

Nabin Koirala

Haskins Laboratories

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Research experience

2022 – Present	Associate Research Scientist at Haskins Laboratories, New Haven, USA
2019 – 2022	Postdoctoral researcher at Haskins Laboratories, New Haven, USA
2020 – Present	Adjunct research scientist at Nepal Applied Mathematics and Informatics Institute for research (NAAMI)
2015 – 2019	PhD student at Johannes Gutenberg University, Mainz, Germany
2013 – 2014	Research assistant at Christian Albrechts University, Kiel, Germany

Academic education

2019	Ph.D Neuroscience, Johannes Gutenberg University, Mainz, Germany
2014	M.Sc Signal processing and communication, Christian Albrecht University, Kiel, Germany
2010	Bachelor of Engineering, Tribhuvan University, Kathmandu, Nepal

Research Grants, fellowships and academic awards

2022 - 2024	Funding Source: Oberkotter Foundation Role: Co-I (PI: Vincent L. Gracco) Title: <i>Identification of the brain and behavior changes post cochlear implantation to predict early developmental milestones in speech and language as a precursor to the development of literacy.</i>	Total: \$1,575,570
2022 - 2023	Funding Source: National Spasmodic Dysphonia Association Role: Co-I (PI: Vincent L. Gracco) Title: <i>Network-targeted transcranial direct current stimulation as a treatment for laryngeal dystonia.</i>	Total: \$50,000

2021 - 2022	Funding Source: Abbott (St. Jude) Total: €80,000 Role: Co-PI (PI - Muthuraman Muthuraman) Title: <i>Quantification of falls and rigidity and their interrelation to disease state and symptoms modulation through deep brain stimulation.</i>
2018	Editor's choice article of the issue in Brain: A journal of neurology <i>"Cerebello-cortical network fingerprints differ between essential, Parkinson's and mimicked tremors"</i>
2015 - 2019	Focus Program Translational Neurosciences Research Fellowship [Funding Source: German research foundation (DFG), Total Amount: €1480/month for 4 years]
2015 - 2019	Travel Grant and Research expenses [Funding Source: German research foundation (DFG), Total Amount: €5000/year for 4 years]
2014	Student Merit Scholarship, Christian Albrecht University, Kiel, Germany <i>2000 Euros</i>
2006	Student Merit Scholarship, Tribhuvan University, Kathmandu, Nepal <i>64000 NPR</i>

Research Interest and Projects

Since 2020	Impact of Cochlear implant in brain structure in infants [Collaboration: Dr. Vincent Gracco, Haskins Laboratories, Yale University, New Haven, USA; Dr. Mikael Deroche, McGill University, Montreal, Canada; Dr. Jace Wolfe, Hearts for Hearing, Oklahoma, USA]
Since 2020	Automatic movement detection in dystonia patients using computer vision and machine learning algorithms [Collaboration: Dr. Hyder Jinnah, Emory University, Atlanta, USA; Dr. David Peterson, University of California San Diego, USA; Dr. Ajad Chhatkuli, ETH Zurich, Switzerland; Dr. Bishesh Khanal, NAAMI, Kathmandu, Nepal]
Since 2020	Automatic Spasmodic dysphonia (Laryngeal Dystonia) diagnosis and classification using deep learning algorithms [Collaboration: Dystonia Coalition, USA; National Spasmodic Dysphonia Association, USA; Dr. Vincent Gracco, Haskins Laboratories, New Haven, USA; Dr. Bishesh Khanal, NAAMI, Kathmandu, Nepal]

- Since 2020 Neural Correlates of Stuttering and its subtypes
[Collaboration: Dr. Michael Milham, Child Mind Institute, New York, USA; Dr. Suok Jun Hong, Sungkyunkwan University, Seoul South Korea; Dr. Vincent Gracco, Haskins Laboratories, New Haven, USA]
- Since 2019 Imaging genetics in children with specific reading disability
[Postdoctoral researcher in NIH GRANT for Florida Learning Disabilities Research Center with PIs Dr. Nicole Landi, University of Connecticut & Yale University, Connecticut, USA and Dr. Elena Grigorenko, University of Houston, Texas, USA]
- Since 2018 Structural brain network characterization in Migraine patients
[Collaboration: Dr. Lars Michels, University of Zurich, Switzerland]
- Since 2015 Neuroimaging brain network markers for neurodegenerative and neuroinflammatory diseases
[Collaboration: Dr. Muthuraman Muthuraman, Johannes Gutenberg university, Mainz, Germany; Dr. Gertrud Tamas, Semmelweis University, Budapest, Hungary]

