# Dr. Delia Fuhrmann (Ph.D., SFHEA)

website: https://deliafuhrmann.com/about/

King's College London

Addison House, Department of Psychology, Guy's Campus, London SE1 1UL

email: delia.fuhrmann@kcl.ac.uk

#### Work & Education

#### 2020 - present

**King's College London**, Institute of Psychology, Psychiatry, and Neuroscience *Senior Lecturer in Psychology & Principal Investigator* (Development & Environment Research Group)

- Research: Modelling lifespan development
- <u>Teaching:</u> Module co-lead for undergraduate Research Methods & Open Science courses; BSc project supervisor, personal tutor
- <u>Organizational roles:</u> Diversity & Inclusion committee member, King's Youth Awards (widening participation project) co-organiser
- <u>Ph.D./D.Clin.Psy. student supervision:</u> A. Pollmann, A. Jong, J. Asad, K. Benza, G. Du Mello Gibbard

#### 2017 - 2020

**University of Cambridge**, MRC Cognition and Brain Sciences Unit & Sidney Sussex College, University of Cambridge

Postdoctoral Trainee & Research Associate with Dr. Rogier Kievit

- Research: Lifespan development of executive functions
- <u>Teaching:</u> Lecturer: Introduction to Matlab for postgraduate students;
   Supervisor (Tutor): Experimental Psychology
- Ph.D. student co-supervision: G.S. Borgeest, I. Simpson-Kent

#### 2013 -2017

**University College London**, Institute for Cognitive Neuroscience *Ph.D. in Cognitive Neuroscience* with Prof. Sarah-Jayne Blakemore

- Research: Plasticity and learning in adolescence
- <u>Teaching:</u> Graduate Teaching Assistant for undergraduate and postgraduate statistics courses for Psychology

### 2009 -2013

**University of St Andrews**, School of Psychology and Neuroscience *BSc Honours Psychology* (1<sup>st</sup> class), other subjects studied: Biology and Divinity

• Dissertation on chimpanzee social learning with Prof. Andrew Whiten

#### **Research Visits**

Spring 2018	<b>Alan Turing Institute for Data Science and AI</b> , London, UK: Data Study Group delegate
Summer 2012	UC Berkeley Social Interaction Lab, Berkeley, US: Research assistant
Summer 2010	<b>Max Planck Institute for Human Cognitive and Brain Sciences</b> , Leipzig, DE: Research assistant
Summer 2009	<b>Max Planck Institute for Evolutionary Anthropology</b> , Leipzig, DE: Research assistant

Selected Awards & Prizes		
2023-2026	<b>Economic and Social Research Council (ESRC) Grant</b> (role: <i>PI;</i> £1M): UNITE: Understanding individual and social pathways to loneliness in young people from socio-economically marginalised backgrounds	
2023-2026	<b>UK Research and Innovation (UKRI) Grant</b> (role: <i>Co-I</i> , PI: N. Byrom, £1M): The time of their lives? Developing Concepts and Methods to Understand Loneliness in Students	
2022 - 2025	<b>UKRI Grant</b> (role: <i>Co-I</i> , PI: J. Lau, £900K): Capturing loneliness across youth: Co-production of a new developmentally sensitive scale	
2022	<b>Senior Fellowship of the Higher Education Academy</b> : Professional recognition	
2022	<b>King's Education Award</b> : Institute of Psychiatry, Psychology & Neuroscience Rising Star	
2021 -2026	<b>UKRI Grant</b> (role: <i>researcher</i> , PI: E. Watkins, £3.8M): Developing and evaluating a stepped change whole-university approach for student wellbeing and mental health	
2021 - 2022	<b>KCL/Wellcome Trust Grant</b> (role: <i>mentor</i> , PI: K. Bates, £1K): Public Engagement Small Grant funding for mental health podcast	
2020 - 2023	<b>ESRC Grant</b> (role: <i>PI</i> , £230K): Secondary Data Analysis Initiative funding for research into sensitive periods for adversity	
2019 - 2021	<b>Deutsche Forschungsgemeindschaft</b> funding for scientific network for neurocognitive psychometrics (role: <i>member</i> , PI: A.L. Schubert, €37K, ~£33K)	
2018	MRC Special Award for excellent performance in 2018, UK Medical Research Council	
2018	<b>British Neuroscience Association Postgraduate Award</b> for the best British Neuroscience Ph.D. in 2017	
2013 - 2017	<b>Statistics Demonstratorship</b> (scholarship) for Ph.D. research, Division of Psychology and Language Sciences, UCL (tuition fees and stipend)	
2009 - 2017	<b>Cusanuswerk Scholarship</b> for BSc studies and Ph.D. Research (stipend, research funding and travel awards)	
2014	<b>Cecily De Monchaux Research Prize</b> for the best performance in the first year of studies and research towards the Ph.D. at the Division of Psychology and Language Sciences, UCL	
2013	Malcolm Jeeves Award for best student in the BSc Psychology at the University of St Andrews	
2009-13	<b>The Deans' List Award</b> of the University of St Andrews for academic excellence	

