

Stanford



Martin Tik

Postdoctoral Scholar, Psychiatry

Bio

BIO

Dr. Tik is a postdoctoral scholar from Vienna, Austria. He has a background in Biological Psychology and Medical Physics and experience in highly interdisciplinary experimental research. During his academic career he used brain imaging and stimulation methods to gain insights into pathways related to insightful problem solving as well as emotion processing. Through collaboration between the Medical University of Vienna and international partners, he could further identify connectivity changes linked to affective disorders and treatment.

Specifically, Dr. Tik has developed new techniques to better combine Transcranial Magnetic Stimulation with functional Magnetic Resonance Imaging to measure induced activation changes as they happen.

Dr. Tik recently joined the Stanford Brain Stimulation Laboratory team to translate these research tools into clinical applications aiming to optimise important stimulation parameters for tailoring transcranial magnetic stimulation to individual patient's needs.

HONORS AND AWARDS

- Merit Abstract Award, Organization for Human Brain Mapping (OHBM) (2021)
- Travel Award, Bio-X (2021)
- Visiting scholarships AI, Bavaria California Technology Center (2021)
- Janssen Special Award, life-science.eu / Janssen (Johnson&Johnson) (2018)
- Merit Abstract Award, OHBM (2017)
- Best Abstract Award, Interdisciplinary College (2015)
- Merit Abstract Award, OHBM (2015)

BOARDS, ADVISORY COMMITTEES, PROFESSIONAL ORGANIZATIONS

- Management committee, COST Action 18138 - RISE Network in Peripartum Depression Disorder (2019 - present)
- Program committee, Brain Stimulation and Imaging Meeting, BrainSTIM (2019 - 2019)

STANFORD ADVISORS

- Nolan Williams, Postdoctoral Faculty Sponsor

LINKS

- My personal site: <http://www.martintik.at>
- Stanford brain stimulation lab: <https://bsl.stanford.edu/post-docs/#Martin%20Tik>

Publications

PUBLICATIONS

- **Give me a pain that I am used to: distinct habituation patterns to painful and non-painful stimulation.** *Scientific reports*
Paul, K., Tik, M., Hahn, A., Sladky, R., Geissberger, N., Wirth, E., Kranz, G. S., Pfabigan, D. M., Kraus, C., Lanzenberger, R., Lamm, C., Windischberger, C.
2021; 11 (1): 22929
- **Reproducibility of amygdala activation in facial emotion processing at 7T.** *NeuroImage*
Geissberger, N., Tik, M., Sladky, R., Woletz, M., Schuler, A. L., Willinger, D., Windischberger, C.
2020; 211: 116585
- **Ultra-high-field fMRI insights on insight: Neural correlates of the Aha!-moment.** *Human brain mapping*
Tik, M., Sladky, R., Luft, C. D., Willinger, D., Hoffmann, A., Banissy, M. J., Bhattacharya, J., Windischberger, C.
2018; 39 (8): 3241-3252
- **Towards understanding rTMS mechanism of action: Stimulation of the DLPFC causes network-specific increase in functional connectivity.** *NeuroImage*
Tik, M., Hoffmann, A., Sladky, R., Tomova, L., Hummer, A., Navarro de Lara, L., Bukowski, H., Pripfl, J., Biswal, B., Lamm, C., Windischberger, C.
2017; 162: 289-296
- **High-sensitivity TMS/fMRI of the Human Motor Cortex Using a Dedicated Multichannel MR Coil.** *NeuroImage*
Navarro de Lara, L. I., Tik, M., Woletz, M., Frass-Kriegl, R., Moser, E., Laistler, E., Windischberger, C.
2017; 150: 262-269
- **Combining stimulus types for improved coverage in population receptive field mapping.** *NeuroImage*
Linhardt, D., Pawloff, M., Hummer, A., Woletz, M., Tik, M., Ritter, M., Schmidt-Erfurth, U., Windischberger, C.
2021; 238: 118240
- **Dynamic causal modeling of the prefrontal-amygdala network during processing of emotional faces.** *Brain connectivity*
Sladky, R., Hahn, A., Karl, I. L., Geissberger, N., Kranz, G., Tik, M., Kraus, C., Pfabigan, D., Gartus, A., Lanzenberger, R., Lamm, C., Windischberger, C.
2021
- **Detached empathic experience of others' pain in remitted states of depression - An fMRI study.** *NeuroImage. Clinical*
Rütgen, M., Pfabigan, D. M., Tik, M., Kraus, C., Pletti, C., Sladky, R., Klöbl, M., Woletz, M., Vanicek, T., Windischberger, C., Lanzenberger, R., Lamm, C.
2021; 31: 102699
- **Technical Note: Human tissue-equivalent MRI phantom preparation for 3 and 7 Tesla.** *Medical physics*
Woletz, M., Roat, S., Hummer, A., Tik, M., Windischberger, C.
2021
- **Hippocampal Subfields in Acute and Remitted Depression-an Ultra-High Field Magnetic Resonance Imaging Study.** *The international journal of neuropsychopharmacology*
Kraus, C., Seiger, R., Pfabigan, D. M., Sladky, R., Tik, M., Paul, K., Woletz, M., Gryglewski, G., Vanicek, T., Komorowski, A., Kasper, S., Lamm, C., Windischberger, et al
2019; 22 (8): 513-522
- **Modulations in resting state networks of subcortical structures linked to creativity.** *NeuroImage*
Schuler, A. L., Tik, M., Sladky, R., Luft, C. D., Hoffmann, A., Woletz, M., Zioga, I., Bhattacharya, J., Windischberger, C.
2019; 195: 311-319
- **Antidepressant treatment, not depression, leads to reductions in behavioral and neural responses to pain empathy.** *Translational psychiatry*
Rütgen, M., Pletti, C., Tik, M., Kraus, C., Pfabigan, D. M., Sladky, R., Klöbl, M., Woletz, M., Vanicek, T., Windischberger, C., Lanzenberger, R., Lamm, C.
2019; 9 (1): 164
- **Correction to: The pulvinar nucleus and antidepressant treatment: dynamic modeling of antidepressant response and remission with ultra-high field functional MRI.** *Molecular psychiatry*
Kraus, C., Klöbl, M., Tik, M., Auer, B., Vanicek, T., Geissberger, N., Pfabigan, D. M., Hahn, A., Woletz, M., Paul, K., Komorowski, A., Kasper, S., Windischberger, et al
2019; 24 (5): 772

