Luigi Petrucco

graduate student @ Portugues lab

Max Planck Institute for Neurobiology

DETAILS

birth 22/11/1992, Italy

email lpetrucco@neuro.mpg.de

github github.com/vigji

website vigji.github.io

EXPERIENCE

Sept. 2017 - ongoing
Ph.D. at **Max Planck Institute of Neurobiology** (München, Germany)
Sensorimotor control in the zebrafish cerebellum
Supervisor: Dr. Ruben Portugues

Oct. 2014 – Sept. 2016
Master Thesis at **Scuola Normale Superiore** (Pisa, Italy)
Slow-wave oscillations and visual processing in a mouse model of epilepsy
Supervisor: Prof. Gian M. Ratto

Jul. – Sept. 2015
Internship at **Harvard University** (Cambridge, Massachusetts)
Imaging the cortico-thalamic circuit in mouse models of altered plasticity
Supervisor: Dr. Takao K. Hensch

Jul. - Oct. 2013
Research Internship at **Max Planck Institute for Chemical Ecology** (Jena, Germany)
Gene expression analysis of olfactory receptors in the moth *M. sexta* ()
Supervisor: Dr. Ewald Grosse-Wilde

EDUCATION

2016 – ongoing
Graduate School in Systemic Neuroscience at **LMU** (München, Germany)

2014 – 2016
Master Degree in Neurobiology at University of Pisa/Scuola Normale Superiore (Pisa, Italy)
110/110 *cum laude*

2011 – 2014
Bachelor's Degree in Biology at University of Pisa/Scuola Normale Superiore (Pisa, Italy)
110/110 *cum laude*

PUBLICATIONS

2020

L Petrucco*, O Prat*, V S, R Portugues, Dissecting sensory representations of a simple visual stimulus in the input streams of the cerebellar circuit [*in preparation*]

Y Xiao, **L Petrucco**, E Agirre, LJ Hoodless, G Castelo-Branco, R Portugues, T Czopka Oligodendrocyte Precursor Cells Sculpt the Visual System by Regulating Axonal Remodeling [*submitted*]

F Claudi, AL Tyson, **L Petrucco**, TW Margrie, R Portugues, T Branco Brainrender: a python-based software for visualizing anatomically registered data [*submitted*] preprint at *bioRxiv*: doi.org/10.1101/2020.02.23.961748

F Claudi*, **L Petrucco***, AL Tyson*, T Branco, TW Margrie, R Portugues (2020) BrainGlobe Atlas API: a common interface for neuroanatomical atlases. *Journal of Open Source Software* 5 (54), 2668 doi.org/10.21105/joss.02668

DA Markov, **L Petrucco**, AM Kist, & R Portugues (2020) The cerebellum recalibrates a feedback controller involved in motor control. [*in review*] preprint at *bioRxiv*: doi.org/10.1101/2020.02.12.945956.

2019 V Štih*, **L Petrucco***, AM Kist, & R Portugues (2019). Stytra: an open-source, integrated system for stimulation, tracking and closed-loop behavioral experiments. *PLoS computational biology,* 15(4), e1006699.

2018 S Landi, **L Petrucco**, F Sicca, & GM Ratto (2019). Transient cognitive impairment in epilepsy. *Frontiers in molecular neuroscience*, 11, 458.

2017 **L Petrucco***, E Pracucci*, M Brondi, GM Ratto, & S Landi (2017). Epileptiform activity in the mouse visual cortex interferes with cortical processing in connected areas. *Scientific reports*, 7(1), 1-12.

*authors contributed equally

SOFTWARE CONTRIBUTIONS

Stytra: a modular package for stimulus generation, online behavioral tracking and hardware control for zebrafish neuroscience experiments.

BrainGlobe: a python toolbox for morphological analyses in systems neuroscience.

ADVANCED TRAINING

Jul. 2017 Cajal Course - Interacting with Neural Circuits (Lisbon, Portugal)

Aug. 2016 Cajal Course - Computational Neuroscience (Lisbon, Portugal)

LABORATORY SKILLS

Imaging: Light-sheet microscopy of behaving zebrafish, *in vivo* and *in slice* voltage-sensitive dye and calcium imaging by two-photon microscopy in mice and zebrafish. Aligment and maintenance of light-sheet and two-photon microscopes.

Electrophysiology: *In vivo* local-field-potential and single cell recordings in anesthetized mice and paralyzed zebrafish; some experience with whole-cell recordings *in slice*.

Molecular Biology: Cloning, transgenic zebrafish generation by embryo injections.

COMPUTER SKILLS

Operative Systems: Familiarity with Windows, Mac, and Linux

Programming Languages: Proficiency with **Python**; Qt based-GUI design; ImageJ scripting; f MATLAB**;** fundamentals of **R** and **Julia**; C in Arduino applications; LabView. Version control using GitHub and continuous integration with Travis/GitHub actions

Others: Advanced user of software for image manipulation (Photoshop, Gimp), professional design (Illustrator, InDesign, Inkscape), 3D modelling (Blender), and LateX.

AWARDS

Jul 2015 **Armenise-Harvard Fellowship** (*Armenise-Harvard Foundation*)

Jun 2013 **RISE Scholarship** (*German Academic Exchange Service - DAAD*)