (karsten.rauss@uni-tuebingen.de).

Sincerely,
Your retreat organizers



MP Frühlingsfest. Spring Party 2017

By LEA HIMMER

Come and test your elasticity, convert your potential energy to kinetic energy and let the inertia built provide momentum to our Spring Party on **May 19th at 7pm!**

Join us in the joyous celebration of the arrival of spring and enjoy a (hopefully warm and sunny) evening on the balcony of **Silcherstraße 5** with lots of food, drinks and music. Also, Hippocambles will honor us with their gracious presence and tunes and will bid farewell to the reigning king of the institute by playing with him one last time.

We will provide barbecues, charcoal, some snacks and non-alcoholic drinks.

For the category and the winner is:

By MONIKA SCHÖNAUER

Ute Strehl has been selected as the **Association of Applied Psychophysiology and Biofeedback (AAPB) 2017 Distinguished Scientist!**

This award recognizes individuals whose research has had a major impact in the field of biofeedback, both nationally and internationally.

Congratulations!

Teaching Meeting

By LEA HIMMER

Here's what you missed, if you didn't attend:

1. Teaching evaluation: please note, that Karsten can only view your personal marks, but not remarks or comments on your person. Students should therefore state personal feedback in this section
2. Karsten proved his skills in correlation statistics and showed bad M1 results (*Physikum*) in Medical Psychology in Tübingen might be due to our subject being a "small" one that suffers in favor of

In order for every attending spring-ling to keep their photons in excited state it is advised to bring your own food to put on the barbecue and your favorite beverages to share with other spring-lings. Music and semi-rhythmic body moving as usual is expected to occur after sufficient nutritional intake and amplification.



better marks in big subjects like anatomy and physiology

3. Teaching is being restructured over the next years as part of the PROFIL initiative to improve teaching. This includes:

- Feedback compilation on practical reference slides in summer 2017
- Add lecture questions in the oral practical exam in summer 2017 lecturers will be asked to provide 5 questions per topic
- Internal evaluation of lecture and practical in summer 2017
- By summer 2018: multiple choice exam on practical and lecture.

Teaching Prize

By LEA HIMMER



Each semester the teaching prize rewards extraordinary efforts in the noble profession of educating medical students.

The prize of 300 Euros goes to the person achieving the best overall rating in Tuevalon, taking into account both the rating for their course and their personal ratings. We are proud to present this years Top-3:

300 Euros are going to **Matthias**, who received an impeccable score of 1.20 for his seminar on oxytocin.

Svenja came second with a score of 1.29 for her first ever seminar on the somewhat dry topic of methods. Third was **Karsten** with a score of 1.37 on his practical, which shows his enormous ambitions in a format of teaching that demands considerable dedication and work.

Like a boss - Christmas Party 2016

By MONIKA SCHÖNAUER



Like a boss: Winning team in the "Who has it all?" competition. Back row celebrating left to right: Anuck Sawaganjit checking out a bright future, King Albrecht the First, "We Can Do It"-Kathrin, THA BOSS, ehrlich Ingrid, she's-got-it-all Lany, very little of Matthias, The artist "Susi the Second," formerly known as Jens. Front row left to right sitting or falling: Carlos "2D Elk" Bibián, Ander "3D Elk" Ramos, Cap-tain Monikarr Sch'nauer, Maria-The Smiles Contreras.

New members. Colleagues leaving

By UJWAL CHAUDHARY

In this edition of our newsletter, we welcome Ainhoa Insausti Delgado, Daniel Sippel, and Kristian Adamatzky. Also, we wish all the best for Albrecht's internship. Members in their own words:



Who: Ainhoa Insausti Delgado
What: PhD student
Where: Alte HNO
When: Summer transfer window 2015 / Master thesis; Winter transfer window 2017 / Doctoral thesis

I am from Donostia-San Sebastián (Basque Country, Spain) and I studied the degree and the master of Biomedical Engineering at Universidad de Navarra. In summer 2015, I joined the small Basque crew led by Ander Ramos-Murguialday in the Institute of Medical Psychology and Behavioral Neurobiology; the Neuroprosthetics group.