- **The pulvinar nucleus and antidepressant treatment: dynamic modeling of antidepressant response and remission with ultra-high field functional MRI.** *Molecular psychiatry*
Kraus, C., Klöbl, M., Tik, M., Auer, B., Vanicek, T., Geissberger, N., Pfabigan, D. M., Hahn, A., Woletz, M., Paul, K., Komorowski, A., Kasper, S., Windischberger, et al
2019; 24 (5): 746-756
- **Beware detrending: Optimal preprocessing pipeline for low-frequency fluctuation analysis.** *Human brain mapping*
Woletz, M., Hoffmann, A., Tik, M., Sladky, R., Lanzenberger, R., Robinson, S., Windischberger, C.
2019; 40 (5): 1571-1582
- **Unsmoothed functional MRI of the human amygdala and bed nucleus of the stria terminalis during processing of emotional faces.** *NeuroImage*
Sladky, R., Geissberger, N., Pfabigan, D. M., Kraus, C., Tik, M., Woletz, M., Paul, K., Vanicek, T., Auer, B., Kranz, G. S., Lamm, C., Lanzenberger, R., Windischberger, et al
2018; 168: 383-391
- **Effects of testosterone treatment on hypothalamic neuroplasticity in female-to-male transgender individuals.** *Brain structure & function*
Kranz, G. S., Hahn, A., Kaufmann, U., Tik, M., Ganger, S., Seiger, R., Hummer, A., Windischberger, C., Kasper, S., Lanzenberger, R.
2018; 223 (1): 321-328
- **Effects of sex hormone treatment on white matter microstructure in individuals with gender dysphoria.** *NeuroImage*
Kranz, G. S., Seiger, R., Kaufmann, U., Hummer, A., Hahn, A., Ganger, S., Tik, M., Windischberger, C., Kasper, S., Lanzenberger, R.
2017; 150: 60-67
- **Neurobiological differences in mental rotation and instrument interpretation in airline pilots.** *Scientific reports*
Sladky, R., Stepniczka, I., Boland, E., Tik, M., Lamm, C., Hoffmann, A., Buch, J. P., Niedermeier, D., Field, J., Windischberger, C.
2016; 6: 28104