Scientific Publications

(Publication Access: [Google Scholar Profile](#), Full text pdfs/ links available in nabinkoirala.com)

Submitted articles for publication

- **Koirala N**, Deroche M. LD, Wolfe J, Neumann S, et al. *Dynamic networks differentiate the language ability of children with cochlear implants*. Under review
- Deroche M. LD, Wolfe J, Neumann S, Manning J, et al. *Auditory evoked response to an oddball paradigm in children wearing cochlear implants*. Under review
- Deroche M. LD, Wolfe J, Neumann S, Manning J, et al. *Cortical response to a checkerboard, revealed through EEG and fNIRS, in children wearing cochlear implants*. Under review

Peer reviewed published articles (Descending chronological order)

37. Gonzalez-Escamilla G[§], Chirumamilla V.C[§], **Koirala N[§]**, Anwar A.R, Tüscher O, et al. (2023) *Community driven causality of the dynamic oscillatory network responses during threat processing*. (§ - Equal contribution). Brain Communications.

36. Bahr-Hamm K, **Koirala N**, Hanif M, Gouveris H, Muthuraman M. (2023) *Sensorimotor Cortical Activity during Respiratory Arousals in Obstructive Sleep Apnea*. International Journal of Molecular Sciences.
35. Hossen A, Anwar A.R, **Koirala N**, et al. (2022) *Machine learning aided classification of tremor in Multiple Sclerosis*. eBioMedicine.
34. Malatantis-Ewert S, Bahr K, Huppertz T, ding H, **Koirala N**, et al. (2022) *Arousal features on polysomnography predict excessive daytime sleepiness in patients with obstructive sleep apnea*. Frontiers in Physiology.
33. Gouveris H[§], **Koirala N**[§], Anwar A.R, Ding H, Bahr K, et al. (2022) *Reduced cross-frequency coupling and daytime sleepiness in sleep apnea patients*. (§ – Equal contribution). Biology.
32. Bitar L, Uphaus T, Thalman C, Muthuraman M. et al. (2022) *Inhibition of the enzyme autotaxin reduces cortical excitability and ameliorates the outcome in stroke*. Science Translational Medicine.
31. Gracco V.L, Sares A.G, **Koirala N**. (2022) *Structural brain network topological alterations in stuttering adults*. Brain Communications.
30. Gonzalez-Escamilla G, **Koirala N**, Bange M, Glaser M, Pintea B, et al. (2022) *Deciphering the network effects of deep brain stimulation in Parkinson's disease*. Neurology and Therapy.
29. **Koirala N**, Kleinman D, Perdue M.V, Su X, Villa M, et al. (2021) *Widespread effect of dMRI data quality on diffusion measures in children*. Human Brain Mapping
28. Muthuraman M, Palotai M, Jávora-Duray B, Kelemen A, **Koirala N**, et al. (2021) *Frequency-specific network activity predicts bradykinesia severity in Parkinson's disease*. Neuroimage Clinical
27. **Koirala N**, Perdue M.V, Su X, Grigorenko E.L, Landi N. (2021) *Neurite density and arborization is associated with reading skill and phonological processing in children*. NeuroImage
26. Lars M[§], **Koirala N**[§], Groppa S, Luechinger R, Gantenbein AR, et al. (2021) *Structural brain network characteristics in patients with episodic and chronic migraine*. The journal of headache and pain (§ - **Equal contribution**).
25. Cerina M, Muthuraman M, Gallus M, **Koirala N**, Dik A, et al. (2020) *Myelination-and immune-mediated MR-based brain network correlates*. Journal of neuroinflammation.
24. **Koirala N**, Serrano L, Paschen S, Falk Daniela, Anwar AR, et al. (2020) *Mapping of subthalamic nucleus using microelectrode recordings during deep brain stimulation*. Scientific reports.
23. Muthuraman M, Bange M, **Koirala N**, Ciolac D, Pintea B, et al. (2020) *Cross-frequency coupling between gamma oscillations and deep brain stimulation frequency in Parkinson's disease*. Brain: a journal of neurology.

