Curriculum Vitae for Stephan Heunis

Name:	Stephan Heunis
Position:	Research Data and Software Engineer
Research fields:	• Research Data Management • Research Software Engineering • Open Science, Reproducibility, FAIR data • Neuroinformatics
Affiliations:	• Institute of Neuroscience and Medicine, Brain & Behaviour (INM-7), Research Center Jülich, Germany. • Department of Psychology, Education and Child Studies (DPECS), Erasmus School of Social and Behavioral Sciences (ESSB), Erasmus University Rotterdam (EUR), The Netherlands. • JSH Solutions, The Netherlands
Contact:	jsheunis@gmail.com
Links:	Website, Twitter, Mastodon, Github, Google scholar

I work at the intersection of software engineering, FAIR and decentralized data management, metadata-driven user applications, and open and inclusive research practices, where I focus on building interoperable tools that span all of these domains. In my current work I use version control systems, metadata, web frameworks, and semantic web technologies to build decentralized data catalogs that make datasets discoverable and accessible, even with considerable variation in dataset size, host location, data privacy regulations, level of sensitivity (personal data), storage infrastructure, and data use terms.

I am as much a generalist as I am a specialist. I sincerely enjoy the challenge of solving a difficult problem with code, and the focus and learning that comes with that. But in order to "get lost" in such details, I first have to understand and agree with the overall context of what I am doing. Hence, I tend to question existing structures rather than accept them as is, and I appreciate a workplace where critical thinking is valued and flexibility prioritized.

I enjoy a dynamic and collaborative team environment with much opportunity for learning, exploring, and building innovative solutions in the domain of human health research. I have an affinity for free, open source, and inclusive solutions that is driven by the same principles that make me dislike prestige, exclusivity, and research waste. I love simplifying complex concepts and explaining them in accessible ways, such that non-experts can have the same opportunity to learn and contribute to the scientific enterprise. I have been responsible for user training, system architecture design, software development, project management, and team management in my current and previous positions, and will welcome a new opportunity that will grant me the space to combine my experience and skills while exploring and contributing to an exciting field.

Tertiary Qualifications

PhD (Real-time neuroimage processing), Department of Electrical Engineering, Eindhoven University of Technology, The Netherlands (2017 to 2021)

Master of Science (Biomedical Engineering), Department of Mechanical and Mechatronic Engineering, Stellenbosch University, South Africa (2011 to 2012)

Bachelor of Engineering (Mechatronic), Department of Mechanical and Mechatronic Engineering, Stellenbosch University, South Africa (2007 to 2010)

Work experience

Research Software Engineer (2021-current).

- Psychoinformatics Lab, Institute of Neuroscience and Medicine, Brain & Behaviour (INM-7), Research Centre Jülich, Jülich, Germany.
- Designing software architecture, developing software, and implementing solutions for reproducible research data management and metadata handling as part of the DataLad ecosystem.

Founder and Engineer, JSH Solutions (2023-current).

- Custom software solutions at the intersection of decentralized research data management, data FAIRification, semantic and linked data, and web-based user applications.
- Current project: metadata-based explorer and data access request interface for data collected in the ongoing GUTS Project.

Postdoctoral researcher, (2021-2023).

- Department of Psychology, Education and Child Studies (DPECS), Erasmus School of Social and Behavioral Sciences (ESSB), Erasmus University Rotterdam (EUR) and Leiden Consortium Individual Development (L-CID), Faculty of Social and Behavioral Sciences (FSW), Leiden University.
- Developmental Neuroscience research; developing reproducible analysis pipelines for MRI data; data management of the LCID dataset.

Software programmer, Eindhoven University of Technology (2019-2020)

- Translation of biomedical image processing course material from Matlab to Python.

Researcher and PhD candidate, Eindhoven University of Technology (2017-2021)

- Researching signal processing and data quality control methods in the field of real-time functional MRI, towards the investigation of neurofeedback treatment in clinical practice.

