

Emily Kate Farran

Contact Details

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Nationality: British

Date of Birth: 29th August 1976

APPOINTMENTS

November 2019 to July 2023 (0.25 FTE, for 3 to 5 years; in association with UK Reproducibility Network): Academic Lead Research Culture and Integrity, University of Surrey, UK.

August 2023 to present (0.25 FTE) University of Surrey Institutional Lead, UK Reproducibility Network.

October 2018 to present: Professor of Cognitive Development, University of Surrey, UK

October 2015 to September 2018: Professor of Cognitive Development, UCL Institute of Education, UK

October 2011 to September 2015: Reader in Psychology, UCL Institute of Education, UK

October 2008 to October 2011: Senior Lecturer in Psychology, UCL Institute of Education, UK

October 2001 to September 2008: Lecturer in Psychology, University of Reading, UK.

Maternity leave on three occasions: 2011-2012; 2014-2015; 2017-2018

COVID-19 disruption due to childcare: March to July 2020; January to March 2021

ACADEMIC QUALIFICATIONS

1998-2002 PhD, Department of Experimental Psychology, University of Bristol, U.K. Thesis title: Visuo-spatial Cognition in Williams syndrome. Supervised by Prof. C. Jarrold and Prof. S. Gathercole.

1995-1998 BSc (Hons.) Psychology. University of Bristol, U.K.

PROJECT GRANTS

	Value
2024-2027. Scerif, G., Farran, E.K., Van Herwegen, J. (Co-PIs). ESRC Early Pathways to Independence in numeracy for Children with GENetic Syndromes - EPIC GENS	£799, 929
2023-2024. Farran E.K., Gilmore, C., Gilligan-Lee, K., Jay, T., Mareschal, D. Education Endowment Foundation SPAtial Cogniton to Enhance mathematical learning (SPACE).	£252, 243
2023-2025. Farran, E.K., Scerif, G., Van Herwegen, J., Pellicano, E. Baily Thomas Charitable Fund and Higher Education Innovation Fund Research England. A participatory approach to shaping the future of research with individuals with intellectual disability.	£70, 272 (BTCF) £21, 050 (HEIF)
2023-2025 Ossmy, O., Farran, E.K. The Waterloo Foundation Real-time mechanisms underlying short- and long-term effects of physical exercise on functional skills in children with ADHD	£64, 890
2022-2023 Farran, E.K., Gifford, S., Gripton, C., Gilligan-Lee, K., Borthwick, A., Williams, H., Lancaster, A. ESRC Impact Acceleration Account and Higher Education Innovation Fund Research England. The Spatial Reasoning toolkit (https://earlymaths.org/spatial-reasoning/); how has it impacted practice?	£17, 003 (ESRC IAA) £7, 154 (HEIF)
2022-2026 Farran, E.K., Moss, J., Dongol, B. EPSRC Doctoral Training Partnership PhD Studentship The use of information technology and traditional methods to understand the impact of motor impairment on cognitive development in neurodevelopmental conditions.	£80, 770 (EPSRC DTP) £10, 000 (WSF)
2022-2024 Farran, E.K. Higher Education Innovation Fund Research England Socialising Open Research and Innovation in our University research culture	£105, 282
2022 Moss, J., Farran, E.K., Gilligan-Lee, K., Ellis, K., Wilby, L., Hitchcock, B. ESRC Impact Acceleration Account and Centre for Educational Neuroscience. Improving evidence-based practice in schools for children with rare genetic syndromes associated with intellectual disability through online bespoke training for special education practitioners.	£19, 997(ESRC IAA) £5, 000 (CEN)
2022 Moss, J., Mukherjee, R., Bozhilova, N., Ellis, K., Farran, E.K., Cook, P. University of Surrey Research Support Fund Autism and related characteristics in individuals with Fetal Alcohol Spectrum Disorders.	£10, 000
2021 - 2026 Munafo, M., Farran, E.K., Grange, J.A., Newton, T., Rowe, C., Foxcroft, D., Shanks, D., Macleod, M., Casci, T., Stewart, A.J., Newton, P., Stafford, T., Uther, M., Knight, A., Graham, K., Wells, D., Macfarlane, G., Padgett, M. REDF Growing and Embedding Open Research in Institutional Practice and Culture	£4,500,000
2021 Farran, E.K., Gifford, S., Gripton, C., Gilligan-Lee, K., Borthwick, A., Williams, H., Lancaster, A. ESRC Impact Acceleration Account and Centre for Educational Neuroscience. The importance of spatial thinking for mathematics; translating research into practice.	£19, 978 (ESRC IAA) £5,000 (CEN)
2021-2022 Farran, E.K., Daoutis, C., Rodriguez-Marquez, M. Higher Education Innovation Fund Research England Socialising Open Research and Innovation in our University research culture	£70, 000
2021-2022 Gilligan, K., Farran, E.K., Hawes, Z., Mix, K. British Academy/ Leverhulme, University of Surrey Research Support Fund Hands-On: Investigating the role of physical manipulatives in spatial training	£9, 981 (BA/L) £8, 000 (FRSF)
2021-2025 Remington, A. Milne, E., Farran, E.K. & Scerif, G. ESRC Superior perceptual capacity in autism: investigating universality, specificity and practical applications for learning	£799, 869
2020-2021 Mareschal, D., Tolmie, A., Dumontheil, I. Porayska-Pomsta, K. Farran, E.K., Thomas, M.S.C., Mayer, S., Bell, D. Education Endowment Foundation UnLoCKE: Understanding Learning of Counterintuitive Concepts through Knowledge Interference Control in Science and Mathematics Education; Efficacy Trial	£224, 031
2020-2023 Thomas, M.S.C., Rutherford, M., Farran, E.K., D'Souza, H., Ojinaga Alfageme, O. Jerome Lejeune Foundation Can measures of prenatal and neonatal brain structure predict infant and child cognition in Down syndrome? Establishing neurocognitive profiles.	€28,375
2020-2022 Gilligan, K., Farran, E.K. Bailey Thomas Charitable Fund.	£52, 039