During the master thesis, I really enjoyed both the working atmosphere and the project: developing a platform based on a Brain Computer Interface (BCI) to control volitionally magnetic stimulation for gait rehabilitation in stroke and spinal cord injury patients. Besides, after one year in Tübingen I did my best and got integrated into the German culture; becoming what locals call waschechte Deutsche. Then, I lacked willpower to leave this charming city and this wonderful project.

Finally, I got the Basque Government's scholarship for predoctoral students. Since January 2017 I am a PhD student in the Neuroprosthetics group, where I am currently continuing my previous work in the most amazing project in the world.



Who: Daniel Sippel
What: Physician / PhD Student
Where: CIN / FIN
When: February 2017

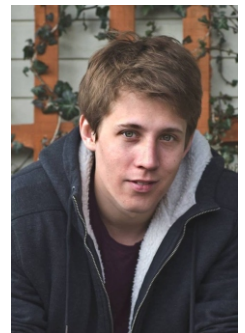
I studied medicine in Tübingen and did my MD thesis on clinical ethics in Gabon/Africa. For

the last 4 years I've been working as a clinician in neurology as well as in basic research (adult neurogenesis in the hippocampus) in Dresden. Now back in Tübingen (which I found to be so much nicer than Dresden) trying to continue the split of doing basic research (doing a PhD) and continuing my clinical specialization in psychiatry. In the lab, I will be working on how adult neurogenesis in the hippocampus, memory and sleep are connected (in rodents). I'm looking forward to meeting you all and collaborating with you!

Who: Kristian Adamatzky
What: Master student
Where: CIN / FIN
When: October 2016

I am working under the supervision of Dr. Yvonne Ritze.

We are currently investigating the effects of a liquid sucrose diet on the expression of intestinal hormones, inflammation markers and sugar transporters in rats.



Who: Albrecht Vorster

I am leaving on the 22. May for 6 month to Cleveland Ohio, for a research internship at the lab of Hillel Chiel to work on electrophysiological correlates of sleep in Aplysia.

Let's see if Aplysia dreams!

At the End of November I will be back again!

Congratulations Dr. Jingy Wang

By FREDERIK WEBER



We happily congratulate **Dr. rer. nat. Jingyi Wang** for her successful doctoral defense on the 22.02.2017. Her actual defense was nearly secretly kept in a small private circle, ...but secrets do not last long here so she could not escape the surprise party afterwards to congratulate her. Though on a short notice, everyone put in time an efforts to contributed in decorating the CIN meeting room, bring various kinds of foods, cake and drinks to celebrate with her this once-in-a-lifetime moment (at least for the rest of us)... and of course fulfill the German tradition to receive a fancy unique doctoral hat that depicts her doctoral work and life here. As is

clearly evident from her hat on first (or second) notice, Jingyi's doctoral work is about how memories glue together not only on hats but right in our lives especially when you are a child and considering the role of sleep—of course—in consolidating those memories for later on.

She is our first academic child that was “born” in Tübingen to start and finally finish her PhD here at our institute on a sleep related topic.

We wish her and our shared memories to be consolidated and reactivated well—not only during sleep—and that she will happily recall back on her PhD life to in her next leaps.

March for Science

By ANDREAS RAY

Approx. 2500 scientists and science supporters came together for a demonstration on April 22nd. On that day there were similar gatherings all around the world to show support for science. After meeting on the Neckarinsel scientists from various disciplines and supporters of science walked through the old-town and

the old botanical garden. At Neue Aula several speakers underlined the role and necessity of science for societal development and the 'approximation of truth' as opposed to 'alternative facts' and discourses based solely on ideas, thoughts and emotion.