22. Muthuraman M, Fleischer V, Kroth J, Ciolac D, Radetz A, **Koirala N**, et al. (2020) *Covarying patterns of white matter lesions and cortical atrophy predict progression in early MS*. *Neurology, Neuroimmunology & Neuroinflammation*.
21. Radetz A, **Koirala N**, Krämer J, Johnen A, Fleischer V, et al. (2020) *Gray matter integrity predicts white matter network reorganization in multiple sclerosis*. *Human Brain Mapping*.
20. Michels L, Villanueva J, O’Gorman R, Muthuraman M, **Koirala N**, et al. (2019). *Interictal hyperperfusion in the higher visual cortex in patients with episodic migraine*. *Headache – The journal of head and face pain*.
19. Chirumamilla V.C, Dresel C, **Koirala N**, Gonzalez-Escamilla G, Deuschl G, et al. (2019). *Structural brain network fingerprints of focal dystonia*. *Therapeutic Advances in Neurological Disorders*.
18. **Koirala N**, Anwar AR, Ciolac D, Glaser M, Pintea B, et al. (2019). *Alterations in White Matter Network and Microstructural Integrity Differentiate Parkinson’s Disease Patients and Healthy Subjects*. *Frontiers in Aging Neuroscience*.
17. Fleischer V[§], **Koirala N**[§], Droby A, Gracien R, Deichmann R, et al. (2019). *Longitudinal cortical network reorganization in early relapsing-remitting multiple sclerosis*. *Therapeutic Advances in Neurological Disorders*. (§ - **Equal contribution**).
16. Ciolac D, Luessi F, Gonzalez-Escamilla G, **Koirala N**, Riedel C, et al. (2019). *Selective Brain Network and Cellular Responses Upon Dimethyl Fumarate Immunomodulation in Multiple Sclerosis*. *Frontiers in Immunology*.
15. Gonzalez-Escamilla G, Muthuraman M, Reich M, **Koirala N**, Riedel, et al. (2019). *Cortical network fingerprints predict deep brain stimulation outcome in dystonia*. *Movement disorders*.
14. Chiosa V, Ciolac D, Groppa St, **Koirala N**, Pintea B, et al. (2019). *Large-scale network architecture and associated structural cortico-subcortical abnormalities in patients with sleep/awake-related seizures*. *Sleep – The journal of sleep research society*.
13. Chirumamilla V.C, Gonzalez-Escamilla G, **Koirala N**, Bonertz T, Grothus S, et al. (2019). *Cortical Excitability Dynamics During Fear Processing*. *Frontiers in Neuroscience*.
12. Muthuraman M, Raethjen J, **Koirala N**, Anwar A, Mideksa K, et al. (2018). *Cerebello-cortical network fingerprints differ among essential, Parkinson and mimicked tremors*. *Brain: a journal of neurology*.
11. Muthuraman M[§], **Koirala N**[§], Ciolac D, Pintea B, Glaser M, et al. (2018). *Deep Brain Stimulation and L-DOPA Therapy: Concepts of Action and Clinical Applications in Parkinson’s disease*. *Frontiers in Neurology*. (§ - **Equal contribution**).