Exploring relative strengths in Down Syndrome: Spatial thinking and its role in mathematics.	£12,304(COVIDext.)
2019-2022 Farran E.K., Gilmore, C. Leverhulme Trust	£235, 822
LEGO® construction, Spatial thinking and Mathematics achievement.	£52,237(COVIDext.)
2019-2020 Farran E.K. Hill., E. Waterloo Foundation, Undergraduate internship, University of Surrey Faculty Research Support Fund	£9, 664 (WF)
A disconnect between motor milestone achievement and motor development in Attention Deficit Hyperactivity Disorder; implications for intervention	£7, 993 (FRSF)
2017 Palmer, S.B., Farran, E.K., Van de Vyver, J., Abrams, D. IOE seed funding	£2, 700 (UG intern)
Exploring the Impact of Socio-Cognitive Skills on the Development of Prejudice: Developing a novel framework	£10, 910
2017-2021 Smith, M. L., Ewing, L., Farran E.K., Karmiloff-Smith, A. Leverhulme Trust	£177, 298
The social side of face perception: insights from atypical development	
2015-2017 Punshon, S., Cohen Kadosh, R., Farran, E.K. Wellcome Trust	£40, 000
We're Stuck; ground breaking interactive theatre.	
2015-2019 Mareschal, D., Tolmie, A., Dumontheil, I. Porayska-Pomsta, K. Farran, E.K., Thomas, M.S.C., Mayer, S., Bell, D. EEF / Wellcome	£998,430
UnLoCKE: Understanding Learning of Counterintuitive Concepts through Knowledge Interference Control in Science and Mathematics Education	
2015-2019 Farran, E.K., Tolmie, A. ESRC Collaborative studentship (CASE).	£75, 000
The interaction between motor development and spatial knowledge in Williams syndrome	
2015-2019 Farran, E.K., Dumontheil, I. Bloomsbury PhD Studentship.	£65,000
Enhancing success on Maths and Science problems; the role of local and global processing	
2015-2019 Farran, E.K., Karmiloff-Smith, A., Hill., E. Waterloo Foundation	£40,163
Motor development and navigation in ADHD	
2014 – 17 Farran, E.K. Thomas, M. Bloomsbury PhD Studentship.	£65,000
Spatial Cognition as a contributor to the development of Science, Technology, Engineering and Mathematics (STEM) skills	
2013-2016 Smith, M. L., Farran E.K., Karmiloff-Smith, A. Leverhulme Trust	£112, 203
Exploration of typical and atypical development of flexible face processing strategies	
2012 – 13 Farran, E.K., Hudson, K.D. Autour des Williams	£13, 588
Understanding Depth Perception in Williams syndrome	
2012 – 13 Farran, E.K., Van Herwegen, J. British Academy	£9, 960
The use of eye-tracking to investigate landmark knowledge and route-learning strategies in typical and atypical development	
2012 – 13 Van Herwegen, J., Farran, E.K., Riby, D. British Psychological Society seminar series competition (co-sponsored by Williams Syndrome Foundation)	£3000 (BPS) £1500 (WSF)
Neurodevelopmental disorders: Exploring sensitive methods of assessment across development	
2010 – 13 Farran, E.K. Karmiloff-Smith, A. Thomas, M. Bloomsbury PhD Studentship.	£65,000
The development of problem-solving abilities in typical and atypical development	
2010 – 13 Farran, E.K. ESRC Collaborative studentship (CASE).	£75,000
The Use of Virtual Environments to Train Environmental Learning and Route Learning in Individuals with Williams Syndrome	
2010 - 14 Farran, E.K., Courbois, Y., Blades, M., Mellier, D. Sokeel, P. ESRC-ANR Bilateral Grant	£483,379 (ESRC)
Investigating strategies for environmental learning in typical and atypical development	£143,819 (ANR)
2009 Farran, E.K. Courbois, Y. Autour de Williams	£11, 549
Utilisation des points de repere dans la navigation spatiale chez Les personnes avec un syndrome de williams : Une recherche avec des environnements virtuels	
2008 Courbois, Y., Farran, E.K. Fondation Jerome Lejeune	€16, 200
Etude de la navigation spatiale chez les personnes porteuses de trisomie 21: apport des environnements virtuels	
2008 Farran, E.K. Courbois, Y. British Academy	£7, 440
Route learning abilities in typical and atypical development; the effects of manipulating landmark salience on performance.	
2006 – 10 Farran, E.K. ESRC Collaborative studentship (CASE).	£70,000
Factors Affecting Visuo-spatial construction and drawing ability in Williams syndrome	
2006 Farran, E. K. British Academy	£7,235
Visuo-spatial perception and production in Williams syndrome.	
2005-07 Farran, E.K., Blades, M., Boucher, J. ESRC	£46,113
Are small- and large-scale visuo-spatial abilities dissociated in Williams syndrome?	
2004-06 Farran, E.K., Brown, J., Karmiloff-Smith, A. Houston-Price, C. ESRC	£48,573
Attention and perceptual grouping in infants with Williams syndrome.	
2003-04 Farran, E.K., Brown, J., Karmiloff-Smith, A. Houston-Price, C. ESRC	£43,060
Individual differences in attention; examining the integration between the development of attentional mechanisms and perceptual organisation in infancy.	

