# NICHOLAS A. DEL GROSSO

#### PERSONAL INFO

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#### GOALS

• Inspire others through mentoring, teaching and leadership.

- Build technical skills in a wide variety of fields in order to perform high-quality research at institutes with limited resources.
- Support open science by building tools and teaching research methodology that promotes reproducible research.
- Obtain teaching, project management, and laboratory experience sufficient to one day become an excellent university professor.

#### EDUCATION

Oct 2014 - Present

PhD. Candidate Graduate School of Systemic Neurosciences, Lüdwig-Maximillians Üniversität

Aug 2012

M.Sc. Neuroscience Graduate Training Centre of Neuroscience, Eberhard Karls Universität Tübingen

May 2010

B.Sc. Psychology

Wittenberg University

## TEACHING EXPERIENCE

July 2018

Programming Instructor

Teaching Statistics with R

This 4-day workshop is an intensive R course taught to the Psychology department professors at Kwantlen University in Vancouver, Canada. In this course, they learned the R programming language and how to build statistics teaching materials with it.

April 2018

Organizer

Munich Science Slam

Arranged a science slam event at a local industry event space, working with 14 speakers from 5 institutes to give talks in a competion. Integrated a real-time evaluation system into the event for the 60 audience members to use for feedback. This event was successful and was repeated in October 2018

April 2018 -Present Soft Skills Trainer

Presentation Skills for Scientists

With this 1-2 day workshop, I taught effective talk organization and outlining skills for scientific presentations. Scientists gain confidence by learning how to focus on their goals and delivering speeches convincingly through repeated practice.

October 2017

3D Graphics Instructor

Animal Tracking and VR Bootcamp

I co-taught an international, week-long workshop on combining animal tracking through machine vision methods and 3D graphics applications to build virtual reality systems for freely-moving animals. Besides theoretical lectures on the mathematics and engineering behind virtual reality systems, I wrote tutorials for software I wrote to teach the concepts, from which the participants, consisting of PhD students, Post-docs, and Professors, built their own prototype VR systems for ants.

Fall 2017 - Present

Organizer

PyData Munich

I revived a local chapter for the global PyData organization, coordinating with technology companies in Munich (e.g. Google, Nokia, TNG Consulting, JetBrains, and Wayra) to

build a data-science teaching community through the MeetUp platform. These companies now host biweekly tutorials at their event spaces, sponsoring each event and providing spaces for university researchers and tech industry specialists to meet, interact, and learn together.

Summer 2017

Organizer

# Super Python Talks for Life Science

I organized a biweekly seminar series for teaching intermediate-level data analysis and Python programming tutorials, given by 10 PhD students and Pos-docs, including myself. Besides recruiting these speakers, I organized the room and equipment for these sessions, advertised the events, and ran the sessions. This series was successful; it was regularly attended by 30-70 researchers.

July 2016 - Present

Trainer

## Intro. to Scientific Programming in Python

This 4-day workshop is an intensive version of the semester Python course I teach at LMU. In this period, students with no programming experience gain the skills needed to perform data analysis and in Python and reason about their analysis workflow.

Summer 2016 -Summer 2017 Lecturer

## Intro. to Scientific Programming in Python

In this semester course, taught two years in a row, I taught beginning programmers data management, scientific data analysis, and programming skills in a new language (Python). Besides organizing and planning the course, I also prepared all course materials, homework assignments, and graded their final projects.

*Winter 2013 - Summer 2014* 

Lecturer

#### Introduction to Matlab

For 3 Semesters, I taught a 2-week introduction to programming course to beginning programmers. Besides organizing, planning, and teaching the course, I also prepared all course materials and homework assignments.

December 2015

Teaching Assistant

## **Psychophysics**

In this 2-week block course, I acted as tutor, providing technical and programming assistance to students programming and analysing their own psychopysics experiments in Matlab, R, and Excel.