Table Tennis. The happy end

By ANDREAS RAY

It is my great pleasure to finally be able to announce that from mid May onwards we will have a new "permanent position" at the Institute. After a long struggle the Communication Committee prevailed and we have reached an agreement with the *Gebäudemanagement* (Facility manager) of the Silcherstraße building. We have found a room in which the table will be set up permanently. The room (U14-U15 - "Kleiner Kursraum") is accessible to all at all times. It is located in the basement of the building and, therefore, nobody will be disturbed by the noise (e.g. outcries of joyful victory, screams of vengeful happiness or the sobbing of bitter loss). You are all invited to enjoy free casual and relaxing

play or serious competition. Some rackets and balls are provided (thanks to some donors of Silcherstraße).

Having the table ready to play, I would also like to reinstate the idea of The MP Table Tennis League™. If you are interested in competing for fun, please send an email to "tabletennism@rews.de". We will set up the mode of the league depending on the number of people interested. The current plan is to hold a series of games (all vs. all) similar to the national football leagues (like the Bundesliga) over a period of several months.

Have fun!

Conference BINGO

By ALBRECHT VORSTER

The ultimate scientific conference BINGO				
„There was a trend for“	“This is a really good question”	“Thanks to the organizers for giving me the opportunity to give this talk”	“Our next speaker is”	“Thanks to the people who did the work”
“This was highly significant”	“Thanks to my collaborators”	“Thank you for your patience”	“This should come up now”	Unidentifiable mix of asian and english words.
“Just a second, I think it’s gonna work this time”	“Can you hear me”	“I don’t know if you can see that”	“If you look closely, you can see that...”	“I don’t know if I understood you correctly”
“You can see it on my screen, the colors come out differently”	“We actually plan to do that / We are working on this”	Funny Power point animation	“I have to think about that”	“If no one has a question, I have a question”
“Originally I wanted to show today...”	“First I’d like to thank...”	“I am going to show you this video”	“Just imagine here to be...”	“We looked at multiple samples from...”
“As you all know...”	“Unexpectedly we found...”	“Here we show for the first time...”	“We haven’t thought about that”	“Thank you for that great talk”

MEASUREMENTS IN SCIENCE

Our Latest Publications

By BORIS KOTCHOUBEY

In this section, we praise your productivity and scientific genius that has resulted in quite a few papers over the last months. Like any journal, we can only publish what has been submitted to us, so this list – though extensive – might miss some great publications. Please help us to make this list as exhaustive as possible, by sending us an email to comm-mp@medizin.uni-tuebingen.de straight away, when you have a new paper published.