## **Selected Talks & Workshops**

- 2023: ESRC funding. KCL Psychology Funding Workshop, King's College London, London, UK
- **2022:** Capturing development and experiences in youth. Dunn Lab, *University of Harvard*, Boston, MA
- **2022:** Latent variable models of adversity in youth. *SEMantics*, King's College London, London, UK
- **2022:** Using nonlinear mixed models to estimate brain maturation events in adolescence. *FLUX Congress* 2022, Paris, FR
- 2022: Sensitive periods for adversity in adolescence. *University of Cambridge*, Cambridge, UK
- **2021:** Environmental influences and sensitive periods in adolescence. *King's College London*, London, UK
- **2020:** Using Big Data to understand windows of opportunity and vulnerability in development. *Max Planck Society*, Berlin, DE
- 2020: Using large existing data sets for research: A Primer. King's College London, London, UK
- **2019:** Bringing theory to Big Data in Psychology. *Max Planck for Human Development*, Berlin, DE
- **2019:** Using Dynamic Measurement Models to estimate cognitive capacity. MRC Methods Day, *MRC Cognition and Brain Sciences Unit*, Cambridge, UK
- 2019: Harnessing Big Data to understand development. University of Bielefeld, Bielefeld, DE
- **2019:** Greater verbal ability in childhood predicts less loneliness in adolescence. *British Association of Cognitive Neuroscience*, Cambridge, UK
- **2018:** The neurocognitive architecture of fluid ability. *Flux Congress 2018,* Flux Society, Berlin, DE
- 2018: Building blocks of cognitive performance. Practitioner Day, CALM, Cambridge, UK
- **2018:** The neurocognitive architecture of fluid ability. *University of Cambridge*, Cambridge, UK
- **2017:** Plasticity and learning in adolescence. *MRC Cognition and Brain Sciences Unit*, Cambridge, UK
- **2017:** Generalized Linear Models. MRC Methods Day, *MRC Cognition and Brain Sciences Unit*, Cambridge, UK
- **2017:** Plasticity and learning in adolescence. School of Psychology Seminar, *University of Birmingham*, Birmingham, UK
- **2017:** Cardiovascular and white matter health imagining. *MRC Cognition and Brain Sciences Unit*, Cambridge, UK
- **2017:** Plasticity and learning in adolescence. *UCL Institute of Cognitive Neuroscience*, London, UK
- **2016:** Inside the adolescent brain. Advisory Meeting of the Global Girls Initiative, *Overseas Development Institute*, London, UK
- 2015: Social Cognition in adolescence. Countdown 2030, PATH, London, UK
- **2014:** Motor mimicry in chimpanzee observational learning. Department of Cognitive Biology, *University of Vienna*, Vienna, AU

### **Publications**

Papers, pre-registrations, materials & scripts are available from <a href="https://deliafuhrmann.com/publications/">https://deliafuhrmann.com/publications/</a>

