

Hemanth Mohan

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Education

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| <i>Vrije University Amsterdam</i> Ph.D. Neuroscience Erasmus Mundus Research Fellow | <i>Amsterdam, The Netherlands</i> Sept. 2012-Mar. 2017 |
| <i>Vrije University Amsterdam</i> MSc. Neuroscience Exchange Honors Student | <i>Amsterdam, The Netherlands</i> Sept. 2010-Aug. 2012 |
| <i>Visvesvaraya Technological University, PES Institute of Technology</i> Bachelor of Engineering in Biotechnology First Class with Distinction | <i>Bengaluru, India</i> July 2005-Aug. 2009 |

Research

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| <i>Cold Spring Harbor Laboratory</i> Postdoctoral fellow, Josh Huang's lab | <i>Cold Spring Harbor, USA</i> April 2017-Present |
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- Investigate cell type specific coding principles of cortical pyramidal neurons and their role in motor control using pharmacological and chemogenetic manipulations, viral tracings, optogenetics, widefield calcium imaging, multiunit recording and computational analysis.
- Investigate the role of axo-axonic cells in controlling network activity in the visual cortex using two photon calcium imaging.

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| <i>Vrije University Amsterdam</i> Ph.D. Researcher, Christiaan de Kock's lab | <i>Amsterdam, The Netherlands</i> Sept. 2012-Mar. 2017 |
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- Investigate the coding principles in the posterior parietal cortex (PPC) of rats during sensorimotor transformation using single cell juxta-cellular and multiunit silicon probe recordings of population activity.
- Study the single cell dendritic and axonal architecture of neurons across layers in human temporal cortex.

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| <i>University of Zurich</i> Ph.D. Researcher, Fritjof Helmchen's lab | <i>Zurich, Switzerland</i> March 2015-June 2015 |
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- Study network activity in PPC during decision making in mice using in-vivo two photon calcium imaging.

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| <i>Netherlands Institute for Neuroscience</i> MSc. Internship, Chris de Zeeuw's lab | <i>Amsterdam, The Netherlands</i> Jan. 2012-Aug. 2012 |
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- Build an in-vivo electrophysiology setup and study motor learning in the cerebellum of mice using optokinetic reflex conditioning.

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| <i>Vrije Univeristy Amsterdam</i> Research Assistantship, Christiaan de Kock's lab | <i>Amsterdam, The Netherlands</i> Oct. 2011-Dec. 2011 |
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- Develop Golgi-cox protocol for thin slices to study architectonics of pyramidal cells in human temporal cortex.

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| MSc. Internship, Christiaan de Kock's lab | Feb. 2011-Aug. 2011 |
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- Study in-vivo 3 dimensional architecture of corticocortical and corticothalamic cells in layer 6 somatosensory cortex using in-vivo single cell electrophysiology.

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| <i>National Institute of Mental Health and Neurosciences</i> Research Assistantship | <i>Bengaluru, India</i> Sept. 2009- June 2010 |
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- Develop a behavioral paradigm by modifying the 8 arm radial maze to study working memory and associative learning using tactile cues in rats.

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| Undergrad Student Assistantship | Jan. 2009- June 2009 |
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- Study migratory pattern of hippocampal cell lines transplanted into the subiculum.

PES Institute of Technology
Undergrad Student Assistantship

Bengaluru, India
Jan. 2007- May 2008

- Study protein extract to identify purity of hybrid okra seeds across generations using poly acrylamide gel electrophoresis.

Scholarships

- Erasmus Mundus Ph.D. Fellowship. Sept. 2012- Aug. 2015
- Boehringer Ingelheim Travel Grant. Mar. 2015- May 2015
- Exchange master honors program. Sept. 2011- Aug. 2012
- Vrije University Fellowship Program Sept. 2010- Aug. 2012

Leadership

Vrije Univeristy Amsterdam
Research Advisor

Amsterdam, The Netherlands
Jan. 2013- July. 2013

- Advise and train internship student in his master project.

Teaching Assistant

Sept. 2012- Nov. 2016

- Give lectures to research master students in the Neural Network in-vivo course
- Give demo classes to research master students on conducting in-vivo electrophysiology experiments
- Assist in conducting histology workshop for bachelor students.

PES Institute of Technology
Teaching Assistant

Bengaluru, India
Aug. 2007- Jan 2008

- Prepared course materials required to teach Cell Biology and Genetics to undergraduate students.

Publications

- Mohan H, Gallero-Salas Y, Carta S, Sacramento J, Laurency B, Sumanovski LT, de Kock CPJ, Helmchen F, Sachidhanandam S. 2018. **Sensory representation of an auditory cued tactile stimulus in the posterior parietal cortex of the mouse**. Sci Rep 8:7739.
- Mohan H, de Haan R, Mansvelder HD, de Kock CPJ. 2017. **The posterior parietal cortex as integrative hub for whisker sensorimotor information**. Neuroscience.
- Mohan H*, Verhoog MB*, Doreswamy KK, Eyal G, Aardse R, Lodder BN, Goriounova NA, Asamoah B, AB BB, Groot C, van der Sluis S, Testa-Silva G, Obermayer J, Boudewijns ZS, Narayanan RT, Baayen JC, Segev I, Mansvelder HD, de Kock CP. 2015. **Dendritic and Axonal Architecture of Individual Pyramidal Neurons across Layers of Adult Human Neocortex**. Cereb Cortex 25:4839-4853. (* equal contribution)
- Narayanan RT*, Mohan H*, Broersen R*, de Haan R, Pieneman AW, de Kock CP. 2014. **Juxtosomal biocytin labeling to study the structure-function relationship of individual cortical neurons**. J Vis Exp:e51359.(* equal contribution)
- H Mohan, R de Haan, R Broersen, AW Pieneman, F Helmchen, JF Staiger, HD Mansvelder, CPJ de Kock. **Whisker motor and sensory information is reliably encoded in the rat posterior parietal cortex**. (*In Prep.*)