Steven P. Errington

BSc (Hons) Psychology, MRes Neuroscience, PhD Psychological Science (Neuroscience)

Address: Henry Wellcome Building, Newcastle University, Newcastle-upon-Tyne | **Phone**: +44(0)7403164307 | **Email**: steven.errington@outlook.com

Personal Website | LinkedIn | Google Scholar | ResearchGate | GitHub

ACADEMIC POSITIONS

May 2024 - Present	**Research Associate (Neural Circuits)** — Newcastle University, Newcastle-upon-Tyne, United Kingdom Supervisor: Professor Yukiko Kikuchi
Jan 2023 – Apr 2024	**Postdoctoral Research Associate** — Washington University in Saint Louis, Saint Louis, United States Supervisor: Professor Ilya E. Monosov

EDUCATION

Aug 2017 - Dec 2022	**PhD Psychological Sciences (Neuroscience)** — Vanderbilt University, Nashville, United States Thesis title: *Neural mechanisms of cognitive control in the primate medial frontal cortex.* Supervisor: Professor Jeffrey D. Schall
Jul 2013 - Dec 2014	**MRes Neuroscience** — Newcastle University, Newcastle-upon-Tyne, United Kingdom Thesis title: *Understanding the relationship between visual hallucinations, visuo-perceptual function and attention: a Masters-in-Research student pilot study*
Sept 2010 - Jun 2013	**BSc (Hons) Psychology** — Northumbria University, Newcastle-upon-Tyne, United Kingdom Thesis title: *Hemispherical differences in emotional processing in healthy adults: a personality-controlled, tDCS study.*

RESEARCH FUNDING

Jan 2026 – Jan 2027	Brain & Behavior Research Foundation, Young Investigator Award, $35,000 (PI) **Cortical microcircuitry of expectancy violations**

SMALL GRANTS

July 2026	IRCN Neuro-inspired Computation Summer Course Travel Grant
Oct 2025	AIBIO-UK L2D Training Scholarship & Travel Grant
Mar 2025	Early Career Researcher Award, Neuromod+, £2000
Sept 2024	UK Symposium on Neuromodulation and Neurotechnology Travel Grant, Neuromod+, £200
Jul 2019 & Sept 2021	Graduate School Travel Grant, Vanderbilt University, $500
Nov 2015	Travel Grant, National Institute for Health Research, £2000
Jul 2015	Vacation Scholarship, Newcastle University, £1920
Aug 2013	MRes Scholarship, National Institute for Health Research, £5500
Jun 2012	Vacation Scholarship, Wellcome Trust, £1440

AWARDS

2022	Graduate Leadership Anchor Award, Vanderbilt University
2021/2020/2019	VU Psychology Department Scholarship Award, Vanderbilt University
2019	William F. Hodges Teaching Assistant Award, Vanderbilt University
2018	Trainee Professional Development Award, Society for Neuroscience

TEACHING EXPERIENCE

	Qualifications
Jun 2026	Associate Fellow, Advance HE
	Teaching Assistant
Nov 2024 to present	PSC3008 Physiology of the Nervous System, Newcastle University
Sept 2018 to Dec 2022	PSY2150 Principles of Experimental Design, Vanderbilt University
Sept 2018 to Jun 2019	PSY2750 Perception, Vanderbilt University
Oct 2014 to Jun 2017	PSY1010 Research Methods and Skills 1, Newcastle University
Oct 2014 to Jun 2017	PSY1011 Research Methods and Skills 2, Newcastle University
Oct 2014 to Jun 2017	PSY2009 Methods in Psychology 2A, Newcastle University

OUTREACH & PUBLIC ENGAGEMENT

May 2026	Co-organizer, Newcastle Brain, Cognition, and Behaviour Symposium
Jun 2025	Scientific demonstrator, Newcastle University Discover Festival
Jan 2025	Co-organizer, Newcastle Marmoset Workshop on Biomedical Research
July 2019	Guest lecturer, Summer Academy at Vanderbilt for the Young
Mar 2019	Guest lecturer, School of Science and Mathematics at Vanderbilt

ADDITIONAL QUALIFICATIONS

May 2026	Emergency First Aid at Work (North East Ambulance Service)
March 2026	APM Project Fundamentals Qualification (SCQF Level 6)

SERVICE

April 2026 to present	Scientist Member, Animal Welfare and Ethical Research Board, Newcastle University
October 2025 to present	Postdoctoral Member, Neuroscience Research Culture Committee, Newcastle University
October 2025 to present	Lab LEAF Sustainability Coordinator, Newcastle University
Jan 2018 to present	**Reviewer**: Scientific Reports, Cerebral Cortex, Neuroscience, Imaging Neuroscience

PEER REVIEWED PUBLICATIONS

Preprint & Under Review

22 | Errington, S. P., Agayby, B., Y., Berger, J.I., Griffiths, T.D., & Kikuchi, Y. (2026*).* Ordinal position in auditory sequences is encoded in population dynamics in macaque frontal cortex. Under Review.