AWARDS

2022 Farran, E.K. Robert Blumberg Distinguished Lecture in Cognitive Science 2022
2022 Farran, E.K. Finalist, University of Surrey Vice-Chancellor award for leadership
2009 Farran, E.K. The Neil O'Connor Award for research into Developmental Disorders. Awarded by the British Psychological Society.

TEACHING & INSTITUTIONAL ROLES

November 2019 to present: University Academic Lead Research Culture and Integrity, UK Reproducibility Society Institutional Lead
August 2019 to 2022: Director of Research, School of Psychology (this encompassed REF2021 School lead role, on multi-School REF2021 UoA3 submission team)
August 2020 to 2022: Developmental Psychology section lead

General: MSc and Undergraduate level teaching: typical and atypical cognitive development, research methods and educational neuroscience, MSc and Undergraduate project supervisor, Personal tutor.

PhD Students

Completed: Chiraz Bensaad (ESRC funded 1+3) 2002-2008 (includes 2 maternity leaves); Kerry Hudson (CASE ESRC funded 1+3) 2006 – 2011; Susie Formby (University of Reading 1+3 studentship) 2006 -2011; Joanne Camp (Bloomsbury +3 studentship) 2010 -2014; Hannah Broadbent (CASE ESRC funded +3) 2010-2014 (this includes 1 maternity leave), Jamie Lingwood (ESRC funded +3) 2011-2014; Katie Gilligan (Bloomsbury studentship) 2015-2018; Alex Hodgkiss (ESRC funded +3) 2015-2018; Su Morris (Bloomsbury studentship) 2015-2020 (includes two secondments); Kathryn Bates (ESRC funded 1+3) 2016-2021; Olatz Ojinaga alfageme (Bloomsbury studentship) 2018-2022; Leighanne Mayall (CASE ESRC funded +3) 2015-2021 (part-time).

Current: Gloria Yoshkova (EPSRC studentship) 2022-2026; Elizaveta Ivanova (Surrey studentship) 2022-2026; Lauren Jenner (Surrey studentship) 2020-2023; Emma Campbell (ESRC 1+3 funded) 2014-2024 (includes 4 maternity leaves).

