Jacques KAISER

Resumé

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Education

2014–2015 **Master 2 MoSIG with Honors**, *ENSIMAG & IM2AG*, Grenoble, France.
Graphics, Vision and Robotics.

2012–2013 **Master 1 with with Honors**, *Strasbourg University*, France.
Computer science and science of images.

2009–2012 **BSc. Computer Science with Honors**, *Strasbourg University*, France.
3rd year Erasmus in **Durham University**, England.

Experiences

Vocational

Aug.–Present 2015 **Research Assistant**, *FZI Forschungszentrum Informatik*, Karlsruhe, ISPE.
Developer and Scientist within the Neurorobotics team of the Human Brain Project. I focus on event-based vision for control tasks with spiking neural networks.

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.
- Numerical stability improvement over the original equation system;
- Gyroscope bias recovery by minimizing the residual;
- published in RA-L and ICRA 2016.

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, 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.

Publications

1st author 2016 **Towards a framework for end-to-end control of a simulated vehicle with spiking neural networks**, *IEEE International Conference on Simulation, Modeling, and Programming for Autonomous Robots (SIMPAR)*.

2016 **Connecting artificial brains to robots in a comprehensive simulation framework: the Neurorobotics Platform**, *Frontiers in Neurorobotics*.

2016 **Retina Color-Opponency Based Pursuit Implemented Through Spiking Neural Networks in the Neurorobotics Platform**, *Biomimetic and Biohybrid Systems*.

1st author 2016 **Simultaneous State Initialization and Gyroscope Bias Calibration in Visual Inertial Aided Navigation**, *IEEE Robotics and Automation Letters (RA-L)*.

Languages

French	**Mother tongue**	*Born in Strasbourg*
English	**Fluent**	*Lived in England and Australia*
German	**A2**	*Currently learning*

Interests

Juggling	Coordination	**Slacklining**	Balance and focus
Ultimate	Team play	**Woofing**	Travel and discover new cultures