

Personalia

Name: Michelle Achterberg, PhD.
Address: Leeuweringerstraat 17a,
3421 AA Oudewater,
The Netherlands
Phone: 00316-40375174
E-mail: achterberg@essb.eur.nl
Date of Birth: 28-05-1991
Gender: Female
Nationality: Dutch



***My ambition** is to extend my research line on **longitudinal development of social competence across childhood and adolescence**. By moving beyond descriptive analyses towards **predictive analyses** I aim to unravel important factors that determine **which children will thrive during adolescence and which might benefit from extra support**.*

*In 2020 I **obtained my PhD cum laude**: The committee unanimously judged my dissertation to belong to the top 5% worldwide. I am most proud of my discovery that the dorsolateral prefrontal cortex (DLPFC) is a **key brain area controlling impulses of children across time**, as it highlights **the predictive power of brain development on future behavior**.*

*I am an ambitious, eager and passionate young researcher with a strong vision that **science becomes better when using an interdisciplinary approach**, which I accomplish by integrating different research fields, using various methods and consulting **societal stakeholders**. It is my ambition to **combine fundamental top science with societal impact** using citizen science.*

Research experience

Assistant Professor at Erasmus University Rotterdam June 2022 – present

- Department of Psychology, Education and Child Studies (DPECS), Erasmus University Rotterdam
- Longitudinal development of social competence across childhood and emerging adolescence

Postdoctoral Researcher at Erasmus University Rotterdam April 2020 – May 2022

- Society, Youth and Neuroscience Connected (SYNC) lab, Erasmus University Rotterdam
- Focus on making societal impact with fundamental neuroscientific findings and developing citizen-science methods to bridge the gap between fundamental science and societal needs

Postdoctoral Researcher at Leiden University Jan 2020 – May 2022

- Leiden Consortium on Individual Development, Faculty of Social Sciences, Leiden University

Ph.D. Candidate at Leiden University Sept 2014 – Dec 2019

- Leiden Consortium on Individual Development, Faculty of Social Sciences, Leiden University
- Dissertation: Nature, nurture, and neural mechanisms of social emotion regulation in childhood

Visiting Ph.D. Candidate Columbia University Sep 2016 - Nov 2016

- Developmental and Affective Neuroscience lab, Columbia University, New York City, NY, USA
- Heritability of ventral striatum and amygdala functional connectivity in middle childhood

Education

Ph.D. Developmental Neuroscience (cum laude) 2014-2020, Leiden University

- Doctoral dissertation: "Like me, or else... Nature, nurture, and neural mechanisms of social emotion regulation in childhood". [E-book available here](#).
- Supervised by: Prof. dr. Eveline A. Crone, Prof. dr. Marian J. Bakermans- Kranenburg, and Dr. Anna C.K. Van Duijvenvoorde

Research Master Neuroscience & Cognition (grade 8.6/10) 2012- 2014, Utrecht University

Bachelor Psychology (grade 7.5/10) 2009-2012, Utrecht University

Grants and Awards

- **Erasmus Research Prize for Exceptional Research** (2022, €7.000 – [news article](#))
- **Dutch Society for Developmental Psychology Dissertation prize** (VNOP) (2022, €250 – [news article](#))
- **Convergence Open Research Award** (2021, €100 – [news article](#))
- **Dutch Neurofederation PhD Award** (2021, €1.000 – [news article](#))
- DPECS Dragons' Den Award (2021, €1.500)
- Co-applicant Charge Your Brainzz ZonMw effectiviteitsonderzoek (2020, €399.540)
- Flux Travel Award (2019, \$1.000)
- Leiden University developmental psychology PhD-student publication Award (2018)
- Royal Netherlands Academy of Sciences (KNAW) Ter Meulen Grant (2016, €3.252)
- LISF-grant Leiden University Fund (2016, €1.000)
- Flux Travel Award (2016, \$1.000)

Scientific committees

- **Consulting Editor Emotion Journal (APA), present**
- **President of the Convergence Healthy Start Young Board, present**
- **Secretary Dutch Society for Brain and Cognition (NVP), present**
- **Flux Conference Program Committee (2022)**
- CID Young Committee (2018- 2021)
- Peer Relations Researchers (PRO) meeting organizing committee (2021)
- Trainee Committee Flux, international society for developmental neuroscience (2018-2020)
- Leiden Institute for Brain and Cognition - MRI Methods Meeting Committee (2017-2020)