RESEARCH

See: <https://www.surrey.ac.uk/cognition-genes-and-developmental-variability-lab>

My research relates to cognitive development in neurodevelopmental disordered groups (Williams syndrome, Down syndrome, Developmental Coordination Disorder, Cerebral Palsy, Attention Deficit Hyperactivity Disorder) and in typical development, with a specific emphasis on spatial cognition. The broad aim of my research is to characterise both typical and atypical development of cognitive functions within a neuroconstructivist framework (i.e. functions are explored within the context of the *developing* brain). This involves analytical investigation of spatial performance in both small-scale (e.g. perception, mental imagery) and large-scale space (navigation and route learning abilities), as well as related mechanisms (e.g. memory, attention and executive function), and the relationship between spatial thinking and Science Technology Engineering and Maths (STEM).

OPEN RESEARCH / OPEN SCIENCE

I established the Surrey Open Research Working Group in 2019 and have led the team to develop and launch multiple University-wide initiatives including our [Open Research position statement](#) and [Open Research action plan](#), 26 webpages on [Open Research and Research Culture](#), our Responsible Metrics implementation plan, and multiple [Open Research events](#). I lead on the creation of a resource document which details [Open Research practice across all disciplines](#). This has been translated into a series of [webpages](#) by the UKRN. I am the Surrey lead of the [UK Reproducibility Network](#) team (18 Universities) who received [significant funding](#) for Open Research. In 2024, I was elected onto the UKRN steering committee.

IMPACT

Media

[‘How spatial thinking could help children learn maths – and go on to use it in their careers’](#) - *The Conversation*, 2023

[‘Spatial cognition and STEM success’](#) - *Psychological podcast*, 2021

[‘Ten UK universities create reproducibility-focused senior roles’](#) - *The Times Higher Education*, 2019

[‘Why Spatial ability could be the key to Stem success’](#) - *TES pedagogy podcast*, 2019

[‘Science in Primary’](#) - *The Times Education Supplement* (TES) article, 2018

Outputs

Spatial Reasoning Toolkit: <https://earlymaths.org/spatial-reasoning/>

Blogs

Farran, E.K. (2022). The importance of spatial thinking for STEM. GL Assessment. <https://reports.gl-assessment.co.uk/the-transition-conversation/spatial-thinking-for-stem/>

Gripton, C. & Farran, E.K. (2022). Supporting spatial play in mathematics. *Early Education Journal*, 97, Summer 2022, 21st century skills themed issue.

Farran, E.K. & Gripton, C. (2022). Improving mathematics through spatial thinking. *Education Endowment Foundation Research Schools Network*. <https://researchschool.org.uk/news/improving-mathematics-through-spatial-thinking>

Gripton, C. & Farran, E.K. (2022). How can we support young children’s spatial reasoning. *Blog on Learning and Development*. <https://bold.expert/how-can-we-support-young-childrens-spatial-reasoning/>

Farran, E.K., Borthwick, A. and Gripton, C. (2022). Spatial reasoning and STEAM. *Primary Mathematics*. 26(1), 24-25. <https://earlymaths.org/wp-content/uploads/2022/02/08.-Spatial-Steam.pdf>

Farran, E.K. (2021). What role does spatial thinking play in STEM? Improving STEM skills by promoting the development of children’s spatial ability. *Blog on Learning and Development*. <https://bold.expert/what-role-does-spatial-thinking-play-in-stem/>

Invited CPD and talks

Farran, E.K. (2023). The importance of spatial reasoning in the early and primary years. *Presentation to Royal Society Advisory Committee on Mathematics Education*. June 2023.

Farran, E.K. (2023). The Importance of spatial thinking for mathematics. *Presentation to workgroup in France missioned by the French government to improve mathematics teaching in France*. March 2023

Farran, E.K. (2022). The importance of spatial ability to support STEM development. *The Global Assessment Conference, GL Education*. October 2022.

Farran, E.K. (2022). The importance of spatial thinking for mathematics in the primary school years. *Ready or Not CPD Series, University of Cambridge*. <https://readyornotstudy.uk/resourcesforteachers> September 2022

Farran, E.K. (2022). Independence and navigation in individuals with Williams syndrome. *Williams Syndrome Foundation National Convention*, July 2022.

Gifford, S. & Farran, E.K. (2022). Spatial Reasoning and Early Years Mathematics. Early Years and Primary Phase Committee of the Geographical Association, UK. March 2022

Gripton, C. & Farran, E.K. (2022). Supporting spatial play in maths. Birth to 5 matters Spring Festival, March 2022.

Farran, E.K. (2021). The relationship between spatial reasoning and mathematics in EYFS. *Early Childhood Maths Group*, February 2021.

Farran, E.K. (2020). Spatial reasoning in the Reception year. *EYFS Building Firm Mathematical Foundations; National Centre for Excellence in the Teaching of Mathematics*, December 2020.

