



NEWS

Past iLab research meeting October 10th 2016

We discussed the benefit of diaries in clinical practice. Fionneke Bos gave a presentation about the focus groups she organized with practitioners and patients about this subject. And clinical psychologist Date van der Veen, as discussant of her lecture initiated a fruitful exchange of ideas between everyone attending the meeting. For those who were not able to attend, Fionneke's presentation can be found on the internal iLab website.

Visit Pennsylvania (Sanne Booij)

Sanne Booij visited assistant professor Zita Oravecz at the Human Development and Family Studies department of the Pennsylvania State University. During her visit, she learned about the Ornstein-Uhlenbeck (OU) model, and to apply Bayesian Hierarchical Ornstein-Uhlenbeck Modeling (BHOUM) with the BHOUM toolbox. BHOUM was originally developed to study the homeostatic set point, stochastic variation, and regulation (homeostatic pull) of emotions in daily life. Sanne applied this model to salivary cortisol levels in daily life, and assessed whether the three dynamic features differed according to gender, age, and depression course in two different intensive longitudinal data sets. The nice thing about the OU model is that it treats time as a continuous factor. Hence, it deals well with both equally and unequally spaced time series. Furthermore, because of the Bayesian approach, results are straightforward in their interpretation. For more information about BHOUM, you can contact me (s.h.booij@umcg.nl). Also, I plan to give a workshop in December 2016 / January 2017 (you will be informed about the date).

Physiqua (Frank Blaauw)

As with all questionnaire data, data retrieved from EMA studies can be subjective. Furthermore, due to the number of questionnaires and questions, completing an EMA study can be cumbersome. In order to ease the collection of data and enrich data obtained through EMA studies, we have designed Physiqua, a platform that allows for combining diary study data with objectively measured data from commercially available sensors, such as provided by Fitbit, Google, or Jawbone.

Currently Physiqua can offer data from two service providers, viz. Google Fit and Fitbit. From these platforms we expose five variables, that is, steps, sleep, distance, calories expended and heart rate. We automatically apply transformations to each of the variables, making the data useful for combination with diary study data.

Besides providing access to the sensor data as retrieved from the service providers, Physiqua can provide aggregated and resampled datasets. Physiqua automatically serves data in a format that can easily be combined with existing diary study designs. That is, it resamples the data in a way similar to the diary study protocol, and exposes the separate variables in a format useful for the researcher. Furthermore, missing data can be imputed automatically by one of the various imputation algorithms available.

We expect sensor quality and wearable data to improve significantly in the near future. Physiqua automatically supports this wearable evolution, and allows researchers to take advantage of the best commercial wearable technology available.

Link to the full text article:

<https://www.ncbi.nlm.nih.gov/pubmed/27498066>

Protocol suicidality of participants

What if one of your participants tells you during a (telephone or live) interview that he or she has suicidal ideas or even is planning to commit suicide? Marrit de Boer, Hanneke Wigman and Robert Schoevers have worked on a protocol how to handle suicidality of research participants. This protocol is added to the internal Google Drive platform. If you have an ongoing study it would be wise to take notice of this protocol and let your research assistants read it.

NEW PROJECT: TRANS-ID project

The transitions in depression (TRANS-ID) project, is a project aiming to identify early warning signals for critical transition from a healthy state into a clinic depression, or vice versa. Marieke Wichers (www.rug.nl/staff/m.c.wichers/projects) received an ERC Consolidator grant for this project. Three PhD students have just started on this project: Yoram Kunkels, Robin Groen and Arnout Smit.

Yoram Kunkels

Hi, my name is Yoram Kunkels and I am one of the new PhD students that have started in September 2016 on the Trans-Id project. I have done my bachelor Psychology at the University of Amsterdam, as well as my Research Master. My master thesis was about continuous and discontinuous transitions in smoking behaviour, and whether non-linear models, such as the cusp catastrophe model, would fit such data better than traditional linear models. Hence, my academic interests lie with dynamical systems, non-linear methods, and network analysis, whilst I also strongly support the current trend towards open science, pre-registration of studies, and thorough replication attempts.

For the Trans-Id project I will be focusing on physiological measurements, such as heart rate variability (HRV) and behavioural measures, and their relation with transitions in depression. Already preparations for our first validation study, which compares two wearable HRV devices to a golden standard, have started in earnest. So far I am enjoying my time at UMCG and I am looking forward to working together with everyone!

