

SUSHRUT THORAT

CONTACT INFORMATION

EMAIL: sushrut.thorat94@gmail.com
WEBPAGE: <http://sushrutthorat.com>

RESEARCH INTERESTS

The role of attention and awareness in the brain, and the nature of object-scene interactions in the visual system

EDUCATION

Ph.D. in Cognitive Neuroscience *Ongoing*
Donders Centre for Cognition, Radboud University, The Netherlands
Advisors: Marius Peelen and Marcel van Gerven

M.Sc. (Hons.) in Cognitive Neuroscience *July 2017*
Center for Mind/Brain Sciences (CIMEC), University of Trento, Italy
Thesis: *Using Convolutional Neural Networks to measure the contribution of visual features to the representation of object animacy in the brain*
Advisor: Marius Peelen

B.Tech. in Engineering Physics *August 2015*
Department of Physics, Indian Institute of Technology - Bombay (IIT-B), India
Thesis: *Quadcopter Flight Control using Modular Spiking Neural Networks*
Advisor: Bipin Rajendran

PUBLICATIONS

Thorat, S., van Gerven, M., and Peelen M. (2018) The functional role of cue-driven feature-based feedback in object recognition, *Conference on Cognitive Computational Neuroscience (CCN)*, Philadelphia, 2018.

Thorat, S. and Choudhari, V. (2016) Implementing a Reverse Dictionary, based on word definitions, using a Node-Graph Architecture, *Proceedings of COLING 2016, the 26th International Conference on Computational Linguistics: Technical Papers*, Osaka, 2016, pp. 2797 – 2806.

Thorat, S. and Rajendran, B. (2015) Arithmetic computing via rate coding in neural circuits with spike-triggered adaptive synapses, *International Joint Conference on Neural Networks (IJCNN)*, Killarney, 2015. doi: 10.1109/IJCNN.2015.7280822

CONFERENCE TALKS/POSTERS

The functional role of cue-driven feature-based feedback in object recognition
(Poster) *Conference on Cognitive Computational Neuroscience (CCN)*, Philadelphia, 2018

Using convolutional neural networks to measure the contribution of visual features to the representation of object animacy in the brain
(Poster) *Donders Discussions*, Nijmegen, 2017
(Talk & Poster) *Rovereto Workshop on Concepts, Actions and Objects (CAOs)*, Rovereto, 2017
(Tweets) *Brain Twitter Conference (brainTC)*, 2017

Arithmetic computing via rate coding in neural circuits with spike-triggered adaptive synapses
(Poster) *International Joint Conference on Neural Networks (IJCNN)*, Killarney, 2015

ATTENDED WORKSHOPS

IBRO-SIMONS Computational Neuroscience Imbizo (ISi-CNI) *January 2017*
Cape Town, South Africa
Project: Assessing the role of feature attention in object detection with CNNs.

Computational Approaches to Memory and Plasticity (CAMP) *June 2015*
Bangalore, India
Project: The role of the billions of granule cells in the cerebellum.

OTHER ACHIEVEMENTS	<ul style="list-style-type: none"> • Recipient of the Merit Award (2017), awarded to students who achieve remarkable results at the end of their Degree, by the University of Trento, Italy. • Abstract Award Winner at the Rovereto Workshop on Concepts, Actions and Objects (2017). • Ranked 721 among 450,000 students in the Joint Entrance Examination (JEE, 2011) conducted towards admission to the Indian Institute of Technology. • Recipient of the KVPY scholarship (2009), awarded to 215 promising young researchers throughout India, by the Dept. of Science & Technology, Govt. of India. • Winner at the Annual All India Web-Design Contest (2008) hosted by SJIIT, Pune (India). • Recipient of the NTSE scholarship (2007), awarded to 1000 students throughout India with excellent all-round skills, by the National Centre for Educational Research and Technology, Govt. of India.
TECHNICAL SKILLS	<p>Programming: Python (TensorFlow), MATLAB (PsychToolbox, MatConvNet, SPM)</p> <p>Neuro-Imaging: EEG, fMRI</p> <p>Web-Design: HTML5, CSS3, JavaScript</p>
OTHER WORK	<p>The functional relevance of neuronal clustering (<i>report</i>) 2016</p> <p>Understanding human visual processing with deep neural networks (<i>pres.</i>) 2016</p> <p>Predisposition to towards-gravity periodic motion in chicks (<i>report</i>) 2015</p> <p>Gesture Lock (<i>report</i>) 2013</p>
WORK EXPERIENCE	<p>General Secretary 2014-15 <i>Undergraduate division - Department of Physics, IIT Bombay</i></p> <p>Content Developer Summer 2013 <i>Avanti Fellows, Delhi</i></p>
OTHER ACTIVITIES	<ul style="list-style-type: none"> • Co-founded Neuro Mondays in 2015, a weekly meeting at CIMeC, where students discuss a review, a specific paper, or their work about cutting-edge ideas in neuroscience and psychology. • Maintain a blog, Meadows, of my writings.