

FABIOLA DIANA

POSTDOCTORAL RESEARCHER

CONTACTS

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REFERENCES

- Prof. Mariska Kret
Leiden University
Email: m.e.kret@fsw.leidenuniv.nl
- Dr. Ruud Hortensius
Utrecht University
Email: r.hortensius@uu.nl

LANGUAGES

- Italian (Mother tongue)
- English (Fluent)
- Spanish (Fluent)
- Dutch (B1)

INTERESTS

- Evolution of social behavior across species and robots
- Multimodal data analysis
- Emotions
- Evolutionary Biology
- Psychophysiology
- Predictive social brain
- Computational neuroscience

RESEARCH SKILLS

- Multimodal naturalistic interaction studies
- Interdisciplinary research (psychology, biology, robotics)
- Integration of physiological, neural, and behavioral data
- Economic games
- Moral behavior
- Psychophysiology
- Field data collection

PROFESSIONAL EXPERIENCE

- Postdoctoral Researcher** Sep 2025 - present
Department of Social, Health and Organizational Psychology, Utrecht University, the Netherlands
Advisor: Dr. Ruud Hortensius
Project: NWO-funded project investigating intergenerational multimodal naturalistic social interactions with humans and artificial agents in social dilemmas across age groups. Note: in Netherlands postdoc appointments may begin before the PhD formal defense (*see last page for explanation)
- JSPS Postdoctoral Short-Term Fellow** Mar 2023 - Jun 2023
Department of Psychology, Tokyo Woman's Christian University, Tokyo
Advisor: Prof. Akihiro Tanaka
Project: JSPS-funded project on cross-cultural difference in dishonesty across different agents during naturalistic dyadic interactions using social cues manipulation and eye-tracking
- PhD in Social and Affective Neuroscience** Oct 2019 - May 2025
Department of Cognitive Psychology, Leiden University, The Netherlands
Advisors: Prof. Mariska E. Kret, Dr. Ruud Hortensius
Project: ERC Horizon-funded project on behavioral mimicry and physiological synchrony in human-human and human-robot naturalistic interaction during social dilemmas and economic games. Defense date: 20th March 2026
- Visiting Research Assistant** Mar 2019 - Jun 2019
Department of Cognitive Psychology, Leiden University, The Netherlands
Advisors: Prof. Mariska E. Kret, Dr. Eliska Prochazkova
Project: Data analysis of pupil data and emotional expressions
- Research Assistant** Apr 2018 - Aug 2019
Department of Psychology, University of Turin, Italy
Advisors: Prof. Marco Tamietto, Dr. Alessia Celeghin
Project: Eye tracking study on unconscious perception of body and facial emotional expressions with Continuous Flash Suppression paradigm
- Research Assistant** Dec 2016 - Dec 2017
"Puzzle" Traumatic Brain Injury Rehabilitation Centre, Turin, Italy & Ophthalmic Hospital, Turin, Italy
Advisors: Prof. Marina Zettin, Dr. Valentina Galetto
Project: Eye-tracking study on facial emotion recognition in patients with brain injury before/after different neurocognitive and visual trainings.

PROGRAMMING

- Python (Fluent and favorite)
- R (Fluent)
- Matlab (Average)
- Java (Average)
- Bash (Basic)
- Arduino (Basic, for fun)

DATA MODALITIES

- Electrodermal Activity (EDA)
- Electrocardiogram (ECG)
- Facial electromyography (EMG)
- Functional Near Infrared Spectroscopy (fNIRS)
- Pupillometry
- Behavioral measures
- Self-report & questionnaires

ANALYTIC APPROACHES

- Time-series analysis (Windowed Lagged Cross-Correlation, Wavelet Coherence)
- Facial expression analysis (landmark detection, AU extraction)
- Manual behavioral coding
- Hierarchical multimodal data analysis (mixed-effect models)
- Nonlinear statistical modeling
- Principal Component (PCA)
- Bayesian statistics (basic)

