Nabin Koirala, PhD

University of Connecticut, Room 142A, 2 Alethia Dr #1271, Storrs, CT 06269
Yale University, 300 George St #900, New Haven, 06511 Connecticut USA

Tel: +1 203-785-2527 +1 860 486 3108
Email: nabin.koirala@yale.edu nabin.koirala@uconn.edu
UConn Profile Yale Profile Google Scholar Profile

Research experience

2024 – Present	Director, Brain Imaging Research Core, University of Connecticut, Storrs, USA
2024 – Present	Research Scientist, Nathan Klein Institute, New York, USA
2023 – Present	Associate Research Scientist, Yale Child Study Center, New Haven, USA
2019 – 2023	Postdoctoral researcher, Haskins Laboratories, New Haven, USA
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	Master of Science, Christian Albrecht University, Kiel, Germany
2010	Bachelor of Engineering, Tribhuvan University, Kathmandu, Nepal

Research Grants, fellowships, and academic awards

2025 - 2026 Funding Source: Dysphonia International Total: $53,500
Role: PI
Title: *Network-targeted transcranial direct current stimulation as a treatment for laryngeal dystonia (Phase II).*

2022 - 2027 Funding Source: NIH (R37) Total: $1,139,803
Role: Co-I (PI: Ken Pugh)
Title: *Tracking neurocognitive changes during evidence-based reading instruction in typically and atypically developing children.*

2022 - 2024	Funding Source: Oberkotter Foundation Total: $1,575,570 Role: Co-I (PI: Vincent L. Gracco) Title: *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*.
2022 - 2023	Funding Source: National Spasmodic Dysphonia Association Total: $50,000 Role: Co-I (PI: Vincent L. Gracco) Title: *Network-targeted transcranial direct current stimulation as a treatment for laryngeal dystonia (Phase I)*.
2021 - 2022	Funding Source: Abbott (St. Jude) Total: €80,000 Role: Co-I (PI - Muthuraman Muthuraman) Title: *Quantification of falls and rigidity and their interrelation to disease state and symptoms modulation through deep brain stimulation*.
2018	Editor's choice article of the issue in Brain: A journal of neurology *"Cerebello-cortical network fingerprints differ between essential, Parkinson's and mimicked tremors"*
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 *2000 Euros*
2006	Student Merit Scholarship, Tribhuvan University, Kathmandu, Nepal *64000 NPR*

Research Interest and Projects

Since 2022	Impact of Cochlear implant and deafness in brain structure of adults [*Collaboration: Dr. Vincent Gracco, Yale University, USA; Dr. Ken Pugh, University of Connecticut, USA; Dr. Nofrat Schwartz, Yale School of Medicine, USA*]
Since 2022	Neuromodulation for the treatment of laryngeal dystonia [*Collaboration: Dysphonia international, USA; Dr. Vincent Gracco, Yale University, USA*]

Since 2020	Impact of Cochlear implant in brain structure in infants and children [*Collaboration: Dr. Vincent Gracco, Yale University, USA; Dr. Mikael Deroche, Concordia University, Canada; Dr. Kyle Simmons, Oklahoma State University, USA; Dr. Rene Gifford, Vanderbilt University, USA*]
Since 2020	Automatic movement detection in dystonia patients using computer vision and machine learning algorithms [*Collaboration: Dr. Hyder Jinnah, Emory University, USA; Dr. David Peterson, University of California San Diego, USA; Dr. Ajad Chhatkuli, ETH Zurich, Switzerland; Dr. Bishesh Khanal, NAAMI, Kathmandu, Nepal*]
Since 2020	Neural Correlates of Stuttering and its subtypes [*Collaboration: Dr. Michael Milham, Child Mind Institute, USA; Dr. Suok Jun Hong, Sungkyunkwan University, South Korea; Dr. Vincent Gracco, Yale University, USA*]
Since 2019	Imaging genetics in children with specific reading disability [*Collaboration: Dr. Nicole Landi, University of Connecticut & Yale University, USA and Dr. Elena Grigorenko, University of Houston, USA*]
Since 2018	Structural brain network characterization and modulation 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, University of Wurzburg & University of Augsburg, Germany; Dr. Gertrud Tamas, Semmelweis University, Hungary*]

Scientific Publications

(Publication Access*: Google Scholar Profile*, Citations: ***>1000***, h-index: ***18*** as of January 2025)
Full text pdfs/ links available in nabinkoirala.com

Peer reviewed published articles (Descending chronological order)

45. Koirala N, Manning J, Neumann S, et al. (2025) *The Neural Characteristics Influencing Literacy Outcome in Children with Cochlear Implants*. Brain Communications.

44. Deroche MLD, Wolfe J, Neumann S, et al. (2024) *Cross-modal plasticity in children with cochlear implant: converging evidence from EEG and functional near-infrared spectroscopy*. Brain Communications.