2015 - 2017

Proofreader

Universität

#### Freelance Proofreader

Proofread and Edited research papers for graduate students in medicine, neuroscience, and philosophy to programming

## RESEARCH EXPERIENCE

May 2013 -Present Ludwig-Maximillians

Prof. Dr. Anton Sirota

Programmed a 3D graphics engine in Python to build virtual reality system for freely moving rats, supervised students in programming, engineering, and cognitive science projects, organized weekly journal clubs, and ordered new equipment, trained rodents to perform behavioral tasks, and performed surgery on said rodents as part of brain research.

# INDUSTRY EXPERIENCE

Freelance Scientific Con-

UKT Psychosomatic Med. and Sports Med.

I evaluated and designed a solution for performing medical science studies in a placebo study, and taught the PhD student who carried out the study over several remote sessions and a few travel consultations.

Research Internship

## The Neuromarketing Labs

I completed set-up of an EEG laboratory, including software calibration and noise measurements. Designed and ran two experiments estimating the evoked responses of semantic agreement and price agreement, then analyzed the data. The results from the second experiment are the basis of Dr. Müller's recently-published book, "Neuropricing". Currently volunteering as an EEG consultant by giving one-day workshops on Fieldtrip, SPM, and artifact correction methods.

Nicholas A. Del Grosso, Justin J. Graboski, Weiwei Chen, Eduardo Blanco Hernández, Anton Sirota. "Virtual Reality system for freely-moving rodents." bioRxiv 161232. July 2017; doi=https://doi.org/10.1101/161232

Broetz D., Del Grosso, N.A., Rea M., Ramos-Murguialday, A., Soekadar S.R., Birbaumer, N. "A New Hand Assessment Instrument for Severely Affected Stroke Patients." Journal of Neurorehabilitation. 2014; 34(3), 409-27.

Benoit, J.B., Del Grosso, N.A., Yoder, J.A., Denlinger, D.L. "Resistance to Dehydration between Bouts of Blood Feeding in the Bed Bug, Cimex Lectularius, is Enhanced by Water Conservation, Aggregation, and Quiescence." American Journal of Tropical Medical Hygience. May 2007; 76(5), 987-93.

### SKILLS

- Languages: English (Mother Tongue), German (Level B1), French (Level A1-2)
- **Programming**: Python, Matlab, C-Sharp, GLSL, R, LabView, C, Bash/Linux, LaTeX
- **Stimulus Presentation**: Psychopy, Neurobs Presentation, Psychophysics Toolbox, OpenGL, Pyglet, SuperLab, RatCAVE
- Statistical Analysis: Pyton SciPy Stack (Pandas, Numpy, Matplotlib), Statistical Parametric Mapping (SPM), SPSS, R, Matlab Statistics Toolbox, Fieldtrip, gTec Analyze, BrainVision Analyzer
- **Graphics**: Blender, Adobe Suite (Photoshop, Illustrator, and InDesign), OpenGL, Google SketchUp, GIMP, Inkspace
- Wet Lab Skills: Rat Neurosurgery, Animal Behavioral training (rats and monkeys), in vivo electrophysiology (single needle electrodes, chronically-implanted electrode arrays, noninvasive arrays of EEG electrodes and MEG sensors), Basic Electronics, Comfortable with building custom laboratory equipment
- EEG System Experience: BrainProducts, gTec, Grass Instruments, CTF

## AWARDS

October 2017	Hackathon 3rd Place Winner and "Most Creative Team" Award at Burda Bootcamp Event "Health and Fitness Hackathon"
July 2017	Hackathon Track Winner at Media Lab Bayern Event "FutureLabSmart Home meets Journalism"
April 2017	Hackathon Winner at Burda Bootcamp Event "Love Hackathon"
2016	Best Talk Award at Interact Munich Conference
2015	Best Poster Award at Interact Munich Conference
2011	National Science Foundation Graduate Research Fellowship
2008	NSF Neuroscience REU Fellowship at Duke University
	Full List of Positions and Publications Available Upon

Nikla Sol Dense

Request.

September 14, 2018