SOFTWARES & HARDWARES

- Physiodata Toolbox (physio data preprocessing)
- BIOPAC and Aknowledge
- NIRx Hyperscanning & Artinis Bright Ultra fNIRS systems
- Tobii Pro Eye-Tracker & Mobile Eye-Tracking Glasses
- EyeLink 1000 Eye-Tracker
- OpenFace for AU detection
- BORIS for behavioral coding
- Psychopy
- Lab Streaming Layer (LSL)
- Furhat & Cozmo Robotic Platforms

Research Intern

Sep 2015 - Jun 2016

Department of Psychology, University of Turin, Italy and Maurizio Hospital (fMRI division), Turin, Italy.

Advisors: Prof. Franco Cauda, Dr Matteo Diano

EDUCATION

2-year Master of Science

Sept 2015 - Dec 2017

Neuroscience and Neuropsychology | University of Turin (Grade 110/110 summa cum laude)

Bachelor of Arts

Sept 2012 - Jul 2015

Psychological Sciences | University of Turin

GRANTS AND AWARDS

KNAW Van Der Gaag Fund (code: 2607-16)

2026

Royal Netherlands Academy for Art and Science mobility grant to visit Prof. Cross ETH Zürich in May-June. €5500

SPR 2025 Travel Grant

2025

Society for Psychophysiological Research travel award for SPR 2025 in Montreal (CA). 1.200 \$ (~ €1010)

KIEM UNA Europa (code: UNA-EUROPA-KRET)

2025

Co-awarded with Prof. Mariska Kret for project "Mapping the World's Emotional Expressions in Humans and Great Apes: A Global Atlas for Inclusive Emotion Research". € 15.000

Human-Robot Interaction Pioneer

2025

Awarded as Human Robot Interaction Pioneer for IEEE/HRI 2025, Melbourne, Australia. \$2.885 (~ €2430)

NFG AiNed XS Europe (code: NGF.1609.242.019)

2024

"Dishonesty towards artificial intelligence across generations: a biobehavioral perspective". I co-wrote this grant and was appointed as a postdoctoral researcher on the application. Because of official guidelines, Dr. Ruud Hortensius is the official recipient and PI. €80.000

KIEM seed grant for interdisciplinary research (code: KIEM-2023-55)

2024

Fund used to organize the interdisciplinary workshop "Cross-Species Emotion Research: Bridging Animal Affective Science and Emotion Psychology using Affective Computing". €10.000

Japanese Society for the Promotion of Science (JSPS) Post-doctoral Short-term Fellowship (code: PE22041)

2023

"Dishonesty in the Digital Era: a cross-cultural focus on the Social Interaction with Robots, Avatar, and Humans". 3-months postdoctoral fellowship. ¥1.360.000 (~ €7639.12)

PUBLICATIONS IN PEER-REVIEWED JOURNALS

van Beek H, Boda D, **Diana F**, Held R, Hogenhuis A, Moore-Lorusso A, Hortensius R. (2026) Seven Questions on Perceiving and Understanding Other Minds, *Behaviour*, 1568-539, DOI:10.1163/1568539X-bja10345 *all authors contributed equally to this work

Diana F & Kret ME (2025) First predict, then bond: Rethinking the function of mimicry from prediction to affiliation in human and non-human animals, *Neuroscience & Biobehavioral Reviews*, 168, 105950, DOI: 10.1016/j.neubiorev.2024.105950.

Diana F, Cañamero L, Hortensius R, & Kret ME (2024). Merging sociality and robotics through an evolutionary perspective. *Science Robotics*, 9, eadk6664, DOI:10.1126/scirobotics.adk6664

Diana F, Juárez-Mora OE, Boekel W, Hortensius R, Kret ME. (2023) How video calls affect mimicry and trust during interactions. *Philosophical Transactions of the Royal Society B*, 378 (1875): 20210484, <https://doi.org/10.1098/rstb.2021.0484>

Diana F, Kawahara M, Saccardi I, Hortensius R, Tanaka A, & Kret, ME. (2022). A Cross-Cultural Comparison on Implicit and Explicit Attitudes Towards Artificial Agents. *International Journal of Social Robotics*, DOI: 10.1007/s12369-022-00917-7 5