Head of Solution Delivery, JourneyApps Inc. South Africa (2015-2016)

- Leading a team of 9 software engineers in the process of delivering "Software as a Service" enterprise mobile applications to customers worldwide.

Solution Delivery Engineer, JourneyApps Inc. South Africa (2014-2015)

- Designing and building enterprise mobility software applications for customers across multiple industries worldwide, using the JourneyApps development platform.

Commercial Engineer, Rockwell Automation. South Africa (2013-2014)

- Pre-sales technical support of the EMEA (Europe, Middle East, Africa) sales team selling hardware and software control systems products to large companies in the food and beverage industry.

Research Engineer, Stellenbosch University. South Africa (2012-2013)

- Technical design, literature research, laboratory testing, and academic writing.

Software programmer, Stellenbosch University. South Africa (2008)

- Translating FORTRAN programs to Matlab.

Skills

Project/team management:

- Agile software development processes (3 years)
- Working in a team of software engineers (6 years)
- Team leader experience (1 year)
- General engineering project management (4 years)
- International networking and community development (7 years)

Software programming experience:

- Python (5 years)
- Javascript (5 years)
- VueJS (4 years)
- HTML+CSS (4 years)

- Shell scripting (5 years)
- Arduino (6 years)
- Matlab (13 years)
- Plotly Dash (2 years)

Computing and continuous integration tools:

- Binder for cloud computing
- HPC for scientific data analysis
- Job scheduling with SLURM / HTCondor
- JupyterHub deployment on S3
- Appveyor
- Github Actions

Transparent research tools and practices:

- Reproducible and decentralized data management with DataLad, git and git-annex
- Software version control and collaboration with git and GitHub/GitLab
- Python package development
- Sphinx documentation
- Jupyter Notebooks, Lab, Books
- Neuroimage data curation with the BIDS standard
- Neuroimage data sharing

Data modeling tools and semantic web technologies:

- RDF (rdflib, rdfjs)
- Schema development with LinkML
- Validation with JSONschema / SHACL
- Ontologies / Vocabularies (DCAT, Schema.org, PROV-O, DASH)

Spoken languages:

- English (Professional proficiency)
- Afrikaans (Professional proficiency, 1st language)
- Dutch (Conversational and reading proficiency)
- German (Basic conversational and reading proficiency)

Community building and leadership

Organizing committee member and moderator for the first conference of distribits 2024: Technologies for distributed data management. Düsseldorf, Germany.

Founder and Engineer at JSH Solutions, a company that delivers custom software solutions at the intersection of decentralized research data management, data FAIRification, semantic and linked data, and web-based user applications.

Advisor to the PaDME project, which will provide an innovative toolkit aimed at establishing legal certainty within the realm of processing health/biometric data for scientific research purposes under the General Data Protection Regulation (GDPR).

Co-leader of GLiMR Working Group 2, which coordinates multi-site data integration and enables the creation of large datasets in glioma diagnostics via the creation of common GDPR- and BIDS-compliant forms and data structures.

Regular **reviewer** for the Journal of Open Source Software (JOSS).

Member of the OHBM Open Science Special Interest Group and **Open Science Room co-chair** for the 2020 annual conference of the Organization for Human Brain Mapping. Montréal, Canada.

Founder of OpenMR Benelux, a community promoting an open and inclusive research culture and transparent practices in the field of Magnetic Resonance Imaging in Medicine, through annual events with talks, workshops and collaboration. Main organizer of the first OpenMR Benelux event (2019) and main advisor to the organizing committee of the 2020 event (Nijmegen, The Netherlands) and planned 2021 event (virtual).

Organizing committee member (and representative of the Eindhoven University of Technology) for the EuroTech Summer school: Open Science in Practice 2019. Lausanne, Switzerland.