10. **Koirala N**, Fleischer V, Glaser M, Zeuner KE, Deuschl G, et al. (2017). *Frontal Lobe Connectivity and Network Community Characteristics are Associated with the Outcome of Subthalamic Nucleus Deep Brain Stimulation in Patients with Parkinson's Disease*. Brain Topography.
9. Muthuraman M, Deuschl G, **Koirala N**, Riedel C, Volkmann J, et al. (2017). *Effects of DBS in parkinsonian patients depend on the structural integrity of frontal cortex*. Scientific Reports.
8. Chirumamilla VC, **Koirala N**, Groppa S. (2017). *Combining transcranial magnetic stimulation and subdural electrodes for pain modulation*. Clinical Neurophysiology.
7. Kroth J, Ciolac D, Fleischer V, **Koirala N**, Kramer J, et al. (2017). *Increased cerebrospinal fluid albumin and immunoglobulin A fractions forecast cortical atrophy and longitudinal functional deterioration in relapsing-remitting multiple sclerosis*. Multiple Sclerosis Journal.
6. Chiosa V, Groppa SA, Ciolac D, **Koirala N**, Misina L, et al. (2017). *Breakdown of Thalamo-Cortical Connectivity Precedes Spike Generation in Focal Epilepsies*. Brain Connectivity.
5. **Koirala N**, Fleischer V, Granert O, Deuschl G, Muthuraman M, et al. (2016). *Network effects and pathways in Deep brain stimulation in Parkinson's disease*. Conference proceedings: IEEE Engineering in Medicine and Biology Society.
4. Fleischer V, Groger A, **Koirala N**, Droby A, Muthuraman M, et al. (2016). *Increased structural white and grey matter network connectivity compensates for functional decline in early multiple sclerosis*. Multiple Sclerosis Journal.
3. Alexandru H, Muthuraman M, Chirumamilla V.C, **Koirala N**, Paktas B, et al. (2016). *Grey Matter Microstructural Integrity Alterations in Blepharospasm Are Partially Reversed by Botulinum Neurotoxin Therapy*. PLoS One.
2. Chirumamilla V.C, **Koirala N**, Mideksa KG, Anwar AR, Schmidt G, et al. (2015). *Testing the effects of pre-processing on voxel based morphometry analysis*. Conference proceedings: IEEE Engineering in Medicine and Biology Society.
1. **Koirala N**, Muthuraman M, Anjum T, Chaitanya CV, Helmolt VF, et al. (2015). *Differentiating tremor patients using spiral analyses*. Conference proceedings: IEEE Engineering in Medicine and Biology Society.

Professional academic experience

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| Since 2020 | Official member of communication committee and blog contributor for Organization for human brain mapping (OHBM) |
| Since 2020 | Member - Organization for human brain mapping (OHBM); Society for the Neurobiology of Language (SNL) |

- Since 2022 Ad hoc Reviewer - Nature partner journals (npj) Parkinson's Disease
- Since 2020 Ad hoc Reviewer - Brain Sciences; Electronics: Circuit and Signal Processing; New Directions for Child and Adolescent Development; Entropy; Mind, Brain and Education
- Since 2019 Ad hoc Reviewer - Human brain mapping; Frontiers in aging Neuroscience; Frontiers in Human Neuroscience; Frontiers in Neurology: Movement disorders

Teaching experiences

- 2023 Guest Lecture on "*White matter imaging methods for understanding cognition and studying development in humans*", Department of Psychological Sciences, University of Connecticut, Storrs, USA (Invited by Prof. Dr. Nicole Landi)
- 2022 1-day Workshop on "*Diffusion weighted Images: Data Processing and analyses*", Brain Imaging Research Center, University of Connecticut, Storrs, USA
- 2022 1-day Workshop on "*Diffusion weighted Images: Principles and Data Acquisitions*", Brain Imaging Research Center, University of Connecticut, Storrs, USA
- 2022 Guest Lecture on "*Latest findings using Neuroimaging data on the phonological theory of Developmental Dyslexia*", Department of Brain and Behavioral Sciences, University of Pavia, Piazza Botta, Italy (Invited by Prof. Dr. Sara Mascheretti)
- 2021 1-day Workshop on "*Diffusion weighted Images: Data Processing and analyses*", Brain Imaging Research Center, University of Connecticut, Storrs, USA
- 2021 1-day Workshop on "*Diffusion weighted Images: Principles and Data Acquisitions*", Brain Imaging Research Center, University of Connecticut, Storrs, USA
- 2020 Weekly course on "*MRI: from basics to advance analytical techniques*", Haskins Laboratories, Yale University; LandiLab, University of Connecticut, Storrs, USA.
- 2020 1-day Seminar for Graduate students on "*Neuroimaging and its application*", Connecticut Institute for Brain & cognitive sciences, University of Connecticut, Storrs, USA.
- 2020 8 weeks course completed in *Advancing Learning Through Evidence-Based Teaching*, with distinction at the Center for the Integration of Research Teaching and Learning (CIRTL) network Massive Open Online Courses (MOOCs).
- 2020 Certificate of college teaching preparation (CCTP) for postdocs, Yale center for teaching and learning (ongoing), New Haven, USA.