21 | Asadian, A., van Klei, R., Thirunavukkarasu, P., Corrigan, B. W., Errington, S. P., Sajad, A., & Schall, J.D. (2026). Time Keeping in the Supplementary Eye Field of Macaques. Under Review.

20 | Corrigan, B. W., Sajad, A., Errington, S. P., Thirunavukkarasu, P., & Schall, J.D. (2026). Multiplicity of Error Centers in Cerebral Cortex. Under Review.

19 | Aizenbud, I., Audette, N., Auksztulewicz, R., Basiński, K., Bastos, A. M., Berry, M., Canales-Johnson, A., Choi, H., Clopath, C., Cohen, U., Costa, R. P., De Filippo, R., Doronin, R., Errington, S. P., Gavornik, J. P., Gillon, C. J., Granier, A., Hamm, J. P., Hertäg, L., Kennedy, H., Kumar, S., Ladd, A., Ladret, H., Lecoq, J. A., Maier, A., McCarthy, P., Mei, J., Mejias, J., Mikulasch, F., Mudrik, N., Najafi, F., Nejad, K., Nejat, H., Oweiss, K., Petrovici, M. A., Priesemann, V., Rudelt, L., Ruediger, S., Russo, S., Salatiello, A., Senn, W., Sennesh, E., Sima, S., Uran, C., Vasilevskaya, A., Vezoli, J., Vinck, M., Westerberg, J. A., Wilmes, K., & Xiong, Y. S. (2025). Neural mechanisms of predictive processing: A collaborative community experiment through the OpenScope program. arXiv.

18 | Corrigan, B. W., Errington, S. P., Sajad, A., & Schall, J.D. (2024). Conflict neurons in cingulate cortex of macaques. BioRxiv.

17 | Errington, S. P., Westerberg, J.A., Woodman, G. F., & Schall, J.D. (2022). Cortical Contributions to Medial Frontal β -Bursts during Executive Control. BioRxiv.

Published

16 | Thirunavukkarasu, P., Errington, S.P., Sajad, A., Corrigan, B. W., & Schall, J.D. (2026). Laminar architecture of visual and auditory responses in supplementary eye field of macaques. Cerebral Cortex.

15 | Errington, S. P. (2025). Frontocentral neural dynamics reflect decisions about when to act. Journal of Neuroscience. +

14 | Woolgar, E., Du, Y., Errington, S., Slater, B., Ogawa, T., & Kikuchi, Y. (2025). Behavioral effects of ai-generated synthetic vocalizations in free-moving marmosets. In *2025 IEEE Cyber Science and Technology Congress (CyberSciTech)* (pp. 800-805). IEEE. #

13 | Errington, S. P., & Schall, J.D. (2025). A preparatory cranial potential for saccadic eye movements in macaque monkeys. eNeuro, 12(4), ENEURO.0023-25.2025.

12 | Herrera, B., Sajad, A., Errington, S. P., Schall, J.D., & Riera., J. (2023). Cortical Origin of Theta Error Signals. Cerebral Cortex, 33(23), 11300-11319.

11 | Fu, F., Sajad, A., Errington, S.P., Schall, J.D., & Rutishauser U. (2023). Neurophysiological mechanisms of performance monitoring in human and nonhuman primates. Nature Reviews Neuroscience. +

10 | Sajad, A*., Errington, S. P.*, & Schall, J.D. (2022). Functional architecture of executive control and associated event-related potentials. Nature Communications, 13(1), 1-19.

09 | Mann, L. G., Hay, K. R., Song, A. K., Errington, S. P., Trujillo, P., Zald, D. H., Yan, Y., Kang, H., Logan, G. D., & Claassen, D. O. (2021). D2-Like Receptor Expression in the Hippocampus and Amygdala Informs Performance on the Stop-Signal Task in Parkinson's Disease. Journal of Neuroscience, 41(48), 10023-10030.

08 | Errington, S. P., Woodman, G. F., & Schall, J.D. (2020). Dissociation of medial frontal β -bursts and executive control. Journal of Neuroscience, 40(48), 9272-9282.

07 | Errington, S. P., & Schall, J.D. (2020). Express saccades in a countermanding task. Journal of Neurophysiology, 124(1), 484-496.