Presentation and conferences

- **SRA 2023** - Symposium presentation (April 2023), San Diego, California, USA
- **Flux 2022 – Preconference workshop “The Developmental Neuroscience Cycle: from research design to societal impact” (September 2022), Paris, France**
- **Flux 2022** – Poster presenter (September 2022), Paris, France
- **OHBM 2022 – Symposium presentation “Beyond the average child: Individual differences in longitudinal brain development” (June 2022), Glasgow, Scotland**
- **Flux 2021 – Presentation in the expert panel “Science to Society” (September 2021), Virtual**
- **Flux 2021** – Poster presenter (September 2021), Virtual
- **DNM 2021** (Dutch Neuroscience Meeting) – PhD award presentation (June 2021), Virtual
- **CID 2021** – Showcase presentation (May 2021), Virtual
- **SRCD 2021 – Symposium presentation “Effects of the COVID-19 lockdown on wellbeing of parents and children” (April 2021, Virtual)**
- **CID 2021** – Spotlight presentation (February 2021), Virtual
- **PRO 2021** – poster presenter (January 2021), Virtual
- **Flux 2020** – symposium chair and presentation (September 2020), *Virtual*
- **NVP winter conference** – presentation (Dec 2019) *Egmond aan zee, the Netherlands*
- **Flux 2019** – poster (Aug 2019), *New York City, NY, USA*
- **SRCD 2019 – Symposium presentation “Aggression regulation following negative social feedback” (March 2019) Baltimore, MD, USA**
- **CID meeting** - presentation (Nov 2018) *Utrecht, the Netherlands*
- **Flux 2018** - poster (Sep 2018) *Berlin, Germany*
- **Flux Satellite 2018**- poster (May 2017) *Chapel hill, North Carolina, USA*
- **SANS 2017** (Social and Affective Neuroscience Symposium) - poster (May 2017) *Brooklyn, NY, USA*
- **CID meeting** - presentation (April 2017) *Utrecht, the Netherlands*
- **SRCD 2017** - presentation on behalf of Dr. Steinbeis (March 2017) *Austin, TX, USA*
- **SRCD 2017** - poster (March 2017) *Austin, TX, USA*
- **SANS 2016** (Social and Affective Neuroscience Symposium) - (Oct 2016) *New York City, NY, USA*
- **Flux 2016**- poster (Sep 2016) *St. Louis, Missouri, USA*
- **NVP winter conference 2015** - presentation (Dec 2015) *Egmond aan zee, the Netherlands*
- **Donders Discussions 2015**- presentation (Nov 2015) *Nijmegen, the Netherlands*

- **VNOP-ICED-CAS 2015** Research Days - presentation (Nov 2015) *Leiden, the Netherlands*
- **Flux 2015**- poster (Sep 2015) *Leiden, the Netherlands*
- **SRCD Satellite 2015** - poster (Sep 2015) *Leiden, the Netherlands*

Popular scientific publications

- De Haan, A., Vreeker, A. & **Achterberg, M.** (2023). Pleidooi voor breder perspectief op jeugdzorg. *Sociale Vraagstukken*
- **Achterberg, M.** (2021). Lockdown-stress raakt kwetsbare pubers en ouders het hardst. *Tijdschrift voor Orthopedagogiek*, 60.
- **Achterberg, M.** (2021). Het puberbrein in beweging. Hersenontwikkeling en sociaal gedrag in relatie tot lichamelijke opvoeding. *Lichamelijke Opvoeding Magazine*, 9.

Societal impact

- Interview Nederlands Dagblad
- Interview NRC rubriek "Opgevoed"
- Interview AD Groene Hart "Onder Proffessoren"
- SYNC E-magazine: het jongerenbrein in coronacrisis: van kwetsbaarheden naar kansen
- Interview Studium Generale Universiteit Utrecht on COVID findings
- Interview Sleutelstad FM on COVID findings
- Article Universiteit Leiden on COVID findings
- Interview JONG magazine on COVID findings
- Public lecture "puberbrein en financiële risico's"
- Interview magazine Schouders Eronder on financial risk-taking in adolescence
- Public lecture at ministerie Sociale Zaken en Werkgelegenheid: "hersenenontwikkeling en sociaal gedrag in de kinderopvang"
- Interview Belle "Hersenontwikkeling & back to school"
- Video and blog contributions to outreach website Kijk in je Brein!
- Blogs on research output for Leiden psychology blog and SYNC-lab
- Social Media campaign on traffic education with Veilig Verkeer Nederland
- Episode on MRI and emotions for Dutch TV show TopDoks

3

Citizen science

- Organizer Erasmus Impact Dialogue "Living labs" (news article)
- **Co-creation in times of COVID-19**: virtual brain storm sessions with adolescent experts. (blog)
- **Jongerentop010**: 500 13-23-year-old Rotterdam youngsters discussed the impact of corona and resilience. As chair I supervised the conversation among young people on the basis of Socratic dialogue.