- 2018 1-day Computational Workshop on “*Machine Learning and neuroimaging analysis*”, Johannes Gutenberg university, Mainz, Germany.
- 2018 1-day Workshop on “*MRI connectivity analysis*”, Johannes Gutenberg university, Mainz, Germany.
- 2017 - 2020 Teaching Assistant “*Medical Signal Processing - Time frequency analysis*” - Prof. Dr. Muthuraman Muthuraman at University of Kiel, Germany.

Invited Colloquia and Talks

- 2022 **Koirala, N.**, Deroche, M., Wolfe, J., Neumann, S., Muthuraman, M., Gracco, VL. American Cochlear Implant Alliance, Washington, DC, USA. “*Neuroimaging resting state markers in children who have cochlear implants and disparate language outcomes*”.
- 2021 Gracco VL, Sares A, **Koirala N.** 12th Oxford Dysfluency Conference, Oxford, UK (virtual) – “*Structural brain network topological alterations in stuttering adults*”.
- 2020 **Koirala N.** Connecticut Institute for Brain & cognitive sciences, University of Connecticut, Storrs, USA – “*Imaging Genetics in Specific reading disability*”.
- 2019 **Koirala N.** Haskins staff talks, New Haven, USA – “*Structural network characteristics in Parkinson’s disease patients*”.
- 2018 **Koirala N.** Introductory course on methods for designing and analyzing human MRI studies, Mainz, Germany – “*Network analysis in human brain*”.
- 2017 **Koirala N.** FTN retreat, Mainz, Germany – “*Structural network architecture predicts the clinical outcome of deep brain stimulation in Parkinson’s disease patients*”.
- 2016 **Koirala N.** 1st Seminar on invasive and non-invasive neurostimulation methods, Mainz, Germany – “*Network effects in deep brain stimulation*”.
- 2016 **Koirala N.**, V Fleischer, O Granert, G Deuschl, M Muthuraman, S Groppa. 38th Annual international conference of Engineering in Medicine and Biology Society, Florida, USA – “*Network effect and pathways in deep brain stimulation in Parkinson’s disease*”.

Poster presentations

- 2022 **Koirala N.**, Hooker A, Villa M, Mahaffy K, Mascheretti S, Perdue MV, Grigorenko EL, Landi N. Society for the Neurobiology of Language (SNL), 14th meeting, Philadelphia, USA – “*Structural covariance network identifies FoxP2 gene allele-specific variations and its association to reading and language*”.
- 2022 Mahaffy K, **Koirala N.**, Landi N. Society for the Neurobiology of Language (SNL), 14th meeting, Philadelphia, USA – “*Are all reading disabled brains the same? A*

comparison of Brain structure in Poor Comprehenders, poor decoders and generally good readers”.