**Robin Groen**

My name is Robin Groen and I am a PhD candidate at the ICPE since the 1st of October. The project I will be working on the coming 4 years is called "Psychopathology across boundaries: Networks as the roadmap to individual routes of symptom development". Together with Marieke Wichers and Hanneke Wigman, we received a NWO Research Talent Grant to fund this position. During this project, we will investigate whether individual network models based on a broad spectrum of symptoms may be predictive of outcome and functioning at a later point in time. More specifically, we would be interested to see whether particular network structures or symptom patterns may be related to improvement or worsening of psychopathology, or predictive of the type of future symptom development. My research interests focus on, personalized models of psychopathology, transdiagnostic approaches and exploring novel methods that may capture psychopathology in a different way than that we are used to.

In 2014, I finished my bachelor at University College in Utrecht, where I completed a major in psychology and neuroscience, and a minor in statistics. After graduating UC, I started a research masters in cognitive and clinical neuroscience in Maastricht, with a specialization in psychopathology. While I officially started working at the ICPE this month, I have had a desk at the ICPE since November last year, when I started master's research internship. During the thesis research, I examined whether the dynamic symptom networks differed between patients with more persisting depressive symptoms as compared to patients with less persisting depressive symptoms. Besides enjoying my work at the ICPE, I also enjoy traveling, reading, sports, borrels and eating tasty food.

**Arnout Smit**

Since the first of September I have been working as a PhD student on TRANS-ID tapering (Marieke's ERC grand). I studied clinical neuropsychology at the VU, and did my clinical internship at Lucertis Child and Adolescent Psychiatry in Velsen-Noord. During and after this I took some courses in mathematics, physics, and econometrics at the VU and the UVA. Last year I was working at the department of methodology and statistics at UU under Ellen Hamaker. There I was working on (Bayesian) multilevel models for circadian rhythms in times series.

Working with patients is interesting to me because all of them are unique. Many patients seem to display some surprising behavior at first, but when you learn more about their combination of personality, mental ability, and environment it often turns out their behavior is actually very understandable.

I also like (statistical) modeling because I think it is often interesting and sometimes useful to think about things from a more abstract and fundamental framework. For me TRANS-ID tapering is a great combination of both the analysis of individual patients and working with very interesting dynamical models.



UPCOMING CONFERENCES/MEETINGS

Society for ambulatory assessment

The upcoming meeting of the Society for Ambulatory Assessment (SAA) will be in Luxembourg city, Luxembourg from June 15th 2016 to June 17th 2016. Please also note that you can become a member of the SAA if you are involved in ambulatory assessment for free, for more information please visit their website: <http://www.saa2009.org/>.

Interesting links

Website of Eiko Fried about network analysis: psych-networks.com

Facebook page for open discussion on dynamical systems: <https://www.facebook.com/groups/PsychologicalDynamics/>

Changes in iLab staff

From 1 October onwards Karin Janssens will no longer work for the iLab. We already miss her and want to thank her for all her efforts and contributions to the iLab. However, we also welcome two new iLab staff members who will take over some of Karin's tasks:

Marij Zuidersma m.zuidersma@umcg.nl
<http://www.rug.nl/staff/m.zuidersma/>

and

Klaas Wardenaar k.j.wardenaar@umcg.nl
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PUBLICATIONS

van der Krieke L, Blaauw FJ, Emerencia AC, Schenk HM, Slaets JP, Bos EH, de Jonge P, Jeronimus BF (in press). Temporal Dynamics of Health and Well-Being: A Crowdsourcing Approach to Momentary Assessments and Automated Generation of Personalized Feedback. *Psychosom Med*.

van Roekel E, Verhagen M, Engels RC, Scholte RH, Cacioppo S, Cacioppo JT. Trait and State Levels of Loneliness in Early and Late Adolescents: Examining the Differential Reactivity Hypothesis. *J Clin Child Adolesc Psychol*. 2016; 18:1-12.

Blaauw FJ, Schenk HM, Jeronimus BF, van der Krieke L, de Jonge P, Aiello M, Emerencia AC. Let's get Physiquial – an Intuitive and Generic Method to Combine Sensor Technology with Ecological Momentary Assessments. *J Biom Inform*. Aug 4; 63: 141-149.

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NB I The link to the internal Google Drive platform only works after you have logged into the platform with your @rgoc.nl account

NB II If you want to be removed from our mailing list, please send a mail to iLAB@icpe.nl.

Website iLab: <http://ilab-psychiatry.nl>