Teaching experience

- **Basis Kwalificatie Onderwijs (BKO)**
- **Basis Kwalificatie Taalvaardigheid Engels (BKE)**
- Coordinator Bachelor Course "Biological Determinants of Learning and Development"
- Coordinator Master Course "Growing up with social media and peers"
- (Research) Master thesis supervisor
- Bachelor thesis supervisor
- Teacher School Psychology - bachelor specialization course
- Teacher Developmental & Educational psychology - bachelor course
- Teacher Academic Skills - bachelor course

Extracurricular activities

- **Social Domain commission member** for the council of Oudewater
- **Ad-hoc reviewer** for fifteen international peer-reviewed journals

Peer-reviewed publications

www.michelleachterberg.nl/publications

- Achterberg, M.**, Becht, A., van der Crujisen, R., van de Groep, I. H., Spaans, J., Klapwijk, E., & Crone, E. (2022). Longitudinal associations between social media use, mental well-being and structural brain development across adolescence. *Developmental Cognitive Neuroscience*, <https://doi.org/10.31234/osf.io/5zaxm>
- Achterberg, M.**, Mulder, J., Dobbelaar, S., Heunis, S. & Crone, E.A. (2022). Preregistration: Individual differences in developmental trajectories of social emotion regulation from childhood to emerging adolescence. Open Science Framework. <https://osf.io/m5avh/>
- Achterberg, M.**, Dobbelaar, S., Boer, O. D., & Crone, E. (2021). Perceived stress as mediator for longitudinal effects of the COVID-19 lockdown on wellbeing of parents and children. *Scientific Reports*. <https://doi.org/10.1038/s41598-021-81720-8>
- Achterberg, M.**, van Duijvenvoorde, A. C. K., van IJzendoorn, M. H., Bakermans-Kranenburg, M. J. & Crone, E. A. (2020) Longitudinal changes in DLPFC activation during childhood are related to decreased aggression following social rejection. *Proceedings of the National Academy of Science*. <https://doi.org/10.1073/pnas.1915124117>
- Achterberg, M.** (2020). Nature, nurture and neural mechanisms of social emotion regulation in childhood. Doctoral dissertation, Leiden University. <http://hdl.handle.net/1887/86283>
- Achterberg, M.** & van der Meulen, M. (2019) Genetic and environmental influences on MRI scan quantity and quality. *Developmental Cognitive Neuroscience*, 38, pp. 100667 <https://doi.org/10.1016/j.dcn.2019.100667>
- Achterberg, M.**, Bakermans-Kranenburg, M. J., Van IJzendoorn, M.H., van der Meulen, M., Tottenham, N., & Crone, E. A. (2018). Distinctive heritability patterns in childhood subcortical-prefrontal cortex resting state connectivity: A twin study. *Neuroimage*, 175, 138-149. <https://doi.org/10.1016/j.neuroimage.2018.03.076>
- Achterberg, M.**, van Duijvenvoorde, A. C. K., van der Meulen, M., Bakermans-Kranenburg, M. J., & Crone, E. A. (2018). Heritability of aggression following social evaluation in middle childhood: an fMRI study. *Human Brain Mapping*, 39(7), 2828-2841. <https://doi.org/10.1002/hbm.24043>
- Achterberg, M.**, van Duijvenvoorde, A.C.K., van der Meulen, M., Euser, S., Bakermans-Kranenburg, M.J., & Crone, E.A. (2017). 3. The neural and behavioral correlates of social evaluation in childhood. *Developmental Cognitive Neuroscience*, 24, 107-117. <https://doi.org/10.1016/j.dcn.2017.02.007>
- Achterberg, M.**, Van Duijvenvoorde, A. C. K., Bakermans-Kranenburg, M. J., & Crone, E. A. (2016). Control your anger! The neural basis of aggression regulation in response to negative social feedback. *Social Cognitive and Affective Neuroscience*, 11(5), 712-720. <https://doi.org/10.1093/scan/nsv154>
- Achterberg, M.**, Peper, J. S., Van Duijvenvoorde, A. C. K., Mandl, R. C. W., & Crone, E. A. (2016). Frontostriatal white matter integrity predicts development of delay of gratification: A longitudinal study. *Journal of Neuroscience*, 36(6), 1954–1961. <https://doi.org/10.1523/JNEUROSCI.3459-15.2016>
- Bos, D.J., Oranje, B., **Achterberg, M.**, Vlaskamp, C., Ambrosino, S., de Reus, M.A., van der Heuvel, M.P. & Rombouts, S.A.R.B. (2017). Structural and functional connectivity in children and adolescents with Attention Deficit/Hyperactivity Disorder. *Journal of Child Psychology and Psychiatry*, 58(7), 810-818. <https://doi.org/10.1111/jcpp.12712>
- Crone E.A., & **Achterberg, M.** (2022). Prosocial development in adolescence. *Current Opinion in Psychology: special issue adolescence*. <https://doi.org/10.1016/j.copsy.2021.09.020>
- Crone, E.A., **Achterberg, M.**, Dobbelaar, S., Euser, S., van den Bulk, B. G., van der Meulen, M., van Drunen, L., Wierenga, L.M., Bakermans-Kranenburg, M. J & van IJzendoorn, M.H. (2020). Neural and behavioral signatures of social evaluation and adaptation in childhood and adolescence: The Leiden Consortium on Individual Development (L-CID). *Developmental Cognitive Neuroscience*, 45. <https://doi.org/10.1016/j.dcn.2020.100805>
- Dobbelaar, S., **Achterberg, M.**, van Duijvenvoorde, A.C.K., van IJzendoorn, M.H. & Crone, E.A. (in revision). Preregistration: Differential susceptibility of associations between parental sensitivity and social behavioral control: a longitudinal fMRI design. *Developmental Cognitive Neuroscience*
- Dobbelaar, S., **Achterberg, M.**, van Duijvenvoorde, A.C.K., van IJzendoorn, M.H., & Crone, E.A. (2022). Feedback processing and retaliatory responses in middle childhood: an fMRI test-replication design. *Social Cognitive and Affective Neuroscience*.
- Dobbelaar, S., van Duijvenvoorde, A.C.K., **Achterberg, M.**, van der Meulen, M. & Crone, E.A. (2021). A Bi-Dimensional Taxonomy of Social Responsivity in Middle Childhood: Prosociality and Reactive Aggression Predict Externalizing Behavior Over Time. *Frontiers in Psychology*, 11:586633. <https://doi.org/10.3389/fpsyg.2020.586633>
- Konijn, E.A., & **Achterberg, M.** (2020). Neuropsychological Underpinnings of Emotional Responsiveness to Media. In J. van den Bulck (Ed.), *The International Encyclopedia of Media Psychology*. John Wiley & Sons <https://doi.org/10.1002/9781119011071.iemp0319>