Founder of the Open Science Community Eindhoven (OSC/e), a community of researchers and faculty at TU/e (representing multiple departments) working together to improve the adoption of transparent and reproducible practices across the research lifecycle.

Treasurer of the organizing committee for the 11th annual meeting of the ISMRM Benelux chapter. Leiden, The Netherlands.

Director on the board of Stichting Solaris Onderzoek en Ontwikkeling, a non-profit organization dedicated to supporting early career researchers.

Funding and awards

Annual IBI-INM Retreat, Best Poster Award. Jülich, Germany. 2022.
DataCat: generate a user-friendly data browser from structured metadata.

Open Initiatives Trophy, runner up.
At the Netherlands National Open Science Festival, 2021.

Organization for Human Brain Mapping (OHBM) - USD500.
Travel grant for attending the 2019 annual OHBM hackathon and conference in Rome, Italy.

Mozilla Open Science Mini-Grant - USD10,000.
For organising the Avengers for Better Science workshop to help future research leaders learn to conduct research in an open and inclusive community. Shared grant.

International Brain Research Organisation (IBRO) - EUR1000.
For organising the OpenMR Benelux (2019) event.

IEEE EMBS Benelux chapter - USD1000.
For organising the OpenMR Benelux (2019) event.

Invited presentations, workshops, talks

Heunis, Stephan, 2024. Technical challenges to data sharing. Webinar presentation for the GLiMR COST Action group. Virtual online.

Heunis, Stephan, 2023. Research Data Management with DataLad. Invited talk at the Einstein Center for Neuroscience. Virtual online.

Heunis, Stephan, 2023. DataLad workshop at the Dutch Open Science Festival. Rotterdam, The Netherlands

Heunis, Stephan, 2023. Research Data Management with DataLad. Invited talk at the MRI Together Workshop. Virtual online.

Heunis, Stephan, 2022. Reproducible Data Management with DataLad. Invited workshop at the Brainhack Nordic 2022 event. Copenhagen, Denmark.

Heunis, Stephan, 2022. Tools for reproducible workflows. Invited keynote talk at the Brainhack Krakow 2022 event. KraKow, Poland.

Heunis, Stephan, 2021. Balancing open data with personal data privacy: a future outlook on MRI data sharing. Invited talk at the MRI Together Workshop. Virtual online.

Heunis, Stephan, 2021. Tools for reproducible workflows. Invited talk at the Chinese Open Science Network. Virtual online.

Heunis, S. and Bayrak, Ş., 2021. "I'd like to reproduce your results…" and other tales in Reproducible Workflows. Workshop at the OHBM Hackathon 2021 TrainTrack Session event. Virtual online.

Heunis, J.S. 2021. Interactive data visualization with Python, Plotly and Dash. Software talk and demonstration at the OpenMR Virtual 2021 event. Virtual online.

Heunis, J.S. et al. 2020. Open neuroimaging data and personal data privacy: anonymization. Panel discussion at the OHBM Open Science Room 2020. Virtual online. Links:

Stephan Heunis, Emma Bluemke, Andrew Task, Jonathan Passerat-Palmbach, PJ Toussaint, Adam Thomas, Tonya White, Michael Beauvais, Gustav Nilsonne, Lyuba Zehl, Reubs J Walsh. 2020. Open neuroimaging data and personal data privacy: convergence or divergence? Panel discussion at the OHBM Open Science Room 2020. Virtual online.

Heunis, J.S. 2020. Hands-on fMRI code and data sharing. Invited workshop at the Food for Psychologists. The Hague, The Netherlands (online).

Heunis, J.S. 2020**.** Brain research data and personal data privacy: practical tips to share and protect. Invited talk at the Think Open Rovereto Workshop 2020. Trento, Italy (online).

Heunis, J.S. 2019. Real-time (fMRI) quality control. Invited lecture at the 2019 international real-time functional imaging and neurofeedback conference: rtFIN2019. Aachen, Germany.

