

Jean-Paul G. NOEL

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Primary: Assistant Professor, Department of Neuroscience, University of Minnesota
 By Courtesy: Masonic Institute for the Developing Brain, University of Minnesota
 UMN Data Science Initiative, University of Minnesota
 Minnesota Robotics Institute, University of Minnesota

Contact

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Education

2008 - 2012	Gustavus Adolphus College, B.A. (Summa Cum Laude: 3.98/4.00 GPA, top 1%) Psychology and Neuroscience	
2014 – 2018	Vanderbilt University, Ph.D. Neuroscience	(Mentor: Dr. Mark Wallace)

Academic Appointments

2012 - 2014	Swiss National Institute for Technology, EPFL Fulbright Research Scholar	(Mentors: Dr. Andrea Serino & Olaf Blanke)
2019 - 2024	New York University & International Brain Lab Post-Doctoral Fellow/K99R00 Fellow Center for Neural Science	(Mentor: Dr. Dora Angelaki)
2024 -	Assistant Professor Department of Neuroscience, University of Minnesota, Masonic Institute for the Developing Brain, University of Minnesota, Data Science, University of Minnesota Minnesota Robotics Institute,	

Industry Appointments

2016	Oculus VR Research, Facebook (now Meta Reality Labs) Research Intern
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Selected Honors, Awards, & Fellowships

2012	Fulbright Research Scholar National Institute of International Education (IIE)
2012	Phi Beta Kappa (Liberal Arts and Sciences Honors Society)
2015	National Science Foundation (NSF) Graduate Research Fellowship
2016	APA Early Graduate Student Researcher Award
2017	Ruth L. Kirschstein National Research Service Award (NRSA) F31 National Institute of Mental Health (NIMH)
2018	Young Invited Lectures – Universal Acoustical Communication Tohoku University, Sendai, Japan
2019	Glushko Dissertation Prize for best dissertation in Cognitive Science, \$10,000 cash prize Cognitive Science Society (CSS)
2020	Finalist, Hanna Gray Fellow, \$10,000 career development award Howard Hughes Medical Institute (HHMI)
2023	K99/R00 Pathway to Independence Award (NINDS) – \$1.08M
2023	Career Development Institute for Psychiatry (University of Pittsburgh)
2024	Early Career Research Award (+ 500k seed funding) Clinical and Translational Science Institute, University of Minnesota
2024	Fellow, Research Corporation for Science Advancement, Tucson, Arizona

2025 Sloan Research Fellow (75k award)

2025 The Body Representation Network (BREnet) Early Career Researcher Award (Inaugural awardee + invited keynote speaker at annual conference)

Publications (direct mentees underlined)

Pre-prints, Submitted, In Press, Under Review, Under Revision

73. **Noel, J. P.**, Zhang, R., Pitkow, X., Angelaki, D. (under review). Dorsolateral prefrontal cortex drives strategic aborting by optimizing long-run policy extraction. *Nature Communications*

72. Bertoni, T., Ricci, G., Johr, J., Donno, B., Cataldi, J., Fellrath, J., Stephan, A., Foglia, C., Lecci, S., Dauvin, F., Lopez Da Silva, M., Galigani, M., Pozeg, P., Dunet, V., De Lucia, M., **Noel, J. P.**, Magosso, E., Diserens, K., Siclari, F., & Serino, A. (under review). Multisensory integration in peripersonal space indexes consciousness states in sleep and disorders of consciousness. *Science*

bioRxiv. <https://doi.org/10.1101/2024.10.25.619776>

71. Birman, D., Chapuis, G., Faulkner, M., Rossant, C., the International Brain Laboratory, Benson, J., Catarino, J., Churchland, A.K., Hu, F., Huntenburg, J.M., Khanal, A., Krasniak, C., Lau, P.Y.P., Meijer, G.T., Miska, N.J., **Noel, J.-P.** Pan-Vazquez, A., Roth, N., Schartner, M., Socha, K.Z., Steinmetz, N.A., Urai, A.E., Wells, M.J., West, S.J., Winter O. (under review). Interactive data exploration websites for large-scale electrophysiology.

BioRxiv: <https://www.biorxiv.org/content/10.1101/2024.06.07.597950v1>

*Authorship is partially alphabetical.

70. Bruijns, S., International Brain Laboratory, Bougrova, K., Laranjeira, I.C., Lau, P.Y., Meijer, G.T., Miska, N.J., **Noel, J.-P.**, Pan-Vazquez, A., Roth, N., Socha, K.Z., Urai, A.E., Dayan, P. (under review). Dissecting the complexities of learning with infinite hidden Markov models. *Nat Neurosci.*

BioRxiv: <https://www.biorxiv.org/content/10.1101/2023.12.22.573001v1>

*Authorship is partially alphabetical.

69. **Noel, J.-P.**, Balzani, E., Acerbi, L., Benson, J., Louka, M., West, S., International Brain Laboratory, Savin, C. Angelaki, D.E (in press). A common computational and neural deficit across mouse models of autism. *Nat. Neurosci.*

*68. Findling, C., Hubert, F., International Brain Laboratory, Acerbi, L., [...], **Noel, J.-P.**, Zador, T., Dayan, P., Pouget, A., (in press). Brain-wide representations of prior information in mouse decision-making. *Nature*.