Events

Spatial Reasoning toolkit launch events (2022). The Early Childhood Maths Group (ECMG) Spatial Reasoning Toolkit was launched via two online webinars on 28th February 2022, attended by over 300 practitioners. http://www.educationalneuroscience.org.uk/wordpress/wp-content/uploads/2022/02/SR_Launch_Event_Flyer.pdf

British Academy showcase (2022). Our exhibit “Find Your Space: the importance of engaging your spatial brain” London, 17-18 June: <https://www.thebritishacademy.ac.uk/events/british-academy-summer-showcase-2022/>

PUBLICATIONS

- Jenner, L. A., Farran, E. K., Welham, A., Jones, C., & Moss, J. (2023). The use of eye-tracking technology as a tool to evaluate social cognition in people with an intellectual disability: a systematic review and meta-analysis. *Journal of Neurodevelopmental Disorders*, 15, 42. <https://doi.org/10.1186/s11689-023-09506-9>
- McDougal, E., Gilligan-Lee, K. A., Gilmore, C., & Farran, E. K. (2023). Construction play frequency and relations with spatial ability and mathematics performance. <https://doi.org/10.1111/bjdp.12465>
- Mayall, L.A., Tolmie, A. & Farran, E.K. (2023). Influence of motor ability on daily living ability in individuals with Williams syndrome and individuals with Down syndrome. *International Review of Research in Developmental Disabilities*. <https://doi.org/10.1016/bs.iridd.2023.09.002>
- Dumontheil, I., Wilkinson, H. R., Farran, E. K., Smid, C., Modhvia, R., & Mareschal, D. (2023). How do executive functions influence children’s reasoning about counterintuitive concepts in mathematics and science?. *Journal of Cognitive Enhancement*, 1-19. <https://doi.org/10.1007/s41465-023-00271-0>
- Gilligan-Lee, K. A., Fink, E., Jerrom, L., Davies, M.P., Dempsey, C., Hughes, C., Farran, E.K. (2023). Building Numeracy Skills: Associations between DUPLO® Block Construction and Numeracy in Early Childhood. *Journal of Intelligence* 11: 161. <https://doi.org/10.3390/jintelligence11080161>
- Gilligan-Lee, K. A., Hawes, Z. C. K., Williams, A. Y., Farran, E. K., & Mix, K. S. (2023). *Hands-On: Investigating the role of physical manipulatives in spatial training. Child Development*, 00, 1–17. <https://doi.org/10.1111/cdev.13963>
- McDougal, E., Silverstein, P., Treleaven, O., Jerrom, L., Gilligan-Lee, K., Gilmore, C., & Farran, E. K. (2023). Assessing the impact of LEGO® construction training on spatial and mathematical skills. *Developmental Science*, e13432. <https://doi.org/10.1111/desc.13432>
- Morris, S., Farran, E. K., & Gilligan-Lee, K. A. (2023). Examining the prevalence and type of technology-use in people with Down syndrome: Perspectives from parents and caregivers. *Journal of Intellectual Disabilities*, 17446295231176121. <https://doi.org/10.1177/17446295231176121>
- Farran, E. K., Purser, H. R. M., Jarrold, C., Thomas, M. S. C., Scerif, G., Stojanovic, V., & Van Herwegen, J. (2023). Cross-sectional and longitudinal assessment of cognitive development in Williams syndrome. *Developmental Science*, e13421. <https://doi.org/10.1111/desc.13421>
- McDougal, E., Silverstein, P., Treleaven, O., Jerrom, L., Gilligan-Lee, K., Gilmore, C., & Farran, E. K. (2023). Associations and Indirect Effects Between LEGO® Construction and Mathematics Performance. *Child Development*. <https://doi.org/10.1111/cdev.13933>
- Gilligan-Lee, K., Bradbury, A., Bradley, C., Farran, E. K., Van Herwegen, J., Wyse, D., & Outhwaite, L. A. (2023). Spatial Thinking in Practice: A snapshot of teacher’s spatial activity use in the early years’ classroom. *Mind, Brain and Education*. <https://doi.org/10.1111/mbe.12352>
- Morris, S., Farran, E. K., & Gilligan-Lee, K. (2023). Spatial abilities in Down syndrome: characterising the profile of spatial skills and models of spatial development. *Cognitive Development*. <https://doi.org/10.1016/j.cogdev.2023.101325>
- Bates, K.E., Williams, A.Y., Gilligan-Lee, K.E., Gripton, C., Lancaster, A., Williams, H., Borthwick, A., Gifford, S., Farran, E.K. (2023). Practitioner’s perspectives on spatial reasoning in educational practice from birth to 7 years. *British Journal of Educational Psychology*. <https://doi.org/10.1111/bjep.12579>
- Gauthier, A., Porayska-Pomsta, K., Mayer, S., Dumonteil, I., Farran, E., Bell, D., ... & Team, U. (2022). Redesigning learning games for different learning contexts: Applying a serious game design framework to redesign Stop & Think. *International Journal of Child-Computer Interaction*, 100503. <https://doi.org/10.1016/j.ijcci.2022.100503>
- Farran, E. K., Hudson, K. D., Bennett, A., Ameen, A., Misheva, I., Bechlem, B., ... Courbois, Y. (2022). Anxiety and spatial navigation in Williams syndrome and Down syndrome. *Developmental Neuropsychology*. <https://doi.org/10.1080/87565641.2022.2047685>
- Farran, E. K., & Scerif, G. (2022). Genetic syndromes, neuroconstructivism, and replicable research; challenges and future directions. *Infant and Child Development*. e2307. <https://doi.org/10.1002/icd.2307>
- Farran, E. K., Blades, M., Hudson, K. D., Sockeel, P., & Courbois, Y. (2022). Spatial exploration strategies in childhood; exploration behaviours are predictive of successful navigation. *Cognitive Development*, 61, 101153. <https://doi.org/10.1016/j.cogdev.2022.101153>
- Stewart, A. J., Farran, E. K., Grange, J. A., Macleod, M., Munafò, M., Newton, P., & Shanks, D. R. (2021). Improving research quality: the view from the UK Reproducibility Network institutional leads for research improvement. *BMC Research Notes*, 14(1), 1-4. <https://doi.org/10.1186/s13104-021-05883-3>
- Bates, K., Farran, E.K. (2021). Mental imagery and visual working memory abilities appear to be unrelated in childhood: evidence for individual differences in strategy use. *Cognitive Development*, 60, 101120. <https://doi.org/10.1016/j.cogdev.2021.101120>
- Back, E., Farran, E.K., Van Herwegen, J. (2021). Impaired block design performance in Williams syndrome: Visuospatial abilities or task approach skills? *American Journal on Intellectual and Developmental Disabilities*. 127(5), 390-399. <https://doi.org/10.1352/1944-7558-127.5.390>
- Farran, E.K., Critten, V., Courbois, Y., Campbell, E., Messer, D. (2021) Spatial cognition in children with physical disability; What is the impact of restricted independent exploration? *Front. Hum. Neurosci.* 15:669034. <https://doi.org/10.3389/fnhum.2021.669034>
- Hodgkiss, A., Gilligan, K.A., Tolmie, A. K., Thomas, M.S.C., Farran, E.K. (2021). The developmental trajectories of spatial skills in middle childhood. *British Journal of Developmental Psychology*. <https://doi.org/10.1111/bjdp.12380>
- Morris, S., Farran, E.K., Dumontheil, I. (2021). Responses to Navon tasks differ across development and between tasks with differing attentional demands. *Visual Cognition*, 185, 17-28. <https://doi.org/10.1016/j.visres.2021.03.008>