43. Dimova V, Welte-Jzyk C, Kronfeld A, et al. (2024) *Brain Connectivity networks underlying resting state heart rate variability in acute ischemic stroke.* Neuroimage: Clinical.

42. **Koirala N**, Hossen A, Ioannis U, Volkmann J, et al. (2024) *Assistive techniques and their added value for tremor classification in multiple sclerosis.* Neural Regeneration Research.

41. Alemi R, Wolfe J, Neumann S, et al. (2024) *Motor Processing in Children with Cochlear Implants as Assessed by Functional Near-Infrared Spectroscopy*. Perceptual and Motor Skills.

40. Alemi R, Wolfe J, Neumann S, et al. (2023) *Audiovisual integration in children with cochlear implants revealed through EEG and fNIRS.* Brain Research Bulletin.

39. **Koirala N**, Deroche M. LD, Wolfe J, Neumann S, et al. (2023) *Dynamic networks differentiate the language ability of children with cochlear implants.* Frontiers in Neuroscience.

38. Deroche M. LD, Wolfe J, Neumann S, Manning J, et al. (2023) *Auditory evoked response to an oddball paradigm in children wearing cochlear implants*. Clinical Neurophysiology.

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*. Brain Communications. (§ - Shared First Author).

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*. Biology. (§ – Shared First Author).

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, Jávor-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 (§ - Shared First Author).

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. (§ - Shared First Author).

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

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 2025	Associate Editor, Nature partner journals (npj) Parkinson's Disease
Until 2025	Ad hoc Reviewer - Neuroimage Nature partner journals (npj) Parkinson's Disease PLOS One Aperture Neuro Brain and Language Journal of Fluency disorder Computers in Biology and Medicine Yale Journal of Biology and Medicine Neurobiology of Aging Human brain mapping Brain Sciences Journal of Neural Engineering Frontiers in aging Neuroscience Electronics: Circuit and Signal Processing Entropy Mind, Brain and Education Frontiers in Human Neuroscience

Frontiers in Neurology:
(Movement disorders | Neurorehabilitation | Neurotechnology)
New Directions for Child and Adolescent Development

Teaching experiences

Since 2024	Courses offered at University of Connecticut, Storrs, USA • Cognitive Science Undergraduate Research (COGS3589) • Cognitive Science Independent Study (COGS3599) • Senior Thesis in Cognitive Science (COGS4596W)
2025	Guest Lecture on "*Advances in neuroimaging methods for understanding hearing related disorders"*, Department of Speech and Hearing Sciences, University of Connecticut, Storrs, USA (Invited by Prof. Dr. Erika Skoe)
2024	Guest Lecture on "*Introduction to Network Neuroscience"*, Department of Psychological Sciences, University of Connecticut, Storrs, USA (Invited by Prof. Dr. Nicole Landi)
2023	Guest Lecture on "*Basics of neuroimaging methods for understanding speech and hearing related disorders"*, Department of Speech and Hearing Sciences, University of Connecticut, Storrs, USA (Invited by Prof. Dr. Erika Skoe)
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, 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

2025	**Koirala N**. Institute of Brain and Cognitive Sciences, University of Connecticut, USA - "*Network level neural perturbation and possible treatment options in neurodevelopmental and neurodegenerative disorders*".
2025	**Koirala, N**., Gifford, RH., Simmons KW., Gracco, VL. American Cochlear Implant Alliance, Boston, USA. "*HOPING Registry: Investigating Neural Trajectories and Environmental Impact in the Deaf Connectome*".
2025	**Koirala, N**., Pugh, K., Gifford, RH., Gracco VL. American Cochlear Implant Alliance, Boston, USA. "*Reading Code Utilization and Its Association to Neural Connectivity In Children With Cochlear Implants*".
2024	**Koirala N**. Haskins Global Literacy Hub talk series, Storrs, USA - "*Network level neural perturbation and possible treatment options in neurodevelopmental and neurodegenerative disorders*".
2024	**Koirala N**. Neuroscience Speaker Series, Augusta University, Georgia, USA - "*Network level neural perturbation and possible treatment options in neurodevelopmental and neurodegenerative disorders*".
2024	**Koirala N**. C-BIN Science Series, Nathan Kline Institute for Psychiatric Research, New York, USA - "*Network level neural perturbation and possible treatment options in neurodevelopmental and neurodegenerative disorders*".
2023	**Koirala, N**., Deroche, M., Wolfe, J., Neumann, S., Muthuraman, M., Gracco, VL. American Cochlear Implant Alliance, Dallas, Texas, USA. "*The Neural characteristics of Good and Poor Reading Skill in Children with Cochlear Implants*".