Heunis, J.S. 2019. Building Open Science Communities. Invited talk at the 2019 Eurotech Summer School: Open Science in Practice. EPFL, Lausanne, Switzerland.

Heunis, J.S. 2019. Open Brain Consent - GDPR edition. Lightning talk at the 2019 meeting of the Society for the Improvement of Psychological Science. Rotterdam, The Netherlands.

Heunis, J.S. 2019. Real-time fMRI neurofeedback methodology: current challenges, possible solutions and future perspectives. Speaker during the session "Neurofeedback in psychiatry" at the 2019 annual Dutch Neuroscience Meeting. Lunteren, The Netherlands.

Heunis, J.S. 2019. Introduction to open science and OpenMR Benelux. Speaker and event host at the 1st annual meeting of the OpenMR Benelux community. Leiden, The Netherlands. (video link)

Heunis, J.S. 2018. Real-time fMRI neurofeedback - from technology to applications. Speaker and session moderator at the 11th annual Donders Discussions conference. The Donders Institute. Nijmegen, The Netherlands.

Heunis, J.S., Besseling, R., Lamerichs, R., De Louw, A., Aldenkamp, B., Bergmans, J., 2018. Dynamic T2* and S0 mapping towards real-time multi-echo fMRI denoising. Oral presentation at the 10th annual meeting of the Benelux Chapter of the International Society for Magnetic Resonance in Medicine. Antwerpen, Belgium.

Academic Publications

Peer-reviewed journal articles:

Szczepanik, M., Wagner, A.S., **Heunis, S**. Waite, L.K., Eickhoff, S.B. and Hanke, M. 2024. Teaching Research Data Management with DataLad: A Multi-year, Multi-domain Effort. Neuroinformatics. https://doi.org/10.1007/s12021-024-09665-7

Kalantari, A., Szczepanik, M., **Heunis, S.**, Mönch, C., Hanke, M., Wachtler, T. and Aswendt, M. 2023. How to establish and maintain a multimodal animal research dataset using DataLad. Nature Scientific Data 10, 357. https://doi.org/10.1038/s41597-023-02242-8

Mara van der Meulen, Simone Dobbelaar, Lina van Drunen, **Stephan Heunis**, Marinus H. van IJzendoorn, Neeltje E. Blankenstein, and Eveline A. Crone. 2023. Transitioning from childhood into adolescence: A comprehensive longitudinal behavioral and neuroimaging study on prosocial behavior and social inclusion. NeuroImage 284. https://doi.org/10.1016/j.neuroimage.2023.120445.

Heunis, S., Breeuwer, M., Caballero-Gaudes, C., Hellrung, L., Huijbers, W., Jansen, J.F., Lamerichs, R., Zinger, S., and Aldenkamp, A.P. 2021. The effects of multi-echo fMRI combination and rapid T2*-mapping on offline and real-time BOLD sensitivity. NeuroImage, 238, https://doi.org/10.1016/j.neuroimage.2021.118244

Heunis, S., Breeuwer, M., Caballero-Gaudes, C., Hellrung, L., Huijbers, W., Jansen, J.F., Lamerichs, R., Zinger, S., and Aldenkamp, A.P. 2021. rt-me-fMRI: A task and resting state

dataset for real-time, multi-echo fMRI methods development and validation. F1000Research, 10:70. https://doi.org/10.12688/f1000research.29988.1

Elizabeth DuPre, Taylor Salo, Zaki Ahmed, Peter A. Bandettini, Katherine L. Bottenhorn, César Caballero-Gaudes, Logan T. Dowdle, Javier Gonzalez-Castillo, **Stephan Heunis**, Prantik Kundu, Angela R. Laird, Ross Markello, Christopher J. Markiewicz, Stefano Moia, Isla Staden, Joshua B. Teves, Eneko Uruñuela, Maryam Vaziri-Pashkam, Kirstie Whitaker, and Daniel A. Handwerker. 2021. TE-dependent analysis of multi-echo fMRI with tedana. Journal of Open Source Software, 6(66), 3669, https://doi.org/10.21105/joss.03669