06 | Tarawneh, G., Nityananda, V., Rosner, R., Errington, S., Herbert, W., Arranz-Paraíso, S., Busby, N., Tampin, J., Read, J. C. A., & Serrano-Pedraza, I. (2018). Contrast thresholds reveal different visual masking functions in humans and praying mantises. Biology Open, 7(4), bio029439.

05 | Tarawneh, G., Nityananda, V., Rosner, R., Errington, S., Herbert, W., Cumming, B., Read, J. C. A. & Serrano-Pedraza, I. (2017). Invisible noise obscures visible signal in insect motion detection. Scientific Reports, 7(1), 3496

04 | Nityananda, V., Tarawneh, G., Errington, S., Serrano-Pedraza, I., & Read, J. C. A. (2017). The optomotor response of the praying mantis is driven predominantly by the central visual field. Journal of Comparative Physiology A, 203(1), 77-87.

03 | McNally, R. J., Basta, N. O., Errington, S., James, P. W., Norman, P. D., Hale, J. P., & Pearce, M. S. (2015). Socioeconomic patterning in the incidence and survival of teenage and young adult men aged between 15 and 24 years diagnosed with non–seminoma testicular cancer in northern England. Urologic Oncology: Seminars and Original Investigations, 33(12), 506-509.

02 | Schmidt, K. J., Cowen, P., Harmer, C.J., Tzortzis, G., Errington, S. P., & Burnet, P. W. J. (2015). Prebiotic intake reduces the waking cortisol response and alters emotional bias in healthy volunteers. Psychopharmacology, 1(19).

01 | McNally, R. J., Basta, N. O., Errington, S., James, P. W., Norman, P. D., & Craft, A. W. (2014). Socioeconomic Patterning in the Incidence and Survival of Children and Young People Diagnosed with Malignant Melanoma in Northern England. Journal of Investigative Dermatology, 134(11), 2703-2708.

* shared first-authorship
+ review paper
# conference proceedings

CONFERENCE PRESENTATIONS

Invited talks

Errington, S. P. (2025, May). *Neural mechanisms of implicit temporal learning in the primate brain.* Talk given at Neuroscience, Neurodisability, and Neurological Disorders Theme Seminar, Newcastle University, Newcastle-upon-Tyne, UK.

Errington, S.P., Woolgar, E., & Kikuchi, K. (2025, Jan). *Decoding marmoset behaviours in response to naturalistic social vocalizations using marker-less pose estimation techniques.* Talk given at Newcastle Marmoset Workshop on Biomedical Research, Newcastle-upon-Tyne, UK.

Errington, S. P., Sajad, A., & Schall, J.D. (2022, Mar). *Cortical microcircuitry of executive control*. Talk given at Desrochers Lab, Brown University, online.

Errington, S. P. (2021, Sept). *Neural mechanisms of cognitive control in the primate medial frontal cortex*. Talk given at Monosov Lab, Washington University at St Louis, MO.

Errington, S. P., Woodman. G.F., & Schall, J.D. (2020, Dec). *Cortical contributions to medial frontal β-bursts during executive control*. Talk given at Aron Lab, University of California San Diego, Online.

Errington, S. P., Woodman. G.F., & Schall, J.D. (2020, Oct). *Dissociation of medial frontal β-bursts and executive control*. Talk given at Cognitive Neurology Lab, University of Iowa, online.

Errington, S. P., Sajad, A., & Schall, J.D. (2019, August). *Cortical microcircuitry of executive control*. Talk given at Newcastle University Neuroscience Seminar Series, Newcastle-upon-Tyne, UK.

Errington, S. P., Sajad, A., & Schall, J.D. (2018, May). *Microcircuitry of visual performance monitoring in the supplementary eye field: Laminar distribution of visual processing under conflict*. Talk given at the Vision Science Society meeting, St Pete Beach, FL.

Posters

Sajad A., Corrigan B.W., Errington S.P., Thirunavukkarasu P., & Schall J.D. (2026, September). *Medial frontal cortex laminar microcircuitry of error monitoring and the origin of associated event-related potentials*. Poster presented at 19th Annual Meeting of the Chinese Neuroscience Society, Fuzhou, China.

Mousavi-Harris A.M., Corrigan B.W., Thirunavukkarasu P., Errington S.P., Schall J.D., & Sajad A. (2026, September). Diversity and multiplexing of different types of error signals in the medial frontal cortex. Poster presented at 19th Annual Meeting of the Chinese Neuroscience Society, Fuzhou, China.

