

Seeing the invisible. Seeing the brain, its anatomy, its functional pathways, its plasticity. Non-invasive methods of observing and describing the brain (such as MRI, functional MRI, tractography, connectome mapping...) deploy varied and autonomous graphic languages, turning each type of image into a small universe with its own rules and modes of reading.

The BRAIN ROADS project explores two hypotheses. The first is that a new graphic language can better align representations with observed reality and the concepts that describe brain plasticity. The second is that a commitment to graphic coherence between representational universes derived from medical imagery may enable these images to better cohabit within tools for exploring and visualizing the brain's digital twin.

The aim of this symposium is to gain a better understanding of the role of images, and to analyze their modalities and limits after observing their use *in situ*, in order to better understand neuroplasticity, propose new graphic forms, and open up an interdisciplinary conversation on their future.

Symposium organised by
Olaf Avenati & Patricia Ribault

The BRAIN ROADS Interdisciplinary symposium is coordinated by → the Graphic & Digital Design Department of ÉSAD Reims → in partnership with the Cluster of Excellence *Matters of Activity. Image Space Material* / Humboldt-Universität zu Berlin → the Master in Fine Arts at Université Paris 8 → the *Image Guidance Lab* / Charité Universitätsmedizin Berlin → the Reims University Hospital → with funding from the French Ministry of Culture.

- <https://entreformesetsignes.fr/brainroads>
- <https://esad-reims.fr>
- <https://www.matters-of-activity.de/en>
- <https://www.univ-paris8.fr/-Master-Art-contemporain-et-sciences-humaines->

BRAIN ROADS

Visions and representations of neuroplasticity

Graphic design → Apolline Evrard, Eugénie Joly, Louise Roo, supervised by Olaf Avenati / ÉSAD de Reims, March 2025



Franco-German interdisciplinary symposium
Presentations in French and English

6 March 2025 → 8:45 am – 6 pm
La Villa Douce → 9 boulevard de la Paix
51100 Reims

Free admission, subject to availability

PROGRAMME

8:45 am	→ 15 min	Welcome
9:00 am	→ 45 min	Olaf Avenati & Patricia Ribault
9:45 am	→ 45 min	Thomas Picht
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10:30 am	→ 15 min	Pause
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10:45 am	→ 45 min	Students' Field Report (Paris-8)
11:30 am	→ 45 min	Students' work (ÉSAD de Reims)
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12:15 pm	→ 1h30 min	Lunch break
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1:45 pm	→ 45 min	Simona-Mihaela Florea
2:30 pm	→ 45 min	Claude-Fabien Litré
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3:15 pm	→ 15 min	Pause
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3:30 pm	→ 45 min	Pauline Hilt
4:15 pm	→ 45 min	Lucius Fekonja
5 pm	→ 1h	Discussion
6 pm	→	End

PARTICIPANTS

→ Olaf Avenati

Olaf Avenati is a graphic and digital designer and teacher at ÉSAD in Reims. He runs the *Datavisualisation* research programme. He is an associate member of the Cluster of Excellence *Matters of Activity* / Humboldt University of Berlin. He is developing the *Brain Roads* project, which aims to visualise and explore the digital model of the human brain.

→ Lucius Fekonja

Dr. Lucius S. Fekonja specializes in translational network neuroscience, focusing mainly on tractography-based network analysis in tumor patients. As project group leader at Charité – Universitätsmedizin Berlin and the Cluster of Excellence *Matters of Activity*, he combines advanced neuroimaging with clinical applications. His background is in knowledge visualization and scientific illustration.

→ Simona-Mihaela Florea

After training at the *Carol Davila University of Medicine and Pharmacy* in Bucharest, Dr Florea has been practicing as a specialist in paediatric neurosurgery and skull base surgery at the Reims University Hospital since 2022.

→ Pauline Hilt

Pauline Hilt is an INSERM researcher (CAPS Laboratory - *Cognition, Action and Sensorimotor Plasticity*, in Dijon). After training in mathematics, computer science and cognitive science, she completed a doctorate in movement sciences. Her research focuses on movement control, inter-individual variability and the effect of action observation on brain plasticity for motor rehabilitation.

→ Claude-Fabien Litré

Claude-Fabien Litré is Professor of Medicine, head of the neurosurgery department and head of the *Neurosciences, Head and Neck Unit* at Reims University Hospital, and Vice-Dean of the Reims Faculty of Medicine. He specialises in cranial surgery, spinal and peripheral nerve surgery, cerebral endoscopy, neurosurgery, functional neurosurgery and cerebral magnetic stimulation.

→ Thomas Picht

Thomas Picht is a neurosurgeon and Professor of Digital Neurosurgery at Charité – Universitätsmedizin Berlin. He leads the *Image Guidance Lab*, co-founded the *Speculative Realities Lab*, and heads the *CEED Industry-in-Clinic Platform*. His research focuses on brain function diagnostics, neuromodulation, visualization strategies, and simulation concepts in surgery and education.

→ Patricia Ribault

Patricia Ribault is associate professor in the department of Visual Arts at the Université Paris 8 Vincennes—Saint Denis, and Principal Investigator of the Cluster of Excellence *Matters of Activity* / Humboldt-Universität zu Berlin, where she was a professor between 2015 and 2024. She also runs a Master's seminar at Beaux-Arts de Paris. Her research focuses on the body, gesture, work, technique, materiality, art, design, and, more recently, on posthumanist studies. Recent publication: *Design, Gestaltung, Formatività. Philosophies of Making*, Birkhäuser (2022).

→ Lyne Alphand, Flora Bossis, Violette Eckmann, Apolline Evrard, Eugénie Joly, Marine Larnicol, Camille Lenoir, Louise Roo, Gabin Rouchouse, Hilaire Tizon are students in the Master Graphic & Digital Design programme at ÉSAD Reims → Bridget Brightfield, Sana Chamakh, Hedia Chaouali, Camille Despagnet, Félix Farenc, Margaux Ferreira, Chahinez Gadari, Daria Gnatchenko, Joachim Lanneluc-Pierron, Lucas Loigerot et Song Yao are students in the Master in Fine Arts programme at Paris 8.