Kristijan Armeni, Loek Brinkman, Rickard Carlsson, Anita Eerland, Rianne Fijten, Robin Fondberg, Vera E Heininga, **Stephan Heunis**, Wei Qi Koh, Maurits Masselink, Niall Moran, Andrew Ó Baoill, Alexandra Sarafoglou, Antonio Schettino, Hardy Schwamm, Zsuzsika Sjoerds, Marta Teperek, Olmo R van den Akker, Anna van't Veer, Raul Zurita-Milla. 2021. Towards wide-scale adoption of open science practices: The role of open science communities, Science and Public Policy, Volume 48, Issue 5: 605–611. https://doi.org/10.1093/scipol/scab039

Elizabeth Levitis, Cassandra D Gould van Praag, Rémi Gau, **Stephan Heunis**, Elizabeth DuPre, Gregory Kiar, Katherine L Bottenhorn, Tristan Glatard, Aki Nikolaidis, Kirstie Jane Whitaker, Matteo Mancini, Guiomar Niso, Soroosh Afyouni, Eva Alonso-Ortiz, Stefan Appelhoff, Aurina Arnatkeviciute, Selim Melvin Atay, Tibor Auer, Giulia Baracchini, Johanna M M Bayer, Michael J S Beauvais, Janine D Bijsterbosch, Isil P Bilgin, Saskia Bollmann, Steffen Bollmann, Rotem Botvinik-Nezer, Molly G Bright, Vince D Calhoun, Xiao Chen, Sidhant Chopra, Hu Chuan-Peng, Thomas G Close, Savannah L Cookson, R Cameron Craddock, Alejandro De La Vega, Benjamin De Leener, Damion V Demeter, Paola Di Maio, Erin W Dickie, Simon B Eickhoff, Oscar Esteban, Karolina Finc, Matteo Frigo, Saampras Ganesan, Melanie Ganz, Kelly G Garner, Eduardo A Garza-Villarreal, Gabriel Gonzalez-Escamilla, Rohit Goswami, John D Griffiths, Tijl Grootswagers, Samuel Guay, Olivia Guest, Daniel A Handwerker, Peer Herholz, Katja Heuer, Dorien C Huijser, Vittorio Iacovella, Michael J E Joseph, Agah Karakuzu, David B Keator, Xenia Kobeleva, Manoj Kumar, Angela R Laird, Linda J Larson-Prior, Alexandra Lautarescu, Alberto Lazari, Jon Haitz Legarreta, Xue-Ying Li, Jinglei Lv, Sina Mansour L., David Meunier, Dustin Moraczewski, Tulika Nandi, Samuel A Nastase, Matthias Nau, Stephanie Noble, Martin Norgaard, Johnes Obungoloch, Robert Oostenveld, Edwina R Orchard, Ana Luísa Pinho, Russell A Poldrack, Anqi Qiu, Pradeep Reddy Raamana, Ariel Rokem, Saige Rutherford, Malvika Sharan, Thomas B Shaw, Warda T Syeda, Meghan M Testerman, Roberto Toro, Sofie L Valk, Sofie Van Den Bossche, Gaël Varoquaux, František Váša, Michele Veldsman, Jakub Vohryzek, Adina S Wagner, Reubs J Walsh, Tonya White, Fu-Te Wong, Xihe Xie, Chao-Gan Yan, Yu-Fang Yang, Yohan Yee, Gaston E Zanitti, Ana E Van Gulick, Eugene Duff, and Camille Maumet. 2021. Centering inclusivity in the design of online conferences—An OHBM–Open Science perspective. GigaScience, Vo 10:8. https://doi.org/10.1093/gigascience/giab051