Woolgar, E., Errington, S. P., Slater, B.J.A., Morris, C., Vuong, Q., Jackson, A., & Kikuchi, Y. (2026, June*). Decoding behavioural responses to emotionally salient acoustic stimuli in free-moving marmosets.* Poster presented at Neuroethology of Nonhuman Primates Meeting, Sicily, Italy.

Asadian, A., van Klei, R., Thirunavukkarasu, P., Corrigan, B. W., Errington, S. P., Sajad, A., & Schall, J.D. (2026, May*). Timing-related activity in the supplementary eye field of macaques.* Poster presented at the 19th Canadian Neuroscience Meeting, Montreal, Canada.

Thirunavukkarasu, P., Errington, S. P., Sajad, A., & Schall, J.D. (2026, May*). Laminar Organization of Medial Frontal β-Bursts During a Stop Signal Task.* Poster presented at the 19th Canadian Neuroscience Meeting, Montreal, Canada.

Corrigan, B.W., Sajad, A., Thirunavukkarasu, P., Errington, S. P., & Schall, J.D. (2026, May*). Multiplicity of Error Centers in the Cerebral Cortex.* Poster presented at the 19th Canadian Neuroscience Meeting, Montreal, Canada.

Corrigan, B.W., Sajad, A., Errington, S. P., Gavenas, J., Thirunavukkarasu, P., Rutishauser, U., & Schall, J.D. (2026, May*). Detecting differential modulations during cognitive tasks.* Poster presented at the Human Neuron to Brain Meeting, Toronto, Canada.

Xu, K., Ogasawara, T., Yuan, J., Yun, M., Errington, S. P., Stark, A., Minamimoto, T., Inoue, K., Chen, H., & Monosov, I. E. (2025, September*). A prefrontal cortex-hypothalamus circuit for heart rate control in non-human primates.* Poster presented at the Society for Neuroscience annual meeting, San Diego, CA.

Errington, S. P., Agayby, B., Poirier, C., Ayala, Y., Berger, J.I., Griffiths, T.D., Petkov, C.I. & Kikuchi, Y. (2025, September*). Neural encoding of identity and ordinal information during auditory sequences in the macaque frontotemporal cortex.* Poster presented at the 8th International Conference on Auditory Cortex, Maastricht, Netherlands.

Woolgar, E., Errington, S. P., Slater, B.J.A., Morris, C., Vuong, Q., Constandinou, T.G., Jackson, A., & Kikuchi, Y. (2025, September*). Modulation of behavioural states in free-moving marmosets using emotionally salient acoustic stimuli.* Poster presented at the 8th International Conference on Auditory Cortex, Maastricht, Netherlands.

Errington, S. P., Agayby, B., Woolgar, E., Morris, C., Griffiths, T.D., Petkov, C.I. & Kikuchi, Y. (2025, May*). Laminae specific optogenetic perturbation of frontotemporal circuits in macaques.* Poster presented at the OPTOGEN conference, Copenhagen, Denmark.

Corrigan, B.W., Sajad, A., Errington, S. P., Thirunavukkarasu, P., & Schall, J.D. (2025, May*). Response conflict neurons: Re-evaluation in medial frontal cortex of non-human primates.* Poster presented at the Centre for Vision Research – Centre for Integrated and Applied Neuroscience Meeting, Toronto, Canada.

Corrigan, B.W., Sajad, A., Errington, S. P., Thirunavukkarasu, P., & Schall, J.D. (2025, May*). Response conflict neurons: Re-evaluation in medial frontal cortex of non-human primates.* Poster presented at the 18th Canadian Neuroscience Meeting, Toronto, Canada.

Corrigan, B. W., Errington, S. P., Sajad, A., & Schall, J.D. (2024, October*). Action conflict neurons in the cingulate cortex of non-human primates.* Poster presented at the Society for Neuroscience annual meeting, Chicago, IL.

Herrera, B., Sajad, A., Errington, S. P., Schall, J.D., & Riera., J. (2024, October*). Multiscale electrical signatures of interneurons in agranular frontal cortex of macaques during performance monitoring*. Poster presented at the Society for Neuroscience annual meeting, Chicago, IL.

Thirunavukkarasu, P., Errington, S. P., Sajad, A., & Schall, J.D. (2024, October*). Functional architecture of visual responses in dorsal and ventral banks of cingulate cortex.* Poster presented at the Society for Neuroscience annual meeting, Chicago, IL.

Corrigan, B.W., Sajad, A., Errington, S. P., & Schall, J.D. (2024, July*). Action conflict neurons in the cingulate cortex of non-human primates.* Poster presented at the Gordon Research Conference: The Neurobiology of Cognition, Waterville Valley, NH.

