

TONIA RIHS PORTRAIT



Tonia Rihs, a trained psychologist, has banked on perseverance and curiosity to pursue her career as a neuroscience researcher.

Tonia Rihs opted for clinical psychology at the University of Fribourg for her university education because she was curious to know more about behavior, emotions and human cognition. Tonia then tackled neuroscience for her master's degree on transcranial magnetic stimulation (TMS) in collaboration with the University of Bern. She understands how important research is for identifying the effects of non-invasive brain stimulation on cognitive processes. Moving between research and clinical work fuels Tonia's desire and thirst for knowledge.

Research, clinical work and EEG

Following her master's, Tonia lived her dream: to discover the world, landing a job as a clinician and scientist in Sydney, Australia. Here she combined research in neuropsychology with the side effects of pharmacological treatments against HIV. Her eagerness to broaden her skills in neuroscience then led Tonia to do a doctorate with Gregor Thut in the University Medical Center (CMU) at the University of Geneva. Since TMS and electroencephalography (EEG) lay at the heart of her thesis on visual attention, Tonia continued her career with a post-doctoral grant in the laboratory led by Christoph Michel, a specialist in neuroimaging and high-definition EEG. She now works as a senior research and teaching assistant.

Tonia has been involved in Synapsy's WP#1 and the 22q11 cohort. She is working hard to identify predictors of psychosis using EEG-focused investigative techniques. She is targeting sensory processes such as vision or hearing and the resting state. "The idea is to be able to study the alterations we observe in 22q11 patients in animal models", she explains.

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Her translational skills and know-how also led Tonia to take part in Holger Sperdin and Marie Schaer's study on autism, helping the team use EEG with very young patients. It was a real challenge for the researchers because the children were at such a young age. "The collaboration was incredible because at first I thought it would be impossible. Eventually, though, we found a good strategy for success", she says, underlining the potential for collaborative synergies within the Synapsy network.

Creating a link

Tonia Rihs works in a world of neuroscientists and psychiatrists. How do other people view her training as a psychologist? "Because neuroscience and medicine are multi-disciplinary by nature, psychologists have a lot to bring to research because they have so many tools and so much experience: their solid foundations in statistics, or their knowledge about designing experiments helps them to enter a dialogue with both worlds," explains Tonia.

Bringing disparate worlds together is exactly the approach Synapsy takes as it seeks to advance research into mental illness. Tonia thinks this is an important, but delicate endeavour. Everyone has to understand the other's needs for it to succeed. "The dialogue with basic researchers can be complicated. The domains are so specialized that sometimes it's hard to find a common language". Tonia believes that Synapsy has a valuable card to play but that even greater interaction is needed between the different members. "One idea would be to set up hackathons or workshops on Synapsy topics and push the participative and interdisciplinary aspects within the group," suggests Tonia. These are all approaches that would undoubtedly stimulate the plurality of views within the Synapsy network.

Values as a goal

Tonia Rihs is not looking to follow a clearly-signposted path; for her, the key lies elsewhere. "Ideally, I'd like to continue my work between research and clinical work. But since no path is pre-defined, my ambition is to keep my curiosity and continue to do meaningful work that makes a significant contribution to society". Armed with this ideal, Tonia's career could lead her to an independent project or a role in a team. It does not matter that much, because for her: "The important thing is to build something". □

*Portrait by Yann Bernardinelli – November 2018
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