Elise Bannier, Gareth Barker, Valentina Borghesani, Nils Broeckx, Patricia Clement, Kyrre E. Emblem, Satrajit Ghosh, Enrico Glerean, Krzysztof J. Gorgolewski, Marko Havu, Yaroslav O. Halchenko, Peer Herholz, Anne Hespel, **Stephan Heunis**, Yue Hu, Chuan-Peng Hu, Dorien Huijser, María de la Iglesia Vayá, Radim Jancalek, Vasileios K. Katsaros, Marie-Luise Kieseler, Camille Maumet, Clara A. Moreau, Henk-Jan Mutsaerts, Robert Oostenveld, Esin Ozturk-Isik, Nicolas Pascual Leone Espinosa, John Pellman, Cyril R Pernet, Francesca Benedetta Pizzini, Amira Šerifović Trbalić, Paule-Joanne Toussaint, Matteo Visconti di Oleggio Castello, Fengjuan Wang, Cheng Wang, Hua Zhu. The Open Brain Consent: Informing Research Participants and Obtaining Consent to Share Brain Imaging Data. Human Brain Mapping 2021; 42: 1945-1951. https://doi.org/10.1002/hbm.25351

Heunis, S., Lamerichs, R., Zinger, S., Aldenkamp, B., Breeuwer, M., 2018. Quality and denoising in real-time fMRI neurofeedback: a methods review. Human Brain Mapping. 2020; 41: 3439–3467. https://doi.org/10.1002/hbm.25010.

Botvinik-Nezer, R., Holzmeister, F., Camerer, C.F., Dreber, A., Huber, J., Johannesson, M., Kirchler, M., Iwanir, R., Mumford, J.A., Adcock, A., Avesani, P., Baczkowski, B., Bajracharya, A., Bakst, L., Ball, S., Barilari, M., Bault, N., Beaton, D., Beitner, J., Benoit, R., Berkers, R., Bhanji, J., Biswal, B., Bobadilla-Suarez, S., Bortolini, T., Bottenhorn, K., Bowring, A., Braem, S., Brooks, H., Brudner, E., Calderon, C., Camilleri, J., Castrellon, J., Cecchetti, L., Cieslik, E., Cole, Z., Collignon, O., Cox, R., Cunningham, W., Czoschke, S., Dadi, K., Davis, C., Luca, A.D., Delgado, M., Demetriou, L., Dennison, J., Di, X., Dickie, E., Dobryakova, E., Donnat, C., Dukart, J., Duncan, N.W., Durnez, J., Eed, A., Eickhoff, S., Erhart, A., Fontanesi, L., Fricke, G.M., Galvan, A., Gau, R., Genon, S., Glatard, T., Glerean, E., Goeman, J., Golowin, S., González-García, C., Gorgolewski, K., Grady, C., Green, M., Moreira, J.G., Guest, O., Hakimi, S., Hamilton, J.P., Hancock, R., Handjaras, G., Harry, B., Hawco, C., Herholz, P., Herman, G., **Heunis, S.**, Hoffstaedter, F., Hogeveen, J., Holmes, S., Hu, C.-P., Huettel, S., Hughes, M., Iacovella, V., Iordan, A., Isager, P., Isik, A.I., Jahn, A., Johnson, M., Johnstone, T., Joseph, M., Juliano, A., Kable, J., Kassinopoulos, M., Koba, C., Kong, X.-Z., Koscik, T., Kucukboyaci, N.E., Kuhl, B., Kupek, S., Laird, A., Lamm, C., Langner, R., Lauharatanahirun, N., Lee, H., Lee, S., Leemans, A., Leo, A., Lesage, E., Li, F., Li, M., Lim, P.C., Lintz, E., Liphardt, S., Vermeer, A.L., Love, B., Mack, M., Malpica, N., Marins, T., Maumet, C., McDonald, K., McGuire, J., Melero, H., Leal, A.M., Meyer, B., Meyer, K., Mihai, P., Mitsis, G., Moll, J., Nielson, D., Nilsonne, G., Notter, M., Olivetti, E., Onicas, A., Papale, P., Patil, K., Peelle, J.E., Pérez, A., Pischedda, D., Poline, J.-B., Prystauka, Y., Ray, S., Reuter-Lorenz, P., Reynolds, R., Ricciardi, E., Rieck, J., Rodriguez-Thompson, A., Romyn, A., Salo, T., Samanez-Larkin, G., Sanz-Morales, E., Schlichting, M., Schultz, D., Shen, Q., Sheridan, M., Shiguang, F., Silvers, J., Skagerlund, K., Smith, A., Smith, D., Sokol-Hessner, P., Steinkamp, S., Tashjian, S., Thirion, B., Thorp, J., Tinghög, G., Tisdall, L., Tompson, S., Toro-Serey, C., Torre, J., Tozzi, L., Truong, V., Turella, L., Veer, A.E. van't, Verguts, T., Vettel, J., Vijayarajah, S., Vo, K., Wall, M., Weeda, W.D., Weis, S., White, D., Wisniewski, D., Xifra-Porxas, A., Yearling, E., Yoon, S., Yuan, R., Yuen, K., Zhang, L., Zhang, X., Zosky, J., Nichols, T.E., Poldrack, R.A., Schonberg, T., 2020. Variability in the analysis of a single neuroimaging dataset by many teams. Nature 582, 84–88. https://doi.org/10.1038/s41586-020-2314-9