- 2022 Villa M, **Koirala N**, Perdue MV, Grigorenko EL, Landi N. Society for the Neurobiology of Language (SNL), 14th meeting, Philadelphia, USA – “*Does white matter mediate the relationship between SES, other environmental risk factors and reading? A. SEM study*”.
- 2022 Sirisoukh, Mahaffy K, Villa M, **Koirala N**, Landi N. Science Slam, University of Connecticut, Storrs, USA – “*Bilingualism: Is there a structural advantage?*”.
- 2020 **Koirala N**, Perdue MV, Su X, Grigorenko EL, Landi N. Society for the Neurobiology of Language (SNL), 12th meeting, Philadelphia, USA (Virtual) – “*Neurite orientation dispersion is associated with reading skills*”.
- 2020 **Koirala N**, Kleinman D, Perdue MV, Su X, Villa M, Grigorenko EL, Landi N. Organization for Human brain mapping (OHBM) conference, Montreal, Canada (Virtual) – “*Effect of dMRI data quality on diffusion measures in children*”.
- 2019 **Koirala N**, Perdue MV, Su X, Grigorenko EL, Landi N. Florida learning disabilities research center (FLDRC) annual meeting, Florida, USA – “*Quantifying imaging quality for Multi-Center Data Analysis*”.
- 2019 **Koirala N**, Serrano L, Paschen S, Anwar AR, Kuravi P, Deuschl G, Groppa S, Muthuraman M. German congress for Parkinson und Movement disorders (DPG), Düsseldorf, Germany – “*Mapping of subthalamic nucleus using microelectrode recordings during deep brain stimulation*”.
- 2019 Michels L, **Koirala N**, Groppa S, Luechinger R, Riederer F, Gantenbein AR, Sandor PS, Kollias S, Muthuraman M. International Headache Congress (IHC), Dublin, Ireland – “*Structural brain network characteristics in migraine patients*”.
- 2018 **Koirala N**, Fleischer V, Glaser M, Zeuner K, Deuschl G, Volkmann J, Muthuraman M, Groppa S. German society of Neurology (DGN) congress, Berlin, Germany – “*Structural network architecture predicts the clinical outcome of deep brain stimulation in Parkinson's patients*”.
- 2017 **Koirala N**, Radetz A, Muthuraman M, Groppa S. Organization for Human brain mapping (OHBM) conference, Vancouver, Canada – “*Structural network architecture predicts the clinical outcome of deep brain stimulation in Parkinson's patients*”.
- 2017 **Koirala N**, Muthuraman M, Groppa S. Ernst Strüngmann Institute – Systems Neuroscience Conference (ESIsync), Frankfurt, Germany – “*Network analysis for the prediction of the outcome of subthalamic nucleus deep brain stimulation in patients with Parkinson's disease*”.
- 2017 **Koirala N**, Deuschl G, Riedel C, Volkmann J, Muthuraman M, Groppa S. Rhein Main Neuroimaging retreat, Hohensolms, Germany – “*Grey matter network and its implications in Parkinson's patients*”.

- 2016 **Koirala N**, Fleischer V, Groeger A, Muthuraman M, Droby A, Zipp F, Groppa S. Organization for Human brain mapping (OHBM) conference, Geneva, Switzerland – “*Increased structural network connectivity compensates functional decline in early multiple sclerosis*”.
- 2016 Fleischer V, **Koirala N**, Droby A, Gracien R, Deichmann R, Meuth S, Ziemann U, Muthuraman M, Zipp F, Groppa S. 32nd Congress of the European committee for treatment and research in Multiple Sclerosis (ECTRIMS), London, UK – “*Continuous short-term structural network reorganization beyond atrophy in patients with RRMS*”.
- 2016 **Koirala N**, Muthuraman M, Groppa S. FTN retreat, Mainz, Germany – “*Connectivity analysis using community structure in Deep Brain Stimulation for Parkinson’s disease patients*”.
- 2016 **Koirala N**, Muthuraman M, Groppa S. Rhein Main Neuroscience Network seminar, Oberwesel, Germany – “*Connectivity analysis of network targets for deep brain stimulation patients with Parkinson’s disease*”.
- 2015 **Koirala N**, Muthuraman M, Anjum T, Chaitanya CV, Helmolt VF, Mideksa KG, Lange K, Schmidt G, Schneider S, Deuschl G. 37th Annual international conference of Engineering in Medicine and Biology Society, Milan, Italy – “*Differentiating tremor patients using spiral analyses*”.