- Aho-Özhan HE, Keller J, Heimrath J, Uttner I, Kassubek J, Birbaumer N, Ludolph AC, Lulé D. Perception of emotional facial expressions in Amyotrophic Lateral Sclerosis (ALS) at behavioural and brain metabolic level. *PLoS One*. 2016.
- Barner C, Seibold M, Born J, Diekelmann S. Consolidation of prospective memory: Effects of sleep on completed and reinstated Intentions. *Front Psychol*. 2017.
- Barth B, Mayer K, Strehl U, Ehls AC. EMG biofeedback training in adult attention-deficit/hyperactivity disorder: an active (control) training? *Behavioural brain research*, 2017
- Buch ER, Santarnecchi E, Antal A, Born J, Celnik PA, Classen J, Gerloff C, Hallett M, Hummel FC, Nitsche MA, Pascual-Leone A, Paulus WJ, Reis J, Robertson EM, Rothwell JC, Sandrini M, Schambra HM, Wassermann EM, Ziemann U, Cohen LG. Effects of tDCS on motor learning and memory formation: A consensus and critical position paper. *Clin Neurophysiol*. 2017.
- Chaudhary U, Birbaumer N, Ramos-Murguialday A. Corrigendum: Brain-computer interfaces for communication and rehabilitation. *Nat Rev Neurol*. 2017.
- Chaudhary U, Xia B, Silvoni S, Cohen LG, Birbaumer N. Brain-computer interface-based communication in the completely Locked-in State. *PLoS Biol*. 2017.
- Costa MS, Born J, Claussen JC, Martinetz T. Modeling the effect of sleep regulation on a neural mass model. *J Comput Neurosci*. 2016.
- Döhring J, Stoldt A, Witt K, Schönfeld R, Deuschl G, Born J, Bartsch T. Motor skill learning and offline-changes in TGA patients with acute hippocampal CA1 lesions. *Cortex*. 2016.
- Erlbeck H, Real RGL, Kotchoubey B, Mattia D, Bargak J, Kübler A. Basic discriminative and semantic processing in patients in the vegetative and minimally conscious state. *Internat J Psychophysiol* 2017.
- Fehlert E, Willmann K, Fritsche L, Linder K, Mat-Husin H, Schleger F, Weiss M, Kiefer-Schmidt I, Brucker S, Häring HU, Preissl H, Fritsche A. Gestational diabetes alters the fetal heart rate variability during an oral glucose tolerance test: A fetal magnetocardiography study. *BJOG*. 2016.
- Feld GB, Born J. Sculpting memory during sleep: concurrent consolidation and forgetting. *Curr Opin Neurobiol*. 2017.
- Feld GB, Weis PP, Born J. The limited capacity of sleep-dependent memory consolidation. *Front Psychol*. 2016.
- Frank S, Heinze JM, Fritsche A, Linder K, von Feilitzsch M, Königsrainer A, Häring HU, Veit R, Preissl H. Neuronal food reward activity in patients with type 2 diabetes with improved glycemic control after bariatric surgery. *Diabetes Care* 2016.
- Garcia-Cossio E, Witkowski M, Robinson SE, Cohen LG, Birbaumer N, Soekadar SR. Simultaneous transcranial direct current stimulation (tDCS) and whole-head magnetoencephalography (MEG): assessing the impact of tDCS on slow cortical magnetic fields. *Neuroimage*. 2016.
- Gordon CM, Andrasik F, Schleip R, Birbaumer N, Rea M. Myofascial triggerpoint release (MTR) for treating chronic shoulder pain: A novel approach. *J Bodyw Mov Ther*. 2016.
- Hartkopf J, Schleger F, Weiss M, Hertrich I, Kiefer-Schmidt I, Preissl H, Muenssinger J. Neuromagnetic signatures of syllable processing in fetuses and infants provide no evidence for habituation. *Early Hum Dev*. 2016.