- Lee, J., Mayall, L. A., Bates, K. E., Hill, E. L., Leonard, H. C., & Farran, E. K. (2021). The relationship between motor milestone achievement and childhood motor deficits in children with Attention Deficit Hyperactivity Disorder (ADHD) and children with Developmental Coordination Disorder. *Research in Developmental Disabilities*, 113, 103920. <https://doi.org/10.1016/j.ridd.2021.103920>
- Bates, K., Gilligan-Lee, K., Farran, E.K. (2021). Reimagining Mathematics: The Role of Mental Imagery in Explaining Mathematical Calculation Skills in Childhood. *Mind, Brain and Education*. <https://doi.org/10.1111/mbe.12281>
- Gilligan-Lee, K. A., Hodgkiss, A., Thomas, M. S., Patel, P.K. Farran, E. K. (2021). Aged-based differences in spatial language skills from 6 to 10 years: Relations with spatial and mathematics skills. Learning and Instruction. <https://doi.org/10.1016/j.learninstruc.2020.101417>
- Lingwood, J., Farran, E. K., Courbois, Y., Blades, M. (2020). Investigating route learning, metacognition, and beacon-based strategies using virtual environments. *European Review of Applied Psychology* <https://doi.org/10.1016/j.erap.2020.100570>
- Mayall, L.A., D'Souza, H., Hill, E.L., Karmiloff-Smith, A., Tolmie, A., Farran, E.K. (2021). Motor Abilities and the Motor Profile in Individuals with Williams Syndrome. *Advances in Neurodevelopmental Disorders*. <https://doi.org/10.1007/s41252-020-00173-8>
- Farran, E.K., Bowler, A., D'Souza, H., Mayall, L., Karmiloff-Smith, A., Sumner, E., Brady, D., Hill, E.L. (2020). Is the Motor Impairment in Attention Deficit Hyperactivity Disorder (ADHD) a Co-Occurring Deficit or a Phenotypic Characteristic? *Advances in Neurodevelopmental Disorders*. <https://doi.org/10.1007/s41252-020-00159-6>
- Farran, E.K., Mares, I., Papasavva, M., Smith, F.W., Ewing, L., Smith, M.L. (2020). Characterizing the neural signature of face processing in Williams syndrome via multivariate pattern analysis and event related potentials. *Neuropsychologia*. <https://doi.org/10.1016/j.neuropsychologia.2020.107440>
- Mares, I., Ewing, L., Farran, E.K., Smith, F.W., Smith, M.L. (2020). Developmental changes in the processing of faces as revealed by EEG decoding. *Neuroimage*. <https://doi.org/10.1016/j.neuroimage.2020.116660>
- Wilkinson, H.R., Smid, C. Morris, S., Farran, E.K., Dumontheil, I., Mayer, S., Tolmie, A., Bell, D., Porayska-Pomsta, K., Holmes, W., Mareschal, D., Thomas, M.S.C. (2019). Domain-specific inhibitory control training to improve children's learning of counterintuitive concepts in mathematics and science. *Journal of Cognitive Enhancement*. <https://doi.org/10.1007/s41465-019-00161-4>
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Book chapters