- Kwok, M. S.\*, Inman, A. A.\*, Bates, K. E.+, & **Fuhrmann, D.**+ (2023). The Co-occurrence of Social Adversities in Early Adolescence and Their Relationship to Cognitive Outcomes Later in Development. *Preprint*, doi: 10.31234/osf.io/rhj4n \*+ joint first and last authors
- Inman, A., Chen, S., Contini, E., Orben, A., Kievit, R., Kulbayeva, Z., Shah, M., Pollmann, A., Bates, K. E.+, & **Fuhrmann, D.+** (2023), "I am concerned about young people's mental health and that they have less hope for their future.": Practitioners' emerging concerns for young people between June 2019 to November 2021, *Barnardo's Children's Charity*. https://www.barnardos.org.uk/practitioners-concerns-issues-facing-young-people. +joint last authors.
- Pollmann, A., Fritz, J., Barker, E. & **Fuhrmann, D**. (2022). Networks of Adversity in Childhood and Adolescence and Their Relationship to Adult Mental Health. *Research on Child and Adolescent Psychopathology*. doi: 10.1007/s10802-022-00976-4
- **Fuhrmann**, D.\*, Skak Madsen, K.\*, Baruel Johansen, L., Baaré, W. F. C., Kievit, R. A. (2022). The midpoint of cortical thinning between late childhood and early adulthood differs across individuals and regions: Evidence from longitudinal modelling in a 12-wave sample, *Neurolmage*, 261, 119507, doi: 10.1016/j.neuroimage.2022.119507, \*joint first authors
- Orben, A., Lucas, R. E., **Fuhrmann**, D., & Kievit, R. A. (2022). Trajectories of adolescent life satisfaction. *Royal Society Open Science*, 9211808211808, doi: 10.1098/rsos.211808
- Deserno, M., **Fuhrmann**, D., Begeer, S., Borsboom, D., Geurts, H., & Kievit, R. (2022). Longitudinal development of language and fine motor skills is correlated, but not coupled, in a childhood atypical cohort. *Autism*, 13623613221086448, doi: 10.1177/13623613221086448
- **Fuhrmann**, D., Van Harmelen, A., & Kievit, R. (2022). Wellbeing and cognition are coupled during development: A preregistered longitudinal study of 1136 children and adolescents. *Clinical Psychological Science*, 10(3):450-466, doi: 10.1177/21677026211030211
- Kievit, R. A., McCormick, E. M\*., Deserno, M. K.\*, & Orben, A.\*, & **Fuhrmann, D.\*** (2021). Using large, publicly available datasets to study adolescent development: Opportunities and challenges. *Current Opinion in Psychology*, 44, 303-308, doi: 10.1016/j.copsyc.2021.10.003 \*joint last authors
- Tsvetanov, K. A., Henson, R., Jones, P. S., Mutsaerts, H., **Fuhrmann**, D., Tyler, L. K., Cam-CAN, & Rowe, J. B. (2021). The effects of age on resting-state BOLD signal variability is explained by cardiovascular and cerebrovascular factors. *Psychophysiology*, *58*(7), e13714, doi: 10.1111/psyp.13714
- Akarca, D., Vértes, P.E., Bullmore, E. T., **the CALM team\*** & Astle D. E. (2021). A generative network model of neurodevelopmental diversity in structural brain organization. *Nature Communications* 12, 4216 (2021), doi: 10.1038/s41467-021-24430-z \*Consortium including Fuhrmann, D.
- Laube, C., & Fuhrmann, D. (2020). Is early good or bad? Early puberty onset and its consequences for learning. *Current Opinion in Behavioral Sciences*, *36*, 150-156, doi: 10.1016/j.cobeha.2020.10.005.
- Kievit R. A., Simpson-Kent, I. L. & Fuhrmann, D. (2020) Why Your Mind Is Like a Shark: Testing