MEASUREMENTS IN SCIENCE

- Hege MA, Stingl KT, Veit R, Preissl H. Modulation of attentional networks by food-related disinhibition. *Physiol Behav.* 2017.
- Heni M, Kullmann S, Ahlqvist E, Wagner R, Machicao F, Staiger H, Häring HU, Almgren P, Groop LC, Small DM, Fritsche A, Preissl H. Interaction between the obesity-risk gene FTO and the dopamine D2 receptor gene ANKK1/TaqIA on insulin sensitivity. *Diabetologia.* 2016.
- Heni M, Wagner R, Kullmann S, Gancheva S, Roden M, Peter A, Stefan N, Preissl H, Häring HU, Fritsche A. Hypothalamic and striatal insulin action suppresses endogenous glucose production and may stimulate glucose uptake during hyperinsulinemia in lean but not in overweight men. *Diabetes.* 2017.
- Kaufmann T, Birbaumer N, Kübler A. Brain-computer communication. In: Schwartz MS, Andrassik F (eds.). *Biofeedback: A Practitioner Guide.* 4th ed., New York, Guilford Press, pp. 697-706.
- Klement J, Ott V, Rapp K, Brede S, Piccinini F, Cobelli C, Lehnert H, Hallschmid M. Oxytocin improves beta-cell responsivity and glucose tolerance in healthy men. *Diabetes* 2017.
- Korf EM, Mölle M, Born J, Ngo HV. Blindfolding during wakefulness causes decrease in sleep slow wave activity. *Physiol Rep.* 2017.
- Kotchoubey B, Tretter F, Braun HA, Buchheim T., Draguhn A., Fuchs T, Hasler F, Hastedt H., Hinterberger T, Northoff G, Rentschler I, Schleim S, Sellmaier S, Tebartz van Elst L, Tschacher W. Methodological problems on the way to integrative human neuroscience. *Front Hum Neurosci.* 2016.
- Kullmann S, Heni M, Hallschmid M, Fritsche A, Preissl H, Häring HU. Brain insulin resistance at the crossroads of metabolic and cognitive disorders in humans. *Physiol Rev.* 2016.
- Lecci S, Fernandez LM, Weber FD, Cardis R, Chatton JY, Born J, Lüthi A. Coordinated infraslow neural and cardiac oscillations mark fragility and offline periods in mammalian sleep. *Sci Adv.* 2017.
- Lee IS, Preissl H, Enck P. How to perform and interpret functional magnetic resonance imaging studies in functional gastrointestinal disorders. *J Neurogastroenterol Motil.* 2017.
- Lee IS, Wang H, Chae Y, Preissl H, Enck P. Functional neuroimaging studies in functional dyspepsia patients: A systematic review. *J Neurogastroenterol Motil.* 2016.
- Leng G, Adan RA, Belot M, Brunstrom JM, de Graaf K, Dickson SL, Hare T, Maier S, Menzies J, Preissl H, Reisch LA, Rogers PJ, Smeets PA. The determinants of food choice. *Proc Nutr Soc.* 2016.
- 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. *Neurorehabil Neural Repair.* 2016.
- Lugo ZR, Quitadamo LR, Bianchi L, Pellas F, Veser S, Lesenfans D, Real RGL, Herbert C, Guger C, Kotchoubey B, Mattia D, Kübler A, Laureys S, Noirhomme Q. Cognitive processing in non-communicative patients: What can event-related potentials tell us? *Front Hum Neurosci.* 2017.
- Lutz ND, Diekelmann S, Hinse-Stern P, Born J, Rauss K. Sleep supports the slow abstraction of gist from visual perceptual memories. *Sci Rep.* 2017.
- Neumann N, Strehl U, Birbaumer N, Kotchoubey B. Electroencephalographic measures and biofeedback: A primer. In: Schwartz MS, Andrassik F (eds.). *Biofeedback: A Practitioner Guide.* 4th ed., New York, Guilford Press, pp. 98-112.
- Noack H, Schick W, Mallot H, Born J. Sleep enhances knowledge of routes and regions in spatial environments. *Learn Mem.* 2017.
- Pavlov YG, Kotchoubey B. EEG correlates of working memory performance in females. *BMC Neurosci.* 2017.
- Pavlov YG, Gais S, Müller F, Schönauer M, Schapers B, Born J and Kotchoubey B. Night sleep in patients with vegetative state. *J Sleep Res.* 2017
- Real RGL, 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. *Clin Neurophysiol.* 2016.