Student supervision

- Prasiddha Bhandari Co-Supervisor for project “*Computer Vision based movement detection in Dystonia patients*”, Nepal Applied Mathematics and Informatics Institute for research (NAAMI), Kathmandu, Nepal. (2022, Ongoing)
- Kelly Mahaffy Co-Supervisor for research project “*Impact of hippocampal structure in specific reading disability*”, University of Connecticut, Storrs, USA. (2021, Ongoing)
- Martina Villa Co-Supervisor for research project “*Impact of Socio-economic status in white matter development in the brain*”, University of Connecticut, Storrs, USA. (2021, Ongoing)
- Alyssa Sirisoukh Co-Supervisor for research project “*White matter changes in bilingual children*”, University of Connecticut, Storrs, USA. (2021, Ongoing)
- Anne Hooker Co-Supervisor for research project “*FoxP2 allele specific cortical and subcortical morphometric changes and its association to reading and related measures*”, University of Connecticut, Storrs, USA. (2021, Ongoing)
- Sagar Shah Supervisor for research project “*Effectiveness of Mindfulness based therapy for symptom relief in movement disorder patients*”, New York University, New York, USA. (2020, Ongoing)

Sushant Gautam	Co-Supervisor for master's project " <i>Deep Learning based pose estimation for Dystonia score prediction</i> ", Institute of Engineering, Tribhuvan University, Kathmandu, Nepal. (2022, Completed)
Raunak Mishra	Supervisor for research project " <i>Epilepsy prevalence in low- and middle-income countries, literature review</i> " (2021, Completed)
Kasidy Quiles	Research mentor for McNair Fellows program, UConn center for Academic programs, University of Connecticut, Storrs, USA. (2021, Completed)
Tina Thomas	Co-Supervisor for master's thesis " <i>Genetic influence in brain imaging biomarkers for children with family history of dyslexia</i> ", University of Houston, Texas, USA. (2021, Completed)
Saugat Bhattarai	Supervisor for research project " <i>Real time movement detection in dystonia patients using computer vision and machine learning algorithm</i> ", Nepal Applied Mathematics and Informatics Institute for research (NAAMI), Kathmandu, Nepal. (2020-2021, Completed)
Sanil Shrestha	Supervisor for research internship " <i>Neuroimaging biomarkers using machine learning algorithm for Parkinson's disease patients</i> ", Nepal Applied Mathematics and Informatics Institute for research (NAAMI), Kathmandu, Nepal. (2020, Completed)
Ashish Subedi	Supervisor for research project " <i>Automatic Spasmodic dysphonia (Laryngeal Dystonia) classification using deep learning algorithms</i> ", Kathmandu University, Kavre, Nepal. (2020, Completed)
Tamara Bonertz	Co-Supervisor for the MD thesis " <i>TMS-EEG measurements to characterize neuronal excitability in the prefrontal cortex under pain conditioning</i> ", University Medical Center of Johannes Gutenberg university, Mainz, Germany. (2018, Completed)
Tabea Marquardt	Co-Supervisor for the MD thesis " <i>Studies of effective cerebral connectivity and hand motor function in patients with Parkinson's disease and healthy subjects</i> ", University Medical Center of Johannes Gutenberg university, Mainz, Germany. (2017, Completed)

Organizational and professional experiences

2017 – 2018	Organizer of Focus program for Translational Neuroscience (FTN) retreat, Mainz, Germany
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- 2017 – 2018 Committee member for poster and talks evaluation for Focus program for Translational Neuroscience (FTN) retreat, Mainz, Germany
- 2016 – 2018 Representative of PhD students and Post-Docs in translational neuroscience, Mainz, Germany
- 2016 Organizer for seminar on ‘Invasive and non-invasive neurostimulation methods’, Mainz, Germany.
- 2010 – 2012 Radio frequency planning and optimization Engineer in Mobicon Tele Networks, Kathmandu, Nepal
- 2009 – 2010 Biomedical Engineer in Kantipur Hospital, Kathmandu, Nepal
- 2009 – 2010 Technical Engineer in AECG Traders, Kathmandu, Nepal
- 2008 – 2010 Organizer for seminars in Embedded System Design, Tribhuvan University, Kathmandu, Nepal
- 2004 – 2010 Coordinator in annual engineering exhibition, Tribhuvan University, Kathmandu, Nepal