Tomas Ros, Stefanie Enriquez-Geppert*, Vadim Zotev, Kymberly Young, Guilherme Wood, Susan Whitfield-Gabrieli, Patrik Vuilleumier,Feng Wan, François Vialatte, Dimitri Van De Ville, Doron Todder, Tanju Surmeli, James Sulzer, Ute Strehl, Barry Sterman, Naomi Steiner, Bettina Sorger, Surjo Soekadar, Ranganatha Sitaram, Leslie Sherlin, Michael Schönenberg, Frank Scharnowski, Manuel Schabus, Katya Rubia, Agostinho Rosa, Miriam Reiners, Jaime Pineda, Christian Paret, Alexei Ossadtchi,Andrew Nicholson, Wenya Nan, Javier Minguez, Jean-Arthur Micoulaud-Franchi, David M. A. Mehler, Michael Lührs, Joel Lubar, Fabien Lotte, David E. J. Linden, Jarrod Lewis-Peacock, Mikhail Lebedev, Ruth Lanius, Andrea Kübler,Cornelia Kranczioch, Yury Koush, Lilian Konicar, Simon H. Kohl, Silivia E. Kober, Manousos Klados, Camille Jeunet, Tieme Janssen, Rene J. Huster, Kerstin Hoedlmoser, Laurence Hirshberg, **Stephan Heunis**, Talma Hendler, Michelle Hampson, Adrian Guggisberg, John Gruzelier, Rainer Göbel, Nicolas Gninenko, Alireza Gharabaghi, Paul Frewen, Thomas Fovet, Thalia Fernandez, Carlos Escolano, Ann-Christine Ehlis, Renate Drechsler, R Christopher deCharms, Stefan Debener, Dirk De Ridder, Eddy Davelaar, Marco Congedo, Marc Cavazza, Rien M. H. M. Breteler, Daniel Brandeis, Jerzy Bodurka, Niels Birbaumer, Olga Bazanova, Robert Bauer, Beatrix Barth, Panagiotis Bamidis, Tibor Auer, Martijn Arns, Robert T. Thibault. 2020. Consensus on the reporting and experimental design of clinical and cognitive-behavioural neurofeedback studies (CRED-nf checklist). Brain 143, 1674–1685. https://doi.org/10.1093/brain/awaa009

Heunis, S., Besseling, R., Lamerichs, R., de Louw, A., Breeuwer, M., Aldenkamp, B., Bergmans, J., 2018. Neu3CA-RT: A framework for real-time fMRI analysis. Psychiatry Research: Neuroimaging 282, 90–102. https://doi.org/10.1016/j.pscychresns.2018.09.008

