

# Guillaume BELLEC

Grieskai 2  
8020 Graz, Austria  
+33633436243  
bellec@igi.tugraz.at

Expert in Deep Learning and Computational Neuroscience

---

## Academic career :

- |            |   |
|------------|---|
| Since 2015 | <b>University Assistant</b> and <b>PhD student</b> at the institute for Theoretical Computer Science of TU-Graz under supervision of <b>Wolfgang Maass</b> ( <i>Investigating Deep learning and models of plasticity and working memory in biological neural networks, teaching Machine Learning and Reinforcement based learning</i> ) |
| 2014       | Master Thesis in <b>Computational Neuroscience of sensory system</b> with <b>Romain Brette</b> and <b>Pierre Yger</b> at the Vision institute in Paris  |
| 2012-2013  | One year research internship in the Sound and music computing lab, KTH with <b>Anders Friberg</b> in Stockholm  |
| 2012       | Four months research internship in the Machine Learning department, City university of London with <b>Tillmann Weyde</b>  |
- 

## Education :

- |             |   |
|-------------|---|
| Since 2015  | <b>Phd student</b> at the institute for Theoretical Computer Science of TU-Graz   |
| Summer 2018 | <b>Brains, Minds and Machines</b> summer school at the Marine Biological Laboratory in <b>Woods hole</b>                  |
| Summer 2018 | Cellular, Computational and Cognitive Neuroscience summer school organized by the <b>Princeton Neuroscience Institute</b> |
| 2013-2014   | Master of <b>Mathematics, Vision and Learning</b> at <b>ENS Cachan</b> (Paris-Saclay)                                     |
| 2010-2014   | Master of <b>Optimization and Operational Research</b> at <b>ENSTA ParisTech</b>  |
| 2012-2013   | Erasmus program at <b>KTH</b> (Stockholm) at the sound and music computing lab  |
| 2008-2010   | Classes préparatoires aux grandes écoles at lycée Hoche (Versailles) in 2009 and at lycée Fénélon (Paris) in 2008         |
- 

## First author publications :

- |           |   |
|-----------|---|
| NIPS 2018 | <i>Bellec*, Salaj*, Subramoney*, Legenstein and Maass.</i> Long short-term memory and learning-to-learn in networks of spiking neurons <b>Conference on Neural Information Processing Systems</b> |
| ICLR 2018 | <i>Bellec, Kappel, Maass and Legenstein.</i> Deep Rewiring: Training very sparse deep networks <b>International Conference on Learning Representations</b>  |

# Guillaume BELLEC

Grieskai 2  
8020 Graz, Austria  
+33633436243  
bellec@igi.tugraz.at

Expert in Deep Learning and Computational Neuroscience

- JCNS 2016     *Bellec, Galtier, Brette and Yger.* Slow Feature Analysis with spiking neurons and its application to audio stimuli **Journal of Computational Neuroscience**
- SMC 2013     *Bellec, Friberg, Elowsson, Wolff, Weyde.* A social network integrated game experiment to relate tapping to speed perception and explore rhythm reproduction **International Sound & Music Computing Conference**
- 

## Other publications :

- IJCNN 2017     *Sebastian Schmitt, Guillaume Bellec, ... Robert Legenstein, Wolfgang Maass, Christian Mayr, Rene Schueffny, Johannes Schemmel, Karlheinz Meier.* Neuromorphic hardware in the loop: Training a deep spiking network on the brainscales wafer-scale system **International Joint Conference on Neural Networks**
- ISCAS 2017     *Mihai A Petrovici, Guillaume Bellec, ... R Legenstein, W Maass, R Schueffny, C Mayr, J Schemmel, K Meier.* Pattern representation and recognition with accelerated analog neuromorphic systems **International Symposium on Circuits and Systems**
- AES 2013     *Wolff, Bellec, Friberg, MacFarlane, Weyde.* Creating Audio Based Experiments as Social Web Games with the CASimIR Framework **International Conference: Semantic Audio (Audio Engineering Society)**
- ISMIR 2012     *Wolff, Bellec, Weyde.* A music similarity game prototype using the CASIMIR API In proceedings of the **International Society for Musing Information Retrieval**
- 

## Skills :

- Programming     Years of professional experience with Python, Tensorflow and Matlab.
- Languages     French as mother tongue and general interest for languages. Very good spoken and written English used for many years in a professional context. Good spoken German and Spanish.
- Music / Sport     Guitar and bass player, passion for music production and music technology. Regular practice of various sports, currently hooked on Capoeira.