BioRxiv: <https://www.biorxiv.org/content/10.1101/2023.07.04.547684v1>

*Authorship is partially alphabetical.

*67. International Brain Laboratory, Benson, B., Benson, J., Birman, D., Bonacchi, N., Carandini, M., [...], **Noel, J.-P** et al., (in press). A Brain-Wide Map of Neural Activity during Complex Behaviour. *Nature*.

BioRxiv: <https://www.biorxiv.org/content/10.1101/2023.07.04.547681v1>

*Authorship is alphabetical.

66. **Noel, J.-P.**, Bockbrader, M., Colachis, S., Solca, M., Orepic, P., Haggard, P., Rezai, A., Blanke, O., , Serino, A. (in press). Human primary motor cortex indexes the onset of subjective intention in brain-machine-interface mediated actions. *PLoS Biology*

65. Bertoni, T., **Noel, J.-P.**, Bockbrader, M., Colachis, S., Orset, B., Foglia, C., Rezai, A., Panzeri, S., Becchio, C., Blanke, O., Serino, A. (in press). Pre-movement sensorimotor oscillations shape the sense of agency by gating cortical connectivity. *Nature Communications*

2025

*64. International Brain Laboratory, Banga K., Benson J., Bonacchi N., Bruijns S.A., Campbell R., Chapuis G.A., Churchland A.K., Davatolhagh M.F., Lee H.D., Faulkner M., Hu F., Hunterberg J., Khanal A., Krasniak C., Meijer G.T., Miska N.J., Mohammadi Z., **Noel J.P.**, Paninski L., Pan-Vazquez A., Roth N., Schartner M., Socha K., Steinmetz N.A., Svoboda K., Taheri M., Urai A.E., Wells M., West S.J., Whiteway M.R., Winter O., Witten, I.B. (2025). Reproducibility of in-vivo electrophysiological measurements in mice. *eLife*

*Authorship is alphabetical.

2024

63. **Noel, J-P.**, Balzani, E., Savin, C. Angeaki, D.E. (2024). Context-invariant beliefs are supported by dynamic reconfiguration of single-unit functional connectivity in pre-frontal cortex. *Nature Communications*, 15, 5738, <https://doi.org/10.1038/s41467-024-50203-5>

62. Biderman, D. Whiteway, M.R., Hurwitz, C., Greenspan, N.R., Lee, R.S. [...] **Noel, J-P.**, [...], Cunningham, J. Sawtell, N.B., Paninski, L. (2024). Lightning Pose: improved animal pose estimation via semi-supervised learning, Bayesian ensembling, and cloud-native open-source tools. *Nature Methods*. <https://doi.org/10.1038/s41592-024-02319-1>
*Authorship is partially alphabetical.

61. Fossataro, C, **Noel, J-P.**, Bruno, V. (2024). The bodily self in the multisensory world. *Frontiers in Human Neuroscience* (Editorial), 18, 1418014.

2023

60. **Noel, J-P.** Bill, J., Ding, H., Vastola, J., DeAngelis, G.C., Angelaki, D.E., Drugowitsch, J. (2023). Causal inference within closed action-perception loops. *Philosophical Transactions B*.

59. **Noel, J-P.**, Angelaki, D.E. (2023). A theory of autism bridging across levels of description. *Trends in Cognitive Science*

58. Balzani, E., **Noel, J-P.**, Herrero-Vidal, P., Angeaki, D.E., Savin, C. (2023). A probabilistic framework for task-aligned intra- and inter-area neural manifold estimation. *ICLR (top 3 Machine Learning Conference)*.

57. **International Brain Laboratory***; Bonacchi N, Chapuis GA, Churchland AK, DeWitt EEJ, Faulkner M, Harris KD, Huntenburg JM, Hunter M, Laranjeira IC, Rossant C, Sasaki M, Scharfner MM, Shen S, Steinmetz NA, Walker EY, West SJ, Winter O, Wells MJ (2023). A modular architecture for organizing, processing and sharing neurophysiology data. *Nature Methods* 20(3):403-407. doi: 10.1038/s41592-022-01742-6

* Listed Consortium Member (e.g., linked to “Jean-Paul Noel” profile on PUBMED)

2022

56. Maisson, D., Wikenheiser, A., **Noel, J-P.**, Keinath, A. (2022). Making sense of the multiplicity of navigational codes in the brain. *Journal of Neuroscience*, 42 (45): 8450-8459.

55. **Noel, J-P***, Balzani*, E., Avila, E., Bruni, S., Alefantis, P., Savin, C., Angelaki, D.E. (2022). Coding of latent variables in sensory, parietal, and frontal cortices during closed-loop virtual navigation. *eLife*, 11, e80280

Press: https://www.simonsfoundation.org/2022/02/23/in-foraging-tasks-new-opportunities-to-study-the-brains-complexity/?mc_cid=29124e83b0&mc_eid=140240ce2c

54. Straka, Z., **Noel, J-P.**, Hoffmann, M. (2022). A normative model of peripersonal space as impact prediction. *PloS Computational Biology*, 18(9):e1010464. doi: 10.1371/journal.pcbi.1010464

53. **Noel, J-P.**, Shivkumar, S., Dokka, K., Haefner, R., Angelaki, D.E. (2022). Aberrant causal inference and presence of a compensatory mechanism in Autism Spectrum Disorder. *eLife*, e71866

