Personal Information

Family Name, First Name:	**Modi, Brijesh**
Date of birth**:**	12/05/1994
Nationality:	Indian
Country of Residence:	Norway
Sex:	Male

Education

[01/10/2018 –24/06/2022]

Degree Title:	**Ph.D. in Behavioral Neuroscience**
Date of Defense:	24/06/2022
Institution:	Sapienza, University of Rome, Italy
	European Brain Research Institute, Rome, Italy
Supervisors:	Prof. Enrico Cherubini and Dr. Marilena Griguoli
Title of Thesis:	Characterization of the hippocampal network state space during wakefulness and sleep

[01/08/2012 – 31/05/2016]

Degree Title:	**Bachelor of Computer Engineering**
Institution:	University of Mumbai, India

Work Experience

[01/10/2022 – present]

Postdoctoral Researcher

Norwegian Center for Molecular Medicine
University of Oslo, Norway
Supervisor: Dr. Charlotte Boccara

[01/01/2018 – 30/09/2022]

Ph.D. Student and Research Fellow

European Brain Research Institute, Rome, Italy
Sapienza, University of Rome, Italy
Supervisor: Prof. Enrico Cherubini and Dr. Marilena Griguoli

[15/01/2020 – 30/06/2020]

Visiting Research Fellow

Donders Institute for Brain, Cognition and Behavior, Nijmegen, Netherlands
Supervisor: Prof. Francesco Battaglia and Dr. Federico Stella

[01/09/2016 – 31/08/2017]

Research Intern

Max Planck Institute for Brain Research, Frankfurt am Main, Germany
Supervisor: Dr. Hiroshi Ito

[01/09/2014 – 31/05/2016]
Founder and Lead Developer
Nuclei Technologies, Mumbai, India

[01/05/2013 – 31/05/2015]
Volunteer and Application Developer
Vivekanand Seva Mandal (NGO), Dombivli, India.

[01/01/2014 – 31/07/2014]
Software Engineering Intern
Tantra-Gyan India Business Solutions, Dombivli, India

[01/09/2013 – 31/04/2014]
Web Editor
Computer Society of India - Student Chapter VESIT, Mumbai, India

Publications

Journal Papers and Manuscripts

Modi B, Boccara CN. Automated Toolbox for Developmental Sleep Scoring (in preparation)

Modi B*, Annavini E*, Zarva P, Korchynska S, Hafting T, Boccara CN. Benchmarking algorithms to automatically detect sharp wave ripples (Manuscript in preparation)

Modi B, Guardamagna M, Stella F, Griguoli M, Cherubini E, Battaglia F. State Dependent Coupling of Hippocampal Oscillations. Elife (2023)

Modi B*, Pimpinella D*, Pazienti A, Zacchi P, Cherubini E, Griguoli M (2019) Possible implication of the CA2 hippocampal circuit in social cognition deficits observed in the neuroligin 3 knock-out mouse, a non-syndromic animal model of Autism. Frontiers in Psychiatry (* = equal contribution)

Basilico B, Ferrucci L, Ratano P, Golia M. T, Grimaldi A, Rosito M, Ferretti V, Reverte I, Sanchini C, Marrone M. C, Giubettini M, De Turris V, Salerno D, Garofalo S, StPierre M.-K, Carrier M, Renzi M, Pagani F, **Modi B**, Raspa M, Scavizzi F, Gross CT, Marinelli S, Tremblay M, Caprioli D, Maggi L, Limatola C, Angelantonio S, Ragozzino D. (2021) Microglia control glutamatergic synapses in the adult mouse hippocampus. Glia.

Tandel A, **Modi B,** Gupta P, Wagle S and Khedkar S, Multi-document text summarization - a survey, 2016 International Conference on Data Mining and Advanced Computing (SAPIENCE), 2016, pp. 331-334.

Conferences

Poster Presentation

Year	Conference	Poster
2023	EMBL, Helsinki	Engberg A, Korchynska S, Annavini E, **Modi B,** Boccara CN, New Electrophysiological and computational tools to score in pre-weaning rodents
2023	EMBL, Helsinki	Korchynska S, **Modi B**, Annavini E, Okinina L, Boccara CN Sleep Architecture Dynamics Across Development

2022	EMBL, Hiedelberg	**Modi B,** Guardamagna M, Stella F, Griguoli M, Cherubini E, Battaglia F, State Dependent Coupling of Hippocampal Oscillations
2022	NCMM retreat, Son	**Modi B,** Guardamagna M, Stella F, Griguoli M, Cherubini E, Battaglia F, Intrinsic Organization of hippocampal oscillations
2022	FENS, Paris	Korchynska S, Annavini E, **Modi B**, Vharegyi L, Boccara CN, Sleep Architecture Dynamics Across Lifespan
2022	FENS, Paris	**Modi B**, Guardamagna M, Stella F, Griguoli M, Cherubini E, Battaglia F, Intrinsic Organization of hippocampal oscillations
2022	BCCN, Berlin	**Modi B**, Guardamagna M, Stella F, Griguoli M, Cherubini E, Battaglia F, State Dependent Coupling of Hippocampal Oscillations

Invited Talks

YEAR	TITLE	VENUE
2023	Benchmarking algorithms to automatically detect sharp wave ripples.	Spring Hippocampus Conference, Verona
2023	Detection of non-canonical sleep stages across lifespan	NCMM Institute Seminar, Oslo
2023	Automated pipelines for developmental sleep scoring	NCMM Institute Seminar, Oslo

Honors / Awards / Fellowships

YEAR	FELLOWSHIPS / HONORS	DURATION	AMOUNT
2023	Seal of Excellence – MSCA Postdoc Fellowship	-NA-	-NA-
2022	EU Marie Curie Scientia Fellowship – Call 4	2 years	~106,800 Euros
2020	EMBO short term Fellowship, Netherlands	4 months	10,800 Euros
2018	EBRI Fellowship, Rome, Italy	2 years	40000 Euros
2016	Internship at MPI Frankfurt	1 year	~20000 Euros

Mentoring

[March 2023 – August 2023]
Adrian Engberg – Master's Student
Project: Emergence of twitches during early development.

[June 2023 – August 2023]
Sunniva Segtnan - Summer Research Intern
Project: Maturation of sleep spindles across development

[September 2023 – Present]
Solveig Horn – Master's Student
Project: Behavioural and electrophysiological method to infer cognitive development in rodents

[September 2023 – Present]
Ane Gaupseth Mæstad – Master's Student
Project: Developmental maturation of thermoregulation across sleep stage

Technical Skills

o *Programming:* MATLAB, Python, PHP, HTML, CSS, MySQL
o *Ex-vivo electrophysiology:* Preparation of healthy hippocampal slices, whole cell patch clamp, immunohistochemistry, PCR for genotyping.
o *In-vivo electrophysiology (head-restrained):* Implanting head bar, training mouse for head fixation, recordings in anesthetized and awake conditions.
o *In-vivo electrophysiology (freely moving):* Building tetrode drive, surgical implantation of drive for chronic recordings, animal handling and behavioral training, electrolytic lesion, and brain extraction for reconstruction of tetrode tracks.

Teaching Activities

Workshops (Computer Science)
o PHP and MySQL Workshop (16 hours) - Nuclei Technologies
o Establishing Local Area Network (LAN) for 40 students- Vivekanand Seva Mandal (NGO).
o Workshop on PC Assembly and PHP/MySQL -- Computer Society of India (CSI)- VESIT
o Teaching Assistant -- JAVA and Android Programming - notemybook.com