PUBLICATIONS IN PEER-REVIEWED PROCEEDINGS

Diana F, Hortensius, R., Kret, ME. (2025) Can Robots Trust Us? Neuropsychophysiological Insights into Honesty Towards Artificial Agents. In *Proceedings of the 2025 ACM/IEEE International Conference on Human-Robot Interaction (HRI '25)*. IEEE Press, 1838-1840. 10.1109/HRI61500.2025.10974055

PREPRINTS UNDER REVIEW

Diana F, Folz J, Shjak-Shie E, Hortensius, R., Kret, ME. Physiological Synchrony Predicts Reduced Reciprocity in Human Face-to-Face Interactions, *PsyArXiv*, 2025 (In review at *Proceeding of the Royal Society B*) https://doi.org/10.31234/osf.io/n85t3_v1

Diana F, Kawahara M, Tanaka A, Shalvi S, Hortensius R, Kret, ME. Cross-Cultural Variation in Dishonesty Toward Humans and Artificial Agents Depends on Agent Pupil Size, *PsyArXiv*, 2025 (In review at *ACM Human-Robot Interaction*) https://doi.org/10.31234/osf.io/8nqsy_v1

ACADEMIC SERVICE AND ACTIVE MEMBERSHIP

Guest editor

Special Theme Issue "Emotions and Social Behaviour: Integrating Human, Animal, and Artificial Perspectives". *Behaviour* 2026

2025 - present

Committees Involvement

Area Chair (AC) for the Human-Robot Interaction Pioneers 2026, ACM HRI

2025 - 2026

Member of the Early Career Researchers Section (ECRS), International Society for Research on Emotion (ISRE)	2025 - present
Member of Women in Science, Committee to Promote Student Interest (CPSI) & Lead director of "Women in SPR" Interview Series, Society of Psychophysiological Research (SPR)	2024 - present
Reviewer for Scientific Journals	
Science Robotics • Behavioral Processes • International Journal of Social Robotics • Human Nature • American Journal of Primatology • Scientific Report • Discovery Psychology	
Reviewer for Conference Proceedings	
International Conference of Affective Computing and Intelligent Interaction (ACII) • Behavioral Processes • Transactions for Human-Robot Interactions	

ORGANIZATION OF CONFERENCES

Pre-conference workshop "Cross-species Emotion Research (CSE-2024): Animals, Humans, and Artificial Agents"	Jul 2024
International Society for Research on Emotions (ISRE), Queen's University Belfast, Ireland, with Prof. Mariska Kret and Dr. Joost Broekens. Funded by KIEM Seed Grant	
Spring School "Emotional Science"	May 2020
Spring School Emotional Science, Jagiellonian University, Krakow, Poland, with Drs Chris Riddel, Julia Folz, Iliana Samara and Prof. Mariska Kret. Workshop moved online due to the COVID-19 pandemic.	

ORAL PRESENTATIONS AT CONFERENCES (* Invited)

