Sahil Moza, PhD

Contact Information

EBRAINS, Human Brain Project
SciLife Lab, KTH, Stockholm
Solna, Sweden
sahil.moza@gmail.com, moza@kth.se

Website: https://sahilmoza.com

Research Interests

Computational and Systems Neuroscience, Neural syntax, Machine Learning approaches to Neuroscience

Education

Ph.D Neuroscience/Systems Biology — July 2020

National Centre for Biological Sciences Bangalore, India

Advisor: Prof. Upinder S. Bhalla

M.E. Computational and Systems Biology, GPA 7.4/9.0 — Aug 2012

Jawaharlal Nehru University New-Delhi, India

B.E. Biotechnology, GPA 3.3/4.0 — Jul 2010

Panjab University Chandigarh, India

PhD Thesis

Robust memory and precise balance: Computation with biological network motifs

Research Publications

Bhatia, A.*, **Moza, S.***, Bhalla, U.S., "Precise excitation-inhibition balance controls gain and timing in hippocampus.", *eLife, Apr 2019* (*Equal contribution)
Faculty Opinions Recommendation. In Faculty Opinions, 04 May 2020

Moza S., Bhalla, U.S., "Different dimensions of robustness- noise, topology and rates - are nearly independent in chemical switches.", *bioRxiv Aug 2020*

HarshaRani, G.V., **Moza, S.**, Ramakrishnan, N., Bhalla, U.S., "SWITCHES: Searchable Web Interface for Topologies of CHEmical Switches.", *Bioinformatics (accepted) Jan 2021*. http://**SWITCHES**.ncbs.res.in

Book Chapters

Bhatia, A., **Moza, S.**, Bhalla, U.S., "Patterned Optogenetic Stimulation using a DMD-projector", *Channelrhodopsin, Chapter 11, Springer Protocols, 2020 (In press)*

Work Experience

Scientist, EBRAINS, Human Brain Project — Oct 2020 -

Programmer, National Centre for Biological Sciences — Oct 2018 - May 2020

Teaching Experience

Teaching Assistant and Organization

Computational approaches to memory and plasticity (CAMP) , — Summer 2014-18

National Centre for Biological Sciences, Bangalore

Boston Bangalore Biosciences Beginnings Neuroscience school — Winter 2016

Harvard University, Boston
National Centre for Biological Sciences, Bangalore

Workshops and Conferences

Transylvanian Experimental Neuroscience Summer School, Romania	Jun 2019
Quantitative approaches to Behaviour & Neural Systems, Lisbon, Portugal	Oct 2018
Neuroscience 2017, Society of Neuroscience, Washington DC, USA	Nov 2017
Molecular Mechanisms at the Synapse, Janelia Research Campus HHMI, Ashburn, Virginia, USA	May 2016
ICTP-ICTS Winter School on Quantitative Systems Biology	Dec 2013

Invited Talks

NeuroMatch Conference, Online Webinar	March 2020
No Garlands Neuroscience, IISER Pune, India	Jan 2020
Molecules and Memory, NCBS, Bengaluru, India	Mar 2019
Spikes lecture series, Centre for Neuroscience, IISc Bengaluru, India	Jan 2018
No Garlands Neuroscience, IISER Pune, India	Oct 2017
BSSE Symposium, IISc Bengaluru, India	Jan 2017

Awards & Fellowships

Fellowships

Council of Scientific and Industrial Research (CSIR)

Senior Research Fellowship (SRF), Biology	Jul 2014 - July 2017
Junior Research Fellowship (JRF), Biology (All India Rank 36)	Dec 2011

DBT Bioinformatics National Certification (All India Rank 33)	Feb 2011
Jawaharlal Nehru University- Masters Fellowship	Aug 2010 - Jul 2012
University of Groningen, The Netherlands- Research Traineeship	Apr - Jun 2009
Panjab University- Extra-mural grants	2008, 2009

Travel Awards

IBRO-PERC, The Brain Prize and FENS stipend	May 2019
Wellcome Trust Travel Award	Sep 2018
Infosys Travel Award, Infosys Foundation	Dec 2017
Department of Biotechnology Travel Award, Government of India	Nov 2017
Janelia Research Campus, HHMI, Ashburn, Virginia, USA	May 2016
Magnetic Resonance Society, EUROMAR, Gothenburg, Sweden	Jun 2009

Research Internship

University of Groningen, The Netherlands May 2009 - Jul 2009

Title *2D NMR Hydrogen/Deuterium exchange study of Haloalkane Dehalogenase (DhlA) from Xanthobacter autotrophicus*

Supervisor Prof. Frans Mulder

Software Skills

Programming

Python, Perl, R, UNIX shell scripting, Octave, GNU make, C, LaTeX

Relevant scientific libraries/software

Machine Learning: scikit-learn, TensorFlow

Simulators: MOOSE, CoPaSi, Brian, MCell

Cluster and supercomputing: Sun Grid Engine

Standardized Tests

GRE General Test- 99% Verbal, 93% Quantitative	Feb 2010
TOEFL iBT- 115/120	Dec 2009
Basic French (DELF - A1, 65%)	Dec 2010

Extra-curricular

Curator and organizer, *TEDxNCR*	Dec 19, 2010
Theater and Improvizational theater	10+ years

References

Upinder S. Bhalla
Dean
Phone: +91-80-23666404
NCBS, Bangalore
bhalla@ncbs.res.in

Arvind Kumar
Associate Professor
Phone:+46 87906224
KTH, Stockholm
arvkumar@kth.se

Rishikesh Narayanan
Assistant Professor
Phone:+91-80-22933372
IISc, Bangalore
rishi@mbu.iisc.ernet.in

Sandeep Krishna
Assistant Professor
Phone: +91-80-23666226
NCBS, Bangalore
sandeep@ncbs.res.in