2023 **Koirala, N**., Deroche, M., Wolfe, J., Neumann, S., Muthuraman, M., Gracco, VL. American Cochlear Implant Alliance, Dallas, Texas, USA. "*Functional Neuroimaging of Brain activity of young children with Cochlear Implants*".

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 Laboratories talk series, 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

2025 Mahaffy. K., Chimbili. M, **Koirala, N**., Landi N. Society of Scientific Study of Reading (SSSR), Calgary, Canada. "*White matter integrity in language related tracks: links to reading comprehension, inattention, and anxiety*".

2025 Villa. M., **Koirala, N**., Perdue. M, Lee. AM., Landi N. Cognitive Neuroscience Society (CNS), Boston, USA. "*How does the environment wire the brain for literacy? Modeling the relationship between SES, white matter, oral language, and reading*".

2024 Manning, J., Anderson. C, **Koirala, N**., Neumann, S., Deroche, M., Wolfe, J., Pugh, K., Landi, N., Muthuraman, M., Gracco, VL. American Cochlear Implant Alliance, Vancouver, Canada. "*Long term adaption of resting state networks and its impact on literacy outcome in Children with Cochlear Implants*".

2024 Bange M, Ding H, **Koirala N**, Reich M, Wang C, Nasseroleslami B, Deuschl G, Volkmann J, Muthuraman M. International Congress of Parkinson's Disease and Movement Disorders, Philadelphia, USA – "*Quantification of an upper limb rigidity network in Parkinson's disease*".

2023 Mulukutla S, Ooi E, Harini S, Zhang Z, Kristina Z, Santini V, **Koirala N**, Pugh K, Noah A, Reed M, Hirsch J. Future of Parkinson's disease conference, Austin, USA – "*Protocol Design: Investigation into Meditation-Induced Neuromodulation for Parkinson's disease (PD)*".

2023 **Koirala N**, Hooker A, Villa M, Mahaffy K, Mascheretti S, Perdue MV, Grigorenko EL, Landi N. Organization of Human Brain Mapping, Montreal, Canada – "*Structural covariance network identifies FoxP2 gene allele-specific variations and its association to reading and language*".

2023 Villa M, **Koirala N**, Perdue MV, Martin-Branum L, Landi N. International workshop on Reading and Developmental Dyslexia, San Sebastian, Spain – "*Does white matter integrity mediate the relationship between SES and reading skills?*".

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

Jahleel DT Perez	Yale Program to Advance Training in Health and Sciences (PATHS) - Mentor (2024, Ongoing)
Luis RM Diaz	Supervisor for project "*Brain Network adaptation in Good and Poor Readers*", University of Connecticut, Storrs, USA. (2024, Ongoing)
Mohammad Khan	Supervisor for senior thesis "*Structural Brain Network Topological Alterations in Stuttering Children*", University of Connecticut, Storrs, USA. (2024, Ongoing)
Louisa Suting	Co-Supervisor/PhD committee member for project "*Treatment-Induced Changes in Individuals with Post-Stroke Aphasia*", University of Connecticut, Storrs, USA. (2023, Ongoing)
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, Completed)
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, Completed)
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, Completed)
Sushant Gautam	Co-Supervisor for master's project "*Deep Learning based pose estimation for Dystonia score prediction*", Institute of Engineering, Tribhuvan University, Kathmandu, Nepal. (2022, Completed)
Raunak Mishra	Supervisor for research project "*Epilepsy prevalence in low- and middle-income countries, literature review*" (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 "*Genetic influence in brain imaging biomarkers for children with family history of dyslexia*", University of Houston, Texas, USA. (2021, Completed)
Saugat Bhattarai	Supervisor for research project "*Real time movement detection in dystonia patients using computer vision and machine learning algorithm*", Nepal Applied Mathematics and Informatics Institute for research (NAAMI), Kathmandu, Nepal. (2020-2021, Completed)
Sanil Shrestha	Supervisor for research internship "*Neuroimaging biomarkers using machine learning algorithm for Parkinson's disease patients*", Nepal Applied Mathematics and Informatics Institute for research (NAAMI), Kathmandu, Nepal. (2020, Completed)
Ashish Subedi	Supervisor for research project "*Automatic Spasmodic dysphonia (Laryngeal Dystonia) classification using deep learning algorithms*", Kathmandu University, Kavre, Nepal. (2020, Completed)
Tamara Bonertz	Co-Supervisor for the MD thesis "*TMS-EEG measurements to characterize neuronal excitability in the prefrontal cortex under pain conditioning*", University Medical Center of Johannes Gutenberg university, Mainz, Germany. (2018, Completed)
Tabea Marquardt	Co-Supervisor for the MD thesis "*Studies of effective cerebral connectivity and hand motor function in patients with Parkinson's disease and healthy subjects*", 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
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