52. Alefantis, P., Lakshminarasimhan, K., Avila, E., **Noel, J-P.**, Pitkow, X., Angelaki, D.E. (2022). Sensory evidence accumulation using optic flow in a naturalistic navigation task. *Journal of Neuroscience*, 43 (37): 5451 - 5462

51. **Noel, J-P.**, Angelaki, D.E. (2022). Human, Systems, and Computational Neurosciences of the Self in Motion. *Annual Review in Psychology*, 73, 103

2021

50. Whiteway, M.R., Biderman, D., Friedman, Y., Dipoppa, M., Buchanan, E.K., Wu, A., Zhou, J., **Noel, J-P.**, International Brain Laboratory, Cunningham, J., Paninski, L. (2021). Partitioning variability in animal behavioral videos using semi-supervised variational autoencoders. *Plos Computational Biology*.

49. **Noel*, J-P**, Zhang*, L.Q., Stocker, A.A., Angelaki, D.E (2021). Individuals with autism spectrum disorder have altered visual encoding capacity. *PloS Biology*, 19 (5), e3001215
48. **Noel, J-P.**, Caziot, B., Bruni, S., Fitzgerald, N., Avila, E., Angelaki, D. (2021). Supporting Expressive Behavior in Non-Human Primates by Tapping into Structural Knowledge. *Progress in Neurobiology* 101996
47. Ronga, I., Galigani, M., Bruno, V., **Noel, J-P.**, Gazzin, A., Perathoner, C., Serino, A., Garbarini, F. (2021). Spatial tuning of electrophysiological responses to multisensory stimuli reveals a primitive coding of the body boundaries in newborns. *Proceedings of the National Academy of Sciences*, 118 (12), e2024548118
 Press: https://www.lesciences.it/news/2021/03/09/news/cervello_neonati_confini_corpo-4902516/?rss
 Press: http://www.quotidianosanita.it/scienza-e-farmaci/articolo.php?articolo_id=93303
 Press: <https://medicalxpress.com/news/2021-03-neural-mechanism-body-position-space.html>
 Press: <https://tg24.sky.it/salute-e-benessere/2021/03/12/neonati-corpo>
46. Masson, C., van der Westhuizen, D., **Noel, J-P.**, Prevost, A., van Honk, J., Fotopoulou, A., Solms, M., Serino, A. (2021). Testosterone administration in women increases the size of their peripersonal space. *Experimental Brain Research*.
45. **Noel, J-P**, Paredes, R., Terrebonne, E., Feldman, J.I., Woynaroski, T., Cascio, C.J., Seriès, P., Wallace, M.T. (2021). Inflexible Updating of the Self-Other Divide During a Social Context in Autism; Psychophysical, Electrophysiological, and Neural Network Modeling Evidence. *Biological Psychiatry CNI*.
- *44. International Brain Laboratory, Aguillon-Rodriguez, V., Angelaki, D., Bayer, H.M., Bonacchi, N., Carandini, M., Cazettes, F., Chapuis, G.A., Churchland, A.K., Dan, Y., Dewitt, E.E., Faulkner, M., Forrest, H., Haetzel, L.M., Hausser, M., Hofer, S.B., Hu, F., Khanal, A., Krasniak, C.S., Laranjeira, I., Mainen, Z.F., Meijer, G.T., Miska, N.J., Mrsic-Flogel, T.D., Murakami, M., **Noel, J-P.**, Pan-Vazquez, A., Sanders, J.I., Socha, K.Z., Terry, R., Urai, A.E., Vergara, H.M., Wells, M.J., Wilson, C.J., Witten, I.B., Wool, L.E., Zador, A. (2021). A standardized and reproducible method to measure decision-making in mice. *eLife*, 10:e63711.
 *Authorship is alphabetical.

2020

43. **Noel, J-P**, Bertoni, T., Terrebonne, E., Pellenin, E., Herbelin, B., Magosso, E., Blanke, O., Wallace, M., Serino, A. (2020). Rapid recalibration of peri-personal space; behavioral, electrophysiological, and computational evidence. *Cerebral Cortex*, 103
42. **Noel, J-P**, Lakshminarasimhan, K.J., Park, H., Angelaki, D. E. (2020). Increased uncertainty but normal integration during visual navigation in Autism Spectrum Disorder. *Proceedings of the National Academy of Sciences*, 117 (20), 11158-11166
41. Wu, A., Buchanan, E.K., Whiteway, M., Scharner, M., Meijer, G., **Noel, J-P.**, Rodriguez, E., Everett, C., Norovich, A., Schaffer, E., Mishra, N., Salzman, C.D., Angelaki, D., Bendesky, A., Cunningham, J.P., Paninski, L. (2020). Deep Graph Pose: a semi-supervised deep graphical model for improved animal pose tracking. *NeurIPS*, 2020.
40. **Noel, J-P.**, Failla MD, Quinde-Zlibut JM, Williams ZJ, Gerdes M, Tracy JM, Zoltowski AR, Foss-Feig JH, Nichols H, Armstrong K, Heckers SH, Blake RR, Wallace MT, Park S, Cascio CJ. (2020). Visual-tactile multisensory interaction in adults with Autism and Schizophrenia. *Frontiers in Psychiatry*, Oct 23;11:578401
39. van der Stoep, N., Colonius, H., **Noel, J-P.**, Wallace, M., Diederich, A. (2020). Audiovisual integration in depth: modeling the effect of distance and stimulus effectiveness using the TWIN model. *Journal of Mathematical Psychology*

2019

38. **Noel, J-P.** & Serino, A. (2019). High Action Values Occur Near our Body. *Trends in Cognitive Science*
37. **Noel, J-P.**, Faivre, N., Magosso, E., Blanke, O., Alais, D., Wallace, M. (2019). Multisensory perceptual awareness: Categorical or graded? *Cortex*, 120, 169-180

36. **Noel, J.-P.**, Chatelle, C., Perdakis, S., Jöhr, J., Lopes Da Silva, M., Ryvlin, P., De Lucia, M., del R. Millán, J., Diserens, K., Serino, A., (2019). Peri-personal space encoding in patients with disorders of consciousness and cognitive-motor dissociation. *NeuroImage: Clinical*

35. **Noel, J.P.**, Ishizawa, Y., Patel, S., Eskandar, E., Wallace, M. (2019). Leveraging multisensory neurons and circuits in assessing consciousness theory. *Journal of Neuroscience* 39 (38) 7485-7500

Featured Article: <https://www.jneurosci.org/content/39/38/7451>

Commentary: <https://www.jneurosci.org/content/40/10/1994>

2018

34. **Noel, J.P.**, Simon, D., Thelen, A., Maier, A., Blake, R., Wallace, M. (2018). Probing electrophysiological indices of perceptual awareness across unisensory and multisensory modalities. *Journal of Cognitive Neuroscience* https://doi.org/10.1162/jocn_a_01247

33. **Noel, J.P.**, Blanke, O., Magosso, E. Serino, A. (2018). Neural Adaptation Accounts for the Resizing of Peri-Personal Space Representation: Evidence from a Psychophysical-Computational Approach. *Journal of Neurophysiology*. <https://doi.org/10.1152/jn.00652.2017>

32. **Noel, J.P.**, Park, H., Pasqualini I., Lissek, H., Wallace, M. Blanke, O., Serino A (2018). Audio-visual sensory deprivation degrades visuo-tactile peri-personal space. *Consciousness and Cognition*, 61, 61-75. DOI: [10.1016/j.concog.2018.04.001](https://doi.org/10.1016/j.concog.2018.04.001)

31. Pfeiffer, C., **Noel, J.P.**, Blanke, O., Serino, A. (2018). Vestibular modulation of peri-personal space boundaries. *European Journal of Neuroscience*, 47, 800-811, doi:10.1111/ejn.13872

30. **Noel, J.P.**, Modi, K., Wallace, M., Van der Stoep, N. (2018). Audiovisual integration in depth: multisensory binding and gain as a function of distance. *Experimental Brain Research*. 236(7):1939-1951. doi: 10.1007/s00221-018-5274-7

29. **Noel, J.P.**, Stevenson, R., Wallace, M. (2018). Atypical audiovisual temporal function in autism and schizophrenia: a similar phenotype, different cause. *European Journal of Neuroscience*. doi:10.1111/ejn.13911

28. Bernasconi, F., **Noel, J.P.**, Park, H.D., Faivre, N., Seeck, M., Spinelli, L., Schaller, K., Blanke, O., Serino, A. (2018). Spatio-temporal processing of multisensory peripersonal space in human parietal and temporal cortex: an intracranial EEG study. *Cerebral Cortex*. <https://doi.org/10.1093/cercor/bhy156>

27. **Noel, J.P.**, Blanke, O., Serino, A. (2018). From multisensory integration in peripersonal space to bodily self-consciousness: From statistical regularities to statistical inference. *Annals of the New York Academy of Science*. DOI: <https://doi.org/10.1111/nyas.13867>

26. **Noel, J.P.** (2018). Supra-optimality may emanate from sub-optimality and hence optimality is no benchmark in multisensory integration. *Behavioral and Brain Sciences*. [Commentary on; Rahnev, D., and Denison, R.N. (2018). Suboptimality in Perceptual Decision Making. *Behavioral and Brain Sciences*]

25. **Noel, J.-P.**, Serino, A., Wallace, M. (2018). Increased neural strength and reliability to audiovisual stimuli at the boundary of peri-personal space. *Journal of Cognitive Neuroscience*; https://doi.org/10.1162/jocn_a_01334

24. **Noel, J.P.**, Samad, M., Doxon, A., Clark, J., Keller, S., Di Luca, M. (2018). Peri-personal space as a prior in coupling visual and proprioceptive signals. *Scientific Reports* (<https://www.nature.com/articles/s41598-018-33961-3>)

2017

23. **Noel, J.P.**, De Nier, M., Stevenson, R., Alais, D., Wallace, M. (2017). Rapid audio-visual temporal recalibration across stimuli-complexities in Autism Spectrum Disorders. *Autism Research*, 10 (1), 121-129

22. **Noel, J.P.**, Cascio, C., Wallace, M., Park, S. (2017). The spatial self in Schizophrenia and Autism Spectrum Disorder. *Schizophrenia Research*, 170, 8-12

Press: <https://www.psychologytoday.com/blog/the-imprinted-brain/201611/the-diametrics-personal-space-autism-vs-schizophrenia>