- ***Diana, F.**, Kawahara M., Tanaka, A., Shalvi, S., Hortensius, R. & Kret, E. Social Cues that Backfire: How Culture and Pupil size Shape Dishonest Behavior towards Human and Artificial Agents, Dutch Society for Brain and Cognition (NVP), 18th-20th December 2025, Egmond aan Zee, The Netherlands
- ***Diana, F.**, Kawahara M., Tanaka, A., Shalvi, S., Hortensius, R. & Kret, E. How Cultural Background, Pupil Size, and Agent Type Shape Real-Life Dishonesty, Leiden Interdisciplinary Network for Emotion (LINE), 27th November 2025, Leiden, The Netherlands
- ***Diana, F.**, Folz, J., Sjak-Shie, E., Hortensius, R., & Kret, M. Exploring the Nexus of Behavioral Mimicry and Physiological Synchrony in Dyadic Cooperation Society for Psychophysiological Research (SPR), 15th-18th October 2025, Montreal, Canada
- ***Diana, F.**, Kawahara M., Tanaka, A., Shalvi, S., Hortensius, R. & Kret, E. Can Robots Trust Us? A Real-World Study of Dishonesty Across Cultures, Pupil Size, and Artificial Agents in the General Population, Dutch Emotion Network Event (NEON), 4th September 2025, Amsterdam, the Netherlands
- Diana, F.** & Kret, M. Breaking the dyad: the effect of physiological synchrony on individual trust behaviour. Redefining Emotional Expressions: Current Perspective Workshop, 10th-14th October 2024, Erice, Italy
- Diana, F.**, Norscia, I., & Kret, M. Are there super-mimickers? And are they empathic?. International Society for Research on Emotions (ISRE 2024), 18-20th July, Belfast, Ireland
- Diana, F.**, Folz, J., Sjak-Shie, E., Hortensius, R., & Kret, M. Trust and Physiological Synchrony: Investigating the Relationship through a Trust Game. NVP Winter Conference, 14th-16th December 2023, Egmond aan Zee, The Netherlands

- **Diana, F., & Kret & Kret, M.** Physiological Synchrony in Competitive vs Cooperative contexts. SocialBRIDGES: Women in Social Neuroscience Conference, 23rd March 2023 (online)
- **Diana, F., Hortensius, R., & Kret, M.** Honesty in the Digital Era - Preliminary Results on the Social Interactions with Robots, Avatars, and Humans. Cognition, Behaviour and Evolution Network (CBEN), 19th November 2021, Tilburg, The Netherlands
- **Diana, F., Hortensius, R., & Kret, M.** Honesty in the Digital Era - Preliminary Results on the Social Interactions with Robots, Avatars, and Humans. International Conference of Development and Learning (ICDL), 23rd -27th August 2021, Beijing, China (online)
- **Diana, F., Juárez-Mora, O., Boekel, W., & Kret, M.** Mimicry in Different Interaction Context: a Behavioural Study with Real Dyads. NEURONUS 2020, 8th-10th December, Krakow, Poland (online)
- **Diana, F.** Neurosynth Demo: Understanding fMRI data. Spring School of Emotional Science. Krakow, May 2020, Krakow, Poland (online)
- **Diana, F.** Human-Robot Interaction (HRI) – an Evolutionary Perspective. Spring School of Emotional Science. May 2020, Krakow, Poland (online)
- **Diana, F., Meneghello, M., Cisternino, D., Galetto, V., Zettin, M., (2019).** Facial Emotion Recognition in Traumatic Brain Injury (TBI): an eye-tracking study. Federation of the European Societies of Neuropsychology (FESN), 5th-7th September, Milan, Italy

POSTER PRESENTATIONS (* shared authorship)

- **Diana F., Hortensius, R. & Kret (2025).** Can Robots Trust Us? Neuropsychophysiological Insights into Honesty Towards Artificial Agents. ACM/IEEE International Conference on Human-Robot Interaction (HRI), 4th-6th March, Melbourne, Australia
- **Diana, F., Folz, J., Sjak-Shie, E., Hortensius, R., & Kret, M. (2024).** The Influence of Physiological Synchrony on Human Trust. European Society for Cognitive and Affective Neuroscience (ESCAN), 22nd – 25th May, Ghent, Belgium
- **Diana, F., Folz, J., Sjak-Shie, E., Hortensius, R., & Kret, M. (2023).** The Paradox of Trust and Physiological Synchrony: Investigating the Relationship through a Trust Game. Society of Psychophysiological Research (SPR), 27th-1st October, New Orleans, US
- **Diana, F., Sjak-Shie, E., Hortensius, R., & Kret, M. (2022).** Capturing the Dynamics: Statistical Considerations on the Window Lagged Cross-Correlation Analysis. Society of Psychophysiological Research (SPR), 28th-2nd October, Vancouver, Canada
- **Diana, F., Folz, J., Sjak-Shie, E., Hortensius, R., & Kret, M. (2022).** The Statistical Challenges of Physiological Synchrony. NVP Winter Conference, 28th-30th April, Egmond aan Zee, The Netherlands
- **Diana, F*, Folz, J.*, & Kret, M. (2022).** Physiological Synchrony and Trust in Real Dyads: Methodological Considerations. Face2Face Scientific Meeting of the Royal Society, 4th-5th April, London, UK
- **Diana, F., Juarez, O., Boekel, W., Kret, M.E., (2020).** Emotional contagion in different interaction contexts: face-to-face vs video call. NEURONUS Ibro Neuroscience Forum, 8th-11th December, Krakow, Poland (online)
- **Diana, F., Celeghin, A., Prochazkova, E., de Zwart, R., Kret, M., Tamietto M., (2019).** Non-conscious perception of emotional stimuli: a study on the variation of pupil size in condition of sensory unawareness. The Cognition, Behavior & Evolution Network (CBEN), 14th -15th November, Amsterdam, The Netherlands