Besseling, R., Lamerichs, R., Michels, B., **Heunis, S.**, de Louw, A., Tijhuis, A., Bergmans, J., Aldenkamp, B., 2018. Functional network abnormalities consistent with behavioral profile in Autism Spectrum Disorder. Psychiatry Research: Neuroimaging 275, 43–48. https://doi.org/10.1016/j.pscychresns.2018.02.006

Heunis, J.S., Scheffer, C. and Schreve, K., 2013, A User Interface for a Seven Degree of Freedom Surgical Robot. R&D Journal of SAIMechE, Vol. 29, pp. 44-54, ISSN 0257- 9669.

Preregistrations:

Achterberg, M., Mulder, J., Dobbelaar, S., **Heunis, S**., & Crone, E. (2022, June 21). Individual differences in developmental trajectories of social emotion regulation from childhood to emerging adolescence. https://doi.org/10.17605/OSF.IO/BYN7R

Peer-reviewed conference articles:

Dellimore, K., **Heunis, S**., Gohier, F., Archer, E., Villiers, A. de, Smith, J., Scheffer, C., 2013. Development of a diagnostic glove for unobtrusive measurement of chest compression

force and depth during neonatal CPR, in: 2013 35th Annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC). pp. 350–353. https://doi.org/10.1109/EMBC.2013.6609509

Heunis, J.S., Scheffer, C., Schreve, K., 2012. A user interface for a seven degree of freedom surgical robot, in: 2012 5th Robotics and Mechatronics Conference of South Africa, pp. 1–6. https://doi.org/10.1109/ROBOMECH.2012.6558467

Conference abstracts/posters/demonstrations

Szczepanik, M., **Heunis, S.**, Mönch, C., Wagner, A., Waite, A. Q., Waite, L., & Hanke, M. 2023. Distributed data management for large collaborative projects: DataLad ecosystem in Collaborative Research Center 1451. INCF Neuroinformatics Assembly 2023.

Stefano Moia, Hao-Ting Wang, Anibal S. Heinsfeld, Dorota Jarecka, Yu Fang Yang, **Stephan Heunis**, et al.. 2024. Proceedings of the OHBM Brainhack 2022. Aperture Neuro. https://dx.doi.org/10.52294/001c.92760.

Stephan Heunis, Christian Mönch, Benjamin Poldraxk, and Michael Hanke. 2022. DataCat: generate a user-friendly data browser from structured metadata. Poster and software demonstration at the 2022 annual meeting of the Organization of Human Brain Mapping. Glasgow, Scotland.

Heunis, S., Hellrung, L., Meer, V.D., Bergert, S., Sladky, R., Pamplona, G.S.P., Scharnowski, F., Koush, Y., Mehler, D., Falcon, C., Gispert, J.D., Molinuevo, J.L., Skouras, S., 2019. rtQC: an open-source toolbox for real-time fMRI quality control. Poster and software demonstration at the 2019 annual meeting of the Organization of Human Brain Mapping. Rome, Italy.

Heunis, J.S., Lamerichs, R., Song, G., Zinger, S., Aldenkamp, B., 2019. Improving BOLD sensitivity with real-time multi-echo echo-planar imaging - Towards a cleaner neurofeedback signal. Poster at the 1th annual meeting of the Benelux Chapter of the International Society for Magnetic Resonance in Medicine. Leiden, The Netherlands.

Heunis, J.S., Besseling, R., Lamerichs, R., De Louw, A., Aldenkamp, B., Bergmans, J., 2018. Dynamic T2* and S0 mapping towards real-time multi-echo fMRI denoising. Poster at the 10th annual meeting of the Benelux Chapter of the International Society for Magnetic Resonance in Medicine. Antwerpen, Belgium.