- van de Groep, I.H., Bos, M.G.N., Jansen, L.M.C., **Achterberg, M.**, Popma, A. & Crone, E.A. (2021). Overlapping and distinct neural correlates of self-evaluations and self-regulation from the perspective of self and others. *Neuropsychologia*, *161*. <https://doi.org/10.1016/j.neuropsychologia.2021.108000>
- van Drunen, L., Dobbelaar, S., van der Cruisen, R., van der Meulen, M., **Achterberg, M.**, Wierenga, L., & Crone, E.A., (2021). The nature of the self: neural analyses and heritability estimates of self-evaluations in middle childhood. *Human Brain Mapping*, <https://doi.org/10.1002/hbm.25641>
- van der Meulen, M., Wierenga, L. M., **Achterberg, M.**, Drenth, N., van IJzendoorn, M.H. & Crone, E. A. (2020) Shared genetic and environmental influences on structure of the social brain in children. *Developmental Cognitive Neuroscience* <https://doi.org/10.1016/j.dcn.2020.100782>
- van der Meulen, M., Steinbeis, N., **Achterberg, M.**, van IJzendoorn, M. H., & Crone, E. A. (2018). Heritability of neural reactions to social exclusion and prosocial compensation in middle childhood. *Developmental Cognitive Neuroscience*, *34*, 42-52. <https://doi.org/10.1016/j.dcn.2018.05.010>
- van der Meulen, M., Steinbeis, N., **Achterberg, M.**, Bilo, E., van den Bulk, B. G., van IJzendoorn, M. H., & Crone, E. A. (2017). The neural correlates of dealing with social exclusion in childhood. *Neuropsychologia*, *103*, 27-39. <https://doi.org/10.1016/j.neuropsychologia.2017.07.008>
- Van Duijvenvoorde, A. C. K., **Achterberg, M.**, Braams, B. R., Peters, S., & Crone, E. A. (2016). Testing a dual-systems model of adolescent brain development using resting-state connectivity analyses. *Neuroimage*, *1*, 409-420. <https://doi.org/10.1016/j.neuroimage.2015.04.069>
- Zondervan-Zwijnenburg, M., Dobbelaar, S., van der Meulen, M. & **Achterberg, M.** (2022). Longitudinal associations between prosocial behavior and behavioral problems across childhood: A robust random-intercept cross-lagged panel model. *Developmental Psychology* <https://doi.org/10.31234/osf.io/5qu87>