INVITED LECTURES AND SEMINARS

Human Robot Interaction: Perception, behavior, and the chaos of the human factor – **invited seminar**, for the cycle of discussions “The Human Factor in Emerging Technologies: The Role and Relevance of the Social Sciences”. 19th July 2026

The Entanglement of Social Interaction: An Evolutionary Approach – **invited lecture**, Social Neuroscience Course, 30th March 2022/15th February 2023/15th March 2024/30th March 2025, Utrecht University, The Netherlands (annual recurrence)

Social Interaction in an Ecological Real-life Setting: Designs and Paradigms – **invited lecture**, Research Methods in Psychology course - Department of Psychology, 17th May 2023, TWCU, Japan

The Evolution of Social Interaction: How social context is Shaping our nonconscious verbal communication – **invited seminar**, Department of Psychology, 24th March 2023, TWCU, Japan

Behavior and Emotion Regulation following Traumatic Brain Injury – **invited lecture**, Neuropsychology and Neurorehabilitation Course, Department of Neuropsychology and Neuroscience, 14 December 2020/21 December 2021/17 December 2022, University of Turin, Italy

TEACHING AND DUTIES

Lecturer Leiden University: Social and Cognitive Neuroscience; Emotion and Psychophysiology

Utrecht University: Social and Cognitive Neuroscience

Tutor Utrecht University: Advanced Research Methods and Statistics for Psychology; Doing Multidisciplinary Research in the Social Sciences

Supervisor Utrecht University: 6 MA students (Social Influence & Health Promotion), 5 BA students (Psychology); Internship supervisor of 1 MA (Social Influence & Health Promotion), and 2 MSc students (Neuroscience and Cognition)

Leiden University: 5 MA students (Applied Cognitive Psychology), 7 MSc students (Psychology Research Master), 2 Erasmus+ students, and 20 BA students (Psychology); Internship supervisor of 2 MSc students (Social and Organizational Psychology), 1 MA student (Applied Cognitive Psychology), 7 BSc students (Minor Brain and Cognition Internship), and 4 Erasmus+ students

PUBLIC OUTREACH AND EXHIBITIONS

Interview for *Leiden University News* on the topics of my dissertation. The video and the interview are available [here](#) 2026

Participatory art exhibition “[De Empathiefabriek](#)” on interbrain synchrony at the University Museum Utrecht (UMU), the Netherlands (assistant) 2025

Participatory art exhibition “HeartSynch” on heartbeat synchrony and meditation at De Effenaar Pop Venue, Eindhoven, the Netherlands 2024

Interview for *Lange Mare News* about the data acquisition with the *Psychology Lab on Wheels* 2023

Interview for *Leiden University News* on my recent publication for the Royal Society Publisher. The interview is available [here](#). 2023

Interview for the robotic issue of *Media INAF - Istituto Nazionale di Astrofisica Italiano* during EuroScience Open Forum 2022. The interview is available [here](#). 2022

○	Public Outreach activity at EuroScience Open Forum 2022 in Leiden (NL). