Jacques KAISER

Resumé

Karlsruhe, Germany
+49 721 9654-392
jkaiser@fzi.de
www.jacqueskaiser.com
French, 27 years old

Education

2015–Present	**PhD in Neurorobotics**, *Human Brain Project*, Karlsruhe. Learning action from event-based vision with spiking neural networks.
2014–2015	**Master 2 MoSIG**, *ENSIMAG & IM2AG*, Grenoble, France. International degree in Graphics, Vision and Robotics.
2012–2013	**Master 1**, *Strasbourg University*, France. Computer science and science of images.
2009–2012	**BSc. Computer Science**, *Strasbourg University*, France. 3rd year Erasmus in **Durham University**, England.

Vocational Experience

Aug.–Present 2015	**Research Scientist**, *FZI Forschungszentrum Informatik*, Karlsruhe, ISPE. Involved in various robotics projects for solving vision tasks and implementing web interfaces.
Feb.–July 2015	**Master Thesis in Sensor Fusion**, *INRIA*, Grenoble, e-Motion. Evaluation of a closed-form solution solving the visual-inertial structure from motion problem.
Feb.–July 2014	**Full-Stack Web Developer**, *Shwish*, Melbourne, Australia. Shwish was a collaborative gifting platform. Within a core team of two developers, we built the platform from scratch using the MEAN stack: MongoDB, Expressjs, Angularjs, Nodejs.
June–Oct. 2013	**JavaScript/WebGL Developer**, *Skimlab*, Strasbourg, skimlab.com. Skimlab provides an online 3D modeling tool based on implicit surfaces for 3D printing. Working on the rendering pipeline, I developed shaders for environment mapping, point cloud rendering and raytracing.
2012–2013	**Individual tutor in mathematics for high school students**, *Complétude*.
June–Aug. 2012	**Research intern in Computer Graphics**, *iCube*, Strasbourg, IGG. Development of an application for deforming mesh on a virtual reality platform.
June–Aug. 2011	**Research intern in Computer Graphics**, *iCube*, Strasbourg, IGG. Interactive 3D cursor to ease the perception of depth in virtual reality applications.

Languages

French	Mother tongue	*Born in Strasbourg*
English	Fluent	*Lived in England and Australia*
German	B2	*Handle day-to-day conversation*

Technical Skills

- Python
- Javascript
- PyTorch
- Linux
- C++
- Angularjs
- ROS
- OpenCV

Extracurricular Activities

Juggling	Coordination	**Slacklining**	Balance and focus
Ultimate	Team play	**Woofing**	Travel and discover new cultures
Ukulele	Easy access to the music world	**Dancing**	Improved leading skills

Rollerskating Founding member of the Association Des Sports Extrêmes de Vendenheim (ASEV)

Volunteering Volunteer at the RACV Great Victorian Bike Ride 2013, Australia

OpenScience
- Presented Spiking Neural Networks at Karlsruhe AI Meetup Group 2017.
- Presented Neurorobotics at Pint of Science 2018, Strasbourg

First-authored Publications

[1] J. Kaiser, G. Lindner, *et al.*, "Microsaccades for asynchronous feature extraction with spiking networks," in *International Conference on Development and Learning and Epigenetic Robotics (ICDL-EPIROB)*, IEEE, 2018.

[2] J. Kaiser, J. Weinland, *et al.*, "Microsaccades for event-based stereo vision with spiking neural networks," in *International Conference on Artificial Neural Networks (ICANN)*, 2018.

[3] J. Kaiser, S. Melbaum, *et al.*, "Learning to reproduce visually similar movements by minimizing event-based prediction error," in *International Conference on Biomedical Robotics and Biomechatronics (BIOROB)*, IEEE, 2018.

[4] J. Kaiser and R. Dillmann, "Learning movements by imitation from event-based visual prediction," in 2nd *Human Brain Project Student Conference*, (Extended Abstract), 2018.

[5] J. Kaiser, D. Zimmerer, *et al.*, "Spiking convolutional deep belief networks," in *International Conference on Artificial Neural Networks (ICANN)*, Springer, 2017, pp. 3–11.

[6] J. Kaiser, R. Stal, *et al.*, "Scaling up liquid state machines to predict over address events from dynamic vision sensors," *Bioinspiration & Biomimetics*, vol. 12, no. 5, p. 055 001, 2017.

[7] J. Kaiser, J. C. V. Tieck, *et al.*, "Towards a framework for end-to-end control of a simulated vehicle with spiking neural networks," in *International Conference on Simulation, Modeling, and Programming for Autonomous Robots (SIMPAR)*, IEEE, 2016, pp. 127–134.