21. Stevenson, R., Cochran, C., McIntosh, L., Park, S., **Noel, J.P.**, Barense, M. Ferber, S., Wallace, M.T. (2017). Multisensory temporal processing in Schizophrenia. *Schizophrenia Research*, 179, 97-103
20. **Noel, J.P.**, Blanke, O., Serino A., Salomon, R. (2017). Interplay between narrative and bodily self in access to consciousness: No difference between self- and non-self attributes. *Frontiers in Psychology*, 8.
19. De Nier*, M. A., **Noel***, **J. P.**, & Wallace, M. T. (2017). The Impact of Feedback on the Different Time Courses of Multisensory Temporal Recalibration. *Neural Plast*, 2017, 3478742. doi:10.1155/2017/3478742
18. **Noel, J.P.**, Kurela, L., Baum, S., Yu, H., Neimat, J. Gallagher, M., Wallace, M. (2017). Multisensory temporal function and neural complexity in patients with epilepsy and psychogenic nonepileptic events. *Epilepsy and Behavior*, 70, 166-172
17. Salomon*, R., **Noel***, **J.P.**, Lukowska, M., Faivre, N., Metzinger, T. Serino A*, Blanke, O*. (2017). Unconscious visuo-tactile integration shapes peripersonal space representation and modulates bodily self-consciousness. *Cognition*, 166, 174-183
16. Simon*, D., **Noel***, **J.P.**, Wallace, M. (2017). Event Related Potentials Index Rapid Recalibration to Audiovisual Temporal Asynchrony. *Frontiers in Integrative Neuroscience*, 11
15. **Noel, J.P.**, Lytle, M., Cascio, C., Wallace, M. (2017). Disrupted Integration of Exteroceptive and Interoceptive Signaling in Autism Spectrum Disorder. *Autism Research*, 10.1002/aur.1880
14. Perdakis, S. **Noel, J.P.**, Silva, M., Chatelle, C., Joehr, J., Pincherle, Pignat, J.M., Millan, J., Serino, A., Diserens, K. (2017). EEG Paradigms as a supplemental tool to behavioral assessments of DOC. *Neurologie & Rehabilitation*.
13. Serino, A., **Noel, J.P.**, Mange, R., Canzoneri, E., Pellencin, E., Bello-Ruiz, J., Bernasconi, F., Blanke, O., Herbelin, B. (2017). Peri-personal space: an index of multisensory body-interaction in real, virtual, and mixed realities. *Frontiers in ICT* 4, 31.
12. **Noel, J.P.**, De Nier, M., Lazzara, N., Wallace, M. (2018). Uncoupling between multisensory temporal function and non-verbal turn-taking in Autism Spectrum Disorder. *IEEE Transactions on Cognitive and Developmental Systems*. doi: 10.1109/TCDS.2017.2778141

2016

11. **Noel, J.P.**, Lukowska, M., Wallace, M.T., Serino, A. (2016). Multisensory simultaneity judgment and distance from the body. *Journal of Vision*. 16 (3), 12-21.
10. **Noel, J.P.** & Wallace, M. (2016). Relative Contributions of Visual and Auditory Spatial Representations to Tactile Localization. *Neuropsychologia*, 82: 84-90.
9. **Noel, J.P.**, De Nier, M., van der Burg, E., Wallace, M.T. (2016). Audio-Visual Temporal Acuity and Rapid Recalibration Throughout the Lifespan. *Plos One*, 11 (8), e016198

2015

8. **Noel, J.P.**, Pfeiffer, C., Blanke, O., Serino, A. (2015). Full body peripersonal space as the sphere of the bodily self? *Cognition*, 144 (3), 49-57.
7. Galli, G., **Noel, J. P.**, Canzoneri, E., Blanke, O., & Serino, A. (2015). The wheelchair as a full-body tool extending the peripersonal space. *Front Psychol*, 6, 639. doi:10.3389/fpsyg.2015.00639
6. **Noel, J.P.**, Wallace, M.T., Blake, R. (2015). Cognitive Neuroscience: Integration of Sight and Sound outside of Awareness? *Current Biology*, 25 (4)
5. **Noel, J.P.**, Grivaz, P., Marmaroli, P., Lissek, H., Blanke, O., Serino A (2015). Full body action remapping of peripersonal space: the case of walking. *Neuropsychologia*. doi: 10.1016/j.neuropsychologia.2014.08.030.

4. **Noel, J.P.**, Wallace, M.T., Orchard-Mills, E., Alais, D., Van der Burg, E. (2015). True and perceived synchrony are preferentially associated with particular sensory pairings. *Scientific Reports*, 5, 17467
3. Serino, A., **Noel, J. P.**, Galli, G., Canzoneri, E., Marmaroli, P., Lissek, H., & Blanke, O. (2015). Body part-centered and full body-centered peripersonal space representations. *Scientific Reports*, 5, 18603. doi:10.1038/srep18603
2. **Noel, J.P.**, Thelen, A. (2014). Cross-modal and Multisensory Training May Distinctively Shape Restored Senses. *Frontiers in Neuroscience*, 8 (450), doi: 10.3389/fnins.2014.00450.
1. **Noel, J.P.**, Giovagnoli, G., Costa, M., Serino, A. (2014). I feel what you feel if I like you: The effect of attractiveness on visual remapping of touch. *Multisensory Research*, 14 (27), 43-54.