- the Idea of Mutualism. Frontiers in Young Minds. 8:60, doi: 10.3389/frym.2020.00060
- Simpson-Kent, I. L., **Fuhrmann**, D., et al. (2020). Neurocognitive reorganization between crystallized intelligence, fluid intelligence and white matter microstructure in two ageheterogeneous developmental cohorts. *Developmental Cognitive Neuroscience* 41: 100743, doi: 10.1016/j.dcn.2019.100743
- Fuhrmann, D., Simpson-Kent, I. L., Bathelt, J., the CALM team & Kievit, R. A. (2019). A
  Hierarchical Watershed Model of Fluid Intelligence in Childhood and Adolescence. *Cerebral Cortex* bhz091, doi: 0.1093/cercor/bhz091
- **Fuhrmann**, D.\*, Chierchia, G.\*, Knoll, L., Piera Pi-Sunyer, B., Sakhardande, A., & Blakemore, S-J. (2019). The Matrix Reasoning Item Bank (MaRs-IB): Novel, Open-Access Abstract Reasoning Items for Adolescents and Adults. *Royal Society Open Science*, 6: 190232, doi: 10.1098/rsos.190232, \*joint first authors
- Fuhrmann, D., Casey, C.S., Speekenbrink, M. & Blakemore, S.J. (2019). Social Exclusion Affects Working Memory Performance in Young Adolescent Girls. *Developmental Cognitive Neuroscience*, 40:100718, doi: 10.1016/j.dcn.2019.100718
- **Fuhrmann**, D. et al. (2019). Strong and specific associations between cardiovascular risk factors and brain white matter micro- and macro-structure in healthy ageing. *Neurobiology of Aging* 74, 46-55, doi: 10.1016/j.neurobiolaging.2018.10.005
- Tibon, R., **Fuhrmann**, D., Levy, D. A., Simons, J., & Henson, R. N. (2019). Multimodal integration and vividness in the angular gyrus during episodic encoding and retrieval. *The Journal of Neuroscience* 39 (22), 4365-4374, doi: 10.1523/JNEUROSCI.2102-18.2018
- **Fuhrmann**, D., Leung, J., Griffin, C. Schweizer, S. & Blakemore, S.J. (2018). The neurocognitive correlates of academic diligence in adolescent girls. *Cognitive Neuroscience*, doi: 10.1080/17588928.2018.1504762
- Kievit, R.A., **Fuhrmann**, et al. (2018). The neural determinants of age-related changes in fluid intelligence: A pre-registered, longitudinal analysis in UK Biobank. *Wellcome Open Research*, 3:38, doi: 10.12688/wellcomeopenres.14241.1
- Foulkes, L., Leung, J., **Fuhrmann**, D. & Blakemore, S-J. (2018). Age differences in the prosocial influence effect. *Developmental Science*, e12666, doi: 10.1111/desc.12666
- **Fuhrmann**, D. (2017). Plasticity and learning in adolescence. *PhD Thesis*. University College London, London, UK
- **Fuhrmann**, D.\*, Knoll, L.J.\*, Sakhardande, A., Stamp, F., Speekenbrink, M. & Blakemore, S-J. (2016). A window of opportunity for cognitive training in adolescence. *Psychological Science*, 27(12):1620-1631. doi: 10.1177/0956797616671327, \*joint first authors
- **Fuhrmann**, D., Knoll, L.J., Sakhardande, A., Speekenbrink, M., Cohen Kadosh, K. & Blakemore, S-J. (2016). Perception and recognition of faces in adolescence. *Scientific Reports*, 6(33497), doi: 10.1038/srep33497
- **Fuhrmann**, D., Knoll, L.J., & Blakemore, S.-J. (2015). Adolescence as a sensitive period of brain development. *Trends in Cognitive Sciences*, 19 (10), doi: 10.1016/j.tics.2015.07.008
- **Fuhrmann**, D., Ravignani, A., Marshall-Pescini, S., & Whiten, A. (2014). Synchrony and motor mimicking in chimpanzee observational learning. *Scientific Reports*, 4(5283), doi: 10.1038/srepo5283