Herrera, B., Sajad, A., Errington, S. P., Schall, J.D., & Riera., J. (2023, November). *The neural basis of the error-related negativity: A biophysical modeling study*. Poster presented at the Society for Neuroscience annual meeting, Washington, DC.

Sajad, A., Errington, S. P., Thirunavukkarasu, P., & Schall, J.D. (2023, November). *Microcircuitry of performance and outcome monitoring in the supplementary eye field and mid-cingulate cortex*. Poster presented at the Society for Neuroscience annual meeting, Washington, DC.

Sajad, A., Errington, S. P., Thirunavukkarasu, P., & Schall, J.D. (2023, July). *Microcircuitry of performance and prediction error monitoring across the medial frontal cortex*. Poster presented at the Gordon Research Conference on Eye Movements, South Hadley, MA.

Thirunavukkarasu, P., Errington, S. P., Sajad, A., & Schall, J.D. (2023, July). *Functional Architecture of Visually Responsive Neurons in Supplementary Eye Field*. Poster presented at the Gordon Research Conference on Eye Movements, South Hadley, MA.

Thirunavukkarasu, P., Errington, S. P., Sajad, A., & Schall, J.D. (2023, May). *Functional Architecture of Visually Responsive Neurons in Supplementary Eye Field*. Poster presented at the Vision Science Society meeting, St Pete Beach, FL.

Herrera, B., Sajad, A., Errington, S. P., Schall, J.D., & Riera., J. (2023, March). *Low frequency spike-field coupling for error monitoring in medial frontal cortex: Empirical findings and biophysical modeling*. Poster presented at the Computational and Systems Neuroscience (COSYNE) conference, Montreal, Canada.

Sajad, A., Errington, S. P., & Schall, J.D. (2022, November). *Functional characterization of feedback-related negativity and associated sensory event-related potentials in medial frontal cortex*. Poster presented at the Society for Neuroscience annual meeting, San Diego, CA.

Errington, S. P., Sajad, A., & Schall, J.D. (2022, November). *Absence of conflict signaling in midcingulate cortex: Neural spiking in macaques during a stop-signal task*. Poster presented at the Society for Neuroscience annual meeting, San Diego, CA.

Herrera, B., Sajad, A., Errington, S. P., Schall, J.D., & Riera., J. (2022, November). *Cell-specific mechanisms of theta oscillations during error monitoring in medial frontal cortex: Empirical findings and biophysical modelin*g. Poster presented at the Society for Neuroscience annual meeting, San Diego, CA.

Herrera, B., Sajad, A., Errington, S. P., Schall, J.D., & Riera., J. (2021, November). *Low frequency spike-field coupling for error monitoring in medial frontal cortex: Empirical findings and biophysical modeling*. Poster presented at the Society for Neuroscience annual meeting, Online.

Errington, S. P., & Schall, J.D. (2020, June). *Express saccades during a countermanding task.* Poster presented at the Vision Sciences Society annual meeting, Online.

Errington, S. P., Sajad, A., & Schall, J.D. (2019, October). *Microcircuitry of Agranular Cortex: Multiplexed executive control and performance monitoring signals*. Poster presented at the Society for Neuroscience annual meeting, Chicago, IL.

Errington, S. P., Sajad, A., & Schall, J.D. (2019, July). *Microcircuitry of Executive Control: Cortical microcircuitry of gaze monitoring in the supplementary eye field.* Poster presented at the Gordon Research Conference on Eye Movements, Lewiston, ME.

Errington, S. P., Sajad, A., & Schall, J.D. (2019, May). *Microcircuitry of Executive Control: Cortical microcircuitry of gaze monitoring in the supplementary eye field.* Poster presented at the Vision Science Society meeting, St Pete Beach, FL.

Errington, S. P., Sajad, A., & Schall, J.D. (2018, November). *Microcircuitry of Performance Monitoring: Laminar profile of conflict monitoring in the supplementary eye field*. Poster presented at the Society for Neuroscience annual meeting, San Diego, CA.

Errington, S. P., Sajad, A., & Schall, J.D. (2018, October). *Microcircuitry of Performance Monitoring: Laminar profile of conflict monitoring in the supplementary eye field*. Poster presented at the 6th Workshop on Computational Properties of the Prefrontal Cortex, Nashville, TN.

Errington, S. P., Elder, G., Collerton, D., Firbank, M.J., & Taylor, J.P. (2015, December). *Visual hallucinations, attention and visuo-perceptual function in Lewy body dementia*. Poster presented at the International Dementia with Lewy Body Conference, Fort Lauderdale, FL.