Peer-Reviewed Book Chapters:

1. **Noel, J-P.**, Bertoni, T., Serino, A. (2021). Peri-personal space as an interface for self-environment interactions; a critical evaluation and look ahead. In: The world at our fingertips (Oxford University Press). Editors: de Vignemont, F., Serino, A., Yu, H., Farne, A.

Grants

2015	Autism Science Foundation (ASF) \$ 25, 000	Role: P.I. (declined for NSF GRFP).
2016	National Science Foundation, Graduate Research Opportunity Worldwide (GROW) Visiting Researcher at the University of Sydney with Dr. David Alais \$ 5, 000	
2017	NIMH F31 Ruth L. Kirschenstein National Research Service Award \$ 134, 169	
2022	Fund Consciousness Science, Templeton World Charity Foundation \$ 17, 436	
2023-2028	NINDS K99/R00 "Pathway to Independence" \$ 1, 080, 000	
2024	UMN Data Science Initiative Seed Funding \$ 15, 000	
2025-2027	Simons Foundation Autism Research Initiative (SFARI) Pilot Award \$ 497, 201	
2025-2030	Simons Collaboration for Ecological Neuroscience (SCENE) \$ 1, 843, 000 (total, 20% IDC)	
2025	UMN Minnesota Robotics Institute Pilot Award \$ 35, 000	
2025	Sloan Research Fellow \$ 75, 000	

Selected Invited Talks

March	2017	CNBI lab meeting, Center for Neuroprosthetics, Geneva, Switzerland
October	2018	Universal Acoustical Communication, Tohoku University, Sendai, Japan
October	2018	Learning Body Models: Humans, Brains, and Robots, Lorentz Center, Leiden, Netherlands
November	2018	Advances in Motor Learning and Motor Control, San Diego, USA

November	2018	Embassy of Switzerland in the United States, Washington, DC, USA
November	2018	New York University Medical School, Host: Dr. Biyu He Lab
March	2019	Cognitive Science Brown Bag CUNY, Host: Dr. David Rosenthal
March	2019	University of Pennsylvania, Host: Dr. Alan Stocker
March	2019	The Seaver Autism Center for Research and Treatment, Mount Sinai School of Medicine
July	2019	Glushko Symposium, Cognitive Science Society, Montreal, Canada
August	2019	IEEE ICDL-EPIROB 2019, Oslo, Norway
January	2020	Yale University, Department of Psychiatry. Host: Dr. Albert Powers
June	2020	Simons Foundation Autism Research Initiative (SFARI). Host: Alice Clayton (Virtual)
November	2020	Junior Scientist Workshop on Mechanistic Cognitive Neuroscience (Janelia; Virtual)
December	2020	Howard Hughes Medical Institute Leadership (Hanna H Gray Fellowship; Virtual)
January	2021	Cognitive Psychology Colloquium, Leiden University, Netherlands (Virtual)
November	2021	Institute of Psychiatry, Psychology & Neuroscience, Kings College (Virtual)
December	2021	Cognitive Neuroscience Seminar, Vanderbilt University (Virtual)
February	2022	Winter Conference on Brain Research, Snowmass, Colorado
February	2022	Laboratory of Cognitive Neuroscience, Swiss National Institute for Technology (Virtual)
March	2022	International Brain Lab NIH NINDS U19 (Virtual)
April	2022	Center for Visual Science at the University of Rochester (selected by trainee vote)
May	2022	Kennedy Krieger Institute, John Hopkins University (Virtual)
October	2022	Dartmouth Department of Psychological and Brain Sciences (Host: Caroline Robertson)
November	2022	Society for Neuroscience, Mini-Symposium (Organizer: David Maisson; Hayden Lab)
May	2023	Carleton College, Northfield, Minnesota
June	2023	International Multisensory Research Forum, Brussels, Belgium (Symposium + selected talk)
October	2023	FENS The Brain Conference: Structuring knowledge for flexible behavior (invited + travel award)
November	2023	Department of Psychology, University of New Mexico
December	2023	Department of Translational Neuroscience, University of Arizona – College of Medicine, Phoenix
December	2023	Department of Neuroscience, University of Arizona – College of Science, Tucson
January	2024	Department of Psychology, Stony Brook University
January	2024	Department of Otorhinolaryngology, University of Pennsylvania
January	2024	Department of Neuroscience and Cell Biology, Rutgers University
February	2024	Department of Neuroscience, University of Minnesota
February	2024	Department of Psychiatry, University of Wisconsin
February	2024	Department of Psychiatry and Behavioral Sciences, Stanford University
June	2024	Mount Sinai Neuroscience Seminar
January	2025	Annual Interdisciplinary Conference at Jackson Hole
March	2025	16 th Gottingen Meeting of the German Neuroscience Society
April	2025	Workshop on “Uncertainty in Navigation” at CoSyNe (Montreal)
April	2025	Department of Biomedical Engineering, University of Minnesota (Virtual)
July	2025	BREnet Conference (“The computing body”), Keynote Speaker, Utrecht, Netherlands

Mentorship: Over the past ~10 years I have been immensely privileged to work with and grow along a stellar group of mentees (8/16 women, 12/16 under-represented minorities in STEM).