MEASUREMENTS IN SCIENCE

- Robinson N, Zaidi AD, Rana M, Prasad VA, Guan C, Birbaumer N, Sitaram R. Real-time subject-independent pattern classification of overt and covert movements from fNIRS signals. PLoS One. 2016.
- Robinson N, Zaidi AD, Rana M, Prasad VA, Guan C, Birbaumer N, Sitaram R. Correction: Real-time subject-independent pattern classification of overt and covert movements from fNIRS signals. PLoS One. 2016.
- Santiago JC, Hallschmid M. Central nervous insulin administration before nocturnal sleep decreases breakfast intake in healthy young and elderly subjects. Front Neurosci. 2017.
- Sawangjit A, Kelemen E, Born J, Inostroza M. Sleep enhances recognition memory for conspecifics as bound into spatial context. Front Behav Neurosci. 2017.
- Schellenberger Costa M, Weigenand A, Ngo HV, Marshall L, Born J, Martinetz T, Claussen JC. A thalamocortical neural mass model of the EEG during NREM sleep and its response to auditory stimulation. PLoS Comput Biol. 2016.
- Schönauer, M., S. Alizadeh, H. Jamalabadi, A. Abraham, A. Pawlizki, and S. Gais, Decoding material-specific memory reprocessing during sleep in humans. Nature Commun 2017
- Schultes B, Panknin AK, Hallschmid M, Jauch-Chara K, Wilms B, de Courbière F, Lehnert H, Schmid SM. Glycemic increase induced by intravenous glucose infusion fails to affect hunger, appetite, or satiety following breakfast in healthy men. Appetite 2016.
- Sitaram R, Ros T, Stoeckel L, Haller S, Scharnowski F, Lewis-Peacock J, Weiskopf N, Blefari ML, Rana M, Oblak E, Birbaumer N, Sulzer J. Closed-loop brain training: the science of neurofeedback. Nat Rev Neurosci. 2017.
- Spetter MS, Hallschmid M. Current findings on the role of oxytocin in the regulation of food intake. Physiol Behav. 2017.
- Spetter MS, Malekshahi R, Birbaumer N, Lühns M, van der Veer AH, Scheffler K, Spuckti S, Preissl H, Veit R, Hallschmid M. Volitional regulation of brain responses to food stimuli in overweight and obese subjects: A real-time fMRI feedback study. Appetite. 2017.
- Strehl U. Biofeedback of slow cortical potentials in epilepsy. In: Schwartz MS, Andrassik F (eds.). Biofeedback: A Practitioner Guide. 4th ed., New York, Guilford Press, pp. 671-676.
- Strehl, Ute. Neurofeedback in der Epilepsie. Epileptologie 2017; 34:25-30
- Strehl U, Aggensteiner P, Wachtlin D, Brandeis D, Albrecht B, Bach C, Banaschewski T, Bogen T, Flaig-Röhr A, Freitag CM, Fuchsberger Y, Gest S, Gevensleben H, Herde L, Hohmann S, Legenbauer T, Marx AM, Millenet S, Pniewski B, Rothenberger A, Ruckes, Wörz S, Holtmann M. Neurofeedback of slow cortical potentials in children with Attention-Deficit/Hyperactivity Disorder: A multicenter randomized trial controlling for unspecific effects. Front Hum Neurosci 2017.
- Thienel M, Fritsche A, Heinrichs M, Peter A, Ewers M, Lehnert H, Born J, Hallschmid M. Oxytocin's inhibitory effect on food intake is stronger in obese than normal-weight men. Int J Obes (Lond). 2016.
- Thienel M, Wilhelm I, Benedict C, Born J, Hallschmid M. Intranasal insulin decreases circulating cortisol concentrations during early sleep in elderly humans. Neurobiol Aging. 2017.
- Volpato C, Schiff S, Facchini S, Silvoni S, Cavinato M, Piccione F, Antonini A, Birbaumer N. Dopaminergic medication modulates learning from feedback and error-related negativity in Parkinson's Disease: A pilot study. Front Behav Neurosci. 2016.
- Witkowski M, Garcia-Cossio E, Chander BS, Braun C, Birbaumer N, Robinson SE, Soekadar SR. Mapping entrained brain oscillations during transcranial alternating current stimulation (tACS). Neuroimage. 2016.
- Zander TO, Krol LR, Birbaumer NP, Gramann K. Neuroadaptive technology enables implicit cursor control based on medial prefrontal cortex activity. Proc Natl Acad Sci U S A. 2016.
- Zinke K, Wilhelm I, Bayramoglu M, Klein S, Born J. Children's initial sleep-associated changes in motor skill are unrelated to long-term skill levels. Dev Sci. 2016.