- Gilligan-Lee, K., Roberts, E., Farran, E.K. (2022). Understanding visuo-spatial processing in the context of paediatric neuropsychology: Theory, assessment and implications. In Booth, R., Murphy, T., & Zebracki K. (Eds). *Paediatric Neuropsychology within the Multidisciplinary Context*. Mackeith Press.
- Farran, E.K. (2021). What can neurodevelopmental disorders tell us about developmental pathways? Realising neuroconstructivist principles now and in the future. In Mareschal, D., Knowland, V., & Thomas, M. S. (Eds). *Taking development seriously: a Festschrift for Annette Karmiloff-Smith. Neuroconstructivism and the multi-disciplinary approach to understanding the emergence of mind. Routledge*.
- Van Herwegen, J., Riby, D. and Farran, E.K. (2015) Neurodevelopmental disorders: definitions and issues. In: Van Herwegen, J. & Riby, D. (Eds.) *Neurodevelopmental disorders: research challenges and solutions*. Hove, U.K. : Psychology Press. pp. 3-18. (Research methods in developmental psychology: a handbook series) ISBN 9781848723283
- Camp, J., Farran, E.K. & Karmiloff-Smith, A. (2012). Numeracy. In Farran, E.K. and Karmiloff-Smith, A. (Eds). *Neurodevelopmental Disorders Across the Lifespan: A Neuroconstructivist Approach*. (pp.299-312). *Oxford University Press*.
- Hudson, K. & Farran, E.K. (2012). Executive function and motor planning. In Farran, E.K. and Karmiloff-Smith, A. (Eds). *Neurodevelopmental Disorders Across the Lifespan: A Neuroconstructivist Approach*. (pp. 165-186). *Oxford University Press*.
- Farran, E.K. & Formby, S. (2012). Visual Perception and Visuospatial Cognition. In Farran, E.K. and Karmiloff-Smith, A. (Eds). *Neurodevelopmental Disorders Across the Lifespan: A Neuroconstructivist Approach*. (pp. 225-246). *Oxford University Press*.

Books

- Farran, E.K. and Karmiloff-Smith, A. (Eds) (2012). *Neurodevelopmental Disorders Across the Lifespan: A Neuroconstructivist Approach*. *Oxford University Press*.

CONFERENCE CONTRIBUTIONS

Recent conference presentations include:

- Farran, E.K., McDougal, E., Silverstein, P., Treleaven, O., Jerrom, L., Gilligan-Lee, K.A., Gilmore, C. (2022). Assessing the impact of LEGO® construction training on spatial and mathematical skills. Mathematical Cognition and Learning Society, Antwerp, Belgium, May 2022.
- Farran, E.K., Purser, H.R.M., Jarrold, C., Thomas, M.S.C., Scerif, G., Stajonovik, V., Van Herwegen, J. (2022). Cross-sectional and longitudinal assessment of cognitive development in Williams syndrome. Neurodevelopmental Disorder Annual Seminar, Edinburgh, June, 2022.

Recent invited activities include:

- Farran, E.K. (2022). Open Research at the University of Surrey. *British Neuroscience Association Research Culture webinar*, November 2022
- Farran, E.K. Co-chair (with Neil Jacobs, UKRI) of “Opportunities and challenges in improving research quality by drawing on lessons across sectors and disciplines”, UKRI Future Leaders Fellowships Conference, October 2021.
- Farran, E.K. Panel discussant at UKRI Enhancing Research Culture event, November 2021.

Recent invited presentations include:

- Farran, E.K. (2023). Navigation, the spatial domain and STEM. *Robert Blumberg Distinguished Lecture in Cognitive Science 2022, University of Latvia*. January 2023.
- Farran, E.K. (2022). The Importance of spatial thinking for mathematics. *Presentation to workgroup in France missioned by the French government to improve mathematics teaching in France*. December 2022
- Farran, E.K. (2021). Spatial exploration patterns, and predictors of navigation competence; evidence from Typical Development, Down Syndrome and Williams Syndrome. Invited speaker, *3rd DZNE Interdisciplinary Symposium on Spatial Cognition in Aging and Neurodegeneration*, November 2021.
- Farran, E.K. (2021). Spatial Exploration and Navigation in Down Syndrome and Williams Syndrome. *HEAD/DRD Seminar Series from the Swedish Institute for Disability Research (SIDR)*, September 2021.
- Farran, E.K. (2020). The relationship between spatial reasoning and mathematics in childhood. *Centre for Educational Neuroscience, London, December 2020*. <https://youtu.be/UrLiK2D-loQ>
- Farran, E.K. (2020). Neurodevelopmental disorders, Open research and Reproducibility. *Keynote address, European Association for Research on Learning and Instruction SIG 15 conference*, August 2020.
- Farran, E.K. (2019). Navigation and the spatial domain; a cross-syndrome comparison of Down Syndrome and Williams Syndrome. *University of Oxford, October 2019*.
- Farran, E.K. (2019). Navigation and the spatial domain; syndrome-specific patterns of learning and development in Down Syndrome and Williams Syndrome. *UCL Centre for Developmental Cognitive Neuroscience, May 2019*.
- Farran, E.K. (2018). Navigation and the spatial domain in neurodevelopmental disorders. *Keynote address. European Conference on Psychological Theory & Research on Intellectual and Developmental Disabilities, June 2018*.

PROFESSIONAL ACTIVITIES OUTSIDE THE UNIVERSITY

- UK Reproducibility Network (UKRN) Institutional lead
- Member of UKRN steering committee, 2024 to present
- Honorary member of University College London
- Member of the Early Childhood Maths Group
- Member of the Experimental Psychology Society
- Member of the Centre for Educational Neuroscience Management committee, London.
- Member of Science and Research Advisory Committee Down Syndrome Education International
- Member of Williams Syndrome Foundation Professional Advisory Panel
- UKRI Future Leader Fellowships Panel Member, 2023 to present
- UKRI Alternative Uses Group Member, Narrative CV, 2022 to present
- UKRI ESRC Peer review college member, 2012-present
- Associate Editor: Cognitive Research: Principles and Implications 2017 – present; Infant and Child Development 2020- present.
- Member of Editorial Board: Developmental Neuropsychology, Developmental Science
- Reviewer for numerous journals and funding bodies, including: American Journal on Mental Retardation, British Journal of Developmental Psychology, Cognitive Processing, Cortex, Developmental Medicine & Child Neurology, Developmental Neuropsychology, Developmental Science, Genes, Brain and Behaviour, Journal of Child Psychology and Psychiatry, Memory, Mind and Language, Neuropsychology, Neuropsychologia, Vision research, Pearson Education, British Academy, ESRC, BBSRC, MRC, Agence Nationale de la Recherche (ANR), GIS-Institut des Maladies Rares, Swiss National Science Foundation.
- PhD examiner: Macquarie University, 2022; University of Surrey, 2019; University of Durham, 2019; Kings College London, 2019; University College London, 2017, 2020; Birkbeck, University of London, 2017, 2019; UCL Institute of Education, 2016, University of Stirling, 2007; University of Oxford, 2011, University of Reading, 2003, 2005, 2007.
- External examiner: Speech Science and Speech Communication, UCL. 2006-2011
- External reviewer: BSc degree proposal, UCL. 2012; MSc Developmental Psychology, University of Surrey, 2018.
- Conference organiser. Neurodevelopmental Disorder Annual Seminar 2019, 2016; Neurodevelopmental Disorders seminar series, 2012-2013; The 3rd Williams Syndrome Workshop, Reading, 2006