	Then:	Next:
2015-2017: Marisa Lytle	Research Assistant (Vanderbilt U.)	Graduate Student (Oregon University)
2016-2018: Lane Williams	Research Assistant (Vanderbilt U.)	Graduate Student (Vanderbilt University)
2016-2018: Kahan Modi	Research Assistant (Vanderbilt U.)	Medical Student (Penn State)
2016 : Matt Boschard	Research Assistant (Gustavus/V.U.)	Post-Doctoral Fellow (MIT)
2016-2018: Nick Lazzara	Research Assistant (Vanderbilt U.)	Research Associate (Hackensack Hospital)
2016-2018: Emily Terrebonne	Research Assistant (Vanderbilt U.)	Medical Student (George Washington U.)
2016-2018: Sydney Gronmeyer	Research Assistant (Vanderbilt U.)	Medical Student (University of Louisville)
2018-2021: Chris Wilson	Research Assistant (NYU)	NBC Production Coordinator
2018-2020: Nora Fitzgerald	Research Assistant (NYU)	Graduate Student (KU Leuven)
2018-2020: Joshua Calugay	Research Engineer (NYU)	Graduate Student (UC Boulder)
2019-2020: Joralysa Conley	Research Assistant (NYU)	Medical Scribe Supervisor
2019-2020: Katie Leeke	Research Assistant (NYU)	Medical Student (Brown University)
2020 : Jack Wiessenberg	Research Assistant (Gustavus/NYU)	Project Manager, Epic Systems
2020-2022: Hoaran Ding	Research Engineer (NYU)	Graduate Student (University of Arizona)
2019-2022: Julius Benson	Research Assistant (NYU)	Graduate Student (U. of Chicago)
2020-2023: Miranta Louka	Research Assistant (NYU)	Research Assistant, Witten Lab (Princeton)
2024- : Tingtong Liu	Research Assistant (UMN Neurosci.)	
2024- : Maximillian Bluhm	Research Assistant (UMN Neurosci.)	
2024- : Maria Sosa	Research Assistant (UMN Neurosci.)	

2024-	: Christian Eidahl	Master Student (UMN Robotics)
2024-	: Brady Chisholm	Undergraduate Honors (UMN Psychology)
2024-	: Hardik Gupta	Master Student (UMN Data Science)
2025-	: Samantha Mosallam	Undergraduate Student (UMN Dean Scholar)
2025-	: Chris Mar	Undergraduate Student (UMN Dean Scholar)

In addition, I mentor (virtually) a number of students internationally, via programs such as the “*Neuromatch Academy*” (2024: 6 students throughout the globe) and “*Action Potential Advising Program*” (2024: 2 students from Iran).

Departmental and University Service

2024	Faculty Search Committee, Department of Neuroscience
2024	UMN Medical School Admittance Interviewer
2025	Minnesota Inclusive Neuroscience Development (MIND) Scholars, Selection Committee

Leadership and contributions to DEI

2008-2012	President International Cultures Club (Gustavus Adolphus College)
2008-2012	Member, Diversity Leadership Council (Gustavus Adolphus College)
2013	Nation-Wide Student Research Showcase Judge Sigma Xi High School Science Competition for under-represented minorities
2017	Curriculum Officer, Diversity Lead (Vanderbilt University)
2022	CoNNExINS Colloquium, speaker and host (NYU School of Medicine)
2024	Panelist, the Hidden Curriculum in Academia (UMN)

Memberships

2012	Vision Sciences Society (VSS)
2013	Association for the Scientific Study of Consciousness (ASSC)
2015	Society for Neuroscience (SfN)
2016	American Psychological Association (APA)
2016	Association for Psychological Science (APS)
2019	Cognitive Science Society (CSS)
2019	The New York Academy of Sciences

Courses Directed (University of Minnesota)

2024-2025	PSY 4994: Honors Research Practicum
2024-2025	ROB 8760: Robotics Capstone Project

Other Teaching Experience

2008 – 2012	Spanish and French Language Tutor Gustavus Adolphus College Department of Modern Languages
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2010 – 2012	Psychological and Brain Sciences Tutor Gustavus Adolphus College Department of Psychology
2013	FENS-IBRO Imaging Human Brain Structure and Function (Lab Instructor) Geneva-Lausanne
2017	Teaching Assistant – Graduate Level Systems Neuroscience (Fundamentals II) Rating of “Excellent” for 95% of students, average performance score = 4.75/5. Vanderbilt University
2017	Certificate in College Teaching – Part I (II total) Center for Teaching, Vanderbilt University
2022	Computational Neurosciences Masters 2, Lyon Neuroscience Research Center (CRNL)
2023	“Multisensory Integration; psychophysics, physiology, computation” Invited lecture, Carleton College, Minnesota
2024	“Itasca Week 1” - Theoretical and computational foundation Neuroscience Bootcamp for Incoming Graduate Students - University of Minnesota

Thesis Examination

2020	External Examiner (Masters), Mr. Adrian Pitonak Faculty of Electrical Engineering and Cybernetics, Czech Technical University
2022	External Examiner (Ph.D.), Ms. Fui Ling Voon School of Biomedical Sciences, The University of Western Australia

Ad Hoc Journal Referee (~ 12 papers / year, publons.com profile; goo.gl/BMLk7v)

Acta Psychologica
 Attention, Perception & Psychophysics (AP&P)
 Autism
 Autism Research
 Behavior Research Methods
 Behavioural Brain Research
 Brain Structure and Function
 Brain Topography
 Brain Sciences
 Cognition
 Communications Biology
 Clinical Psychological Science
 Developmental Science
 European Journal of Neuroscience
 Experimental Brain Research (EBR)
 Frontiers in Computational Neuroscience
 Frontiers in Human Neuroscience
 Frontiers in Psychology
 Frontiers in Psychiatry
 Heliyon, Cell Press
 IEEE Transactions on Cognitive and Developmental Systems
 IEEE Transactions on Biomedical Engineering
 IEEE International Conference on Systems, Man, and Cybernetics
 i-Perception
 iScience
 Journal of Autism and Developmental Disorders
 Journal of Child Psychology and Psychiatry
 Journal of Cognitive Psychology

Journal of Cognitive Neuroscience
 Journal of Experimental Psychology: Learning, Memory, & Cognition
 Journal of Experimental Psychology: General
 Journal of Mathematical Psychology
 Journal of Neurophysiology
 Journal of Neuroscience
 Journal of Visualized Experiments (JOVE)
 Journal of Vision
 Multisensory Research
 Nature Communications
 Nature Neuroscience
 NeuroImage
 Neuropsychologia ("Outstanding Reviewer" status)
 Neuroscience & Biobehavioral Reviews
 Neuroscience Letters
 NPJ Science of Learning
 PloS Biology
 PloS Computational Biology
 PloS ONE
 Proceedings of the National Academy of Sciences (PNAS)
 Psychiatry and Clinical Neurosciences
 Psychological Science
 Psychology of Consciousness: Theory, Research, and Practice
 Quarterly Journal of Experimental Psychology
 Research in Autism Spectrum Disorder
 Research in Developmental Disabilities
 Science
 Scientific Reports

Journal Editor

eLife, Reviewing Editor (2024 - ongoing)
 Brain Sciences
 Frontiers in Human Neuroscience (special issue "Bodily Self in the Multisensory World")

Book Referee

Volume on Peripersonal Space, Editors: Drs. de Vignemont, Farnè, Serino, Wu, & Yu.

Conference Referee

Cognitive Computational Neuroscience ('24)
 Computational and Systems Neuroscience (Cosyne, '21 '22 '23 '24 '25)
 Eurohaptics
 IEEE International Conference on Systems, Man, and Cybernetics

Grants Referee

NIH, Sensory-Motor Neuroscience (SMN) Study Section (temporary member)
 ERC Starting Grant LS5 Panel ('23, '24)
 Fondazione Cassa di Risparmio di Padova e Rovigo - Progetti di Eccellenza ('17)
 Czech Science Foundation
 Swiss National Science Foundation
 Del Monte Neuroscience Pilot Grant Program, University of Rochester

Other Professional Activities

2016	Membership Committee (chair of committee since 2018) Association for the Scientific Study of Consciousness (ASSC)
2017	18th International Multisensory Research Forum (IMRF) Local Organizing Committee – Nashville, TN
2017	CIFAR's Winter School for the Neuroscience of Consciousness Canadian Institute for Advanced Research

2018	Summer School in Computational Sensory-Motor Neuroscience (COSMO) University of Minnesota (NSF-Sponsored) Research project winner and invitation to talk at <i>Advances in Motor Learning & Control</i>
2018	Mini-course on Neuropixel Recordings (UCL, Carandini & Harris Lab)
2019	eLife Ambassador
2019	Associate Chair – New Task Working Group, International Brain Lab
2022	Invited, Fund Consciousness Workshop for ECRs Templeton World Charity Foundation, NIH, NSF

Miscellaneous

Citizenships: American, Mexican, Belgian

Languages: Spanish, French, English fluent; Catalan proficient

Programming: MATLAB, Python, Arduino, Xcode Swift, LUA

Lab Skills: Rodent behavior, husbandry and surgery; Large scale electrophysiology (Neuropixel) and histology; VR/AR;

Psychophysics; M/EE; computational modeling (normative and ANNs).

Google Scholar Citations: 3195; h-Index: 32

References

Prof. Dora Angelaki (Post-Doc Advisor)

Professor, Center for Neural Science, New York University

Professor, Tandon School of Engineering, New York University

Da93@nyu.edu

Prof. Andrea Serino (Fulbright Scholar Advisor)

SNSF Professor, Clinical Neurosciences, University Hospital of Lausanne (CHUV)

Foundation Bertarelli Chair in Cognitive Neuroprosthetics (EPFL)

Head of Neuroscience, MindMaze

Andrea.serino@unil.ch

Prof. Mark Wallace (PhD Advisor)

Director Vanderbilt Brain Institute

Professor of Hearing and Speech Sciences, Vanderbilt University

Professor of Psychiatry, Vanderbilt University

Mark.wallace@vanderbilt.edu

Prof. Olaf Blanke (Fulbright Scholar Advisor)

Founding Director of the Center for Neuroprosthetics, Campus Biotech, Geneva.

Bertarelli Foundation Chair in Cognitive Neuroprosthetics at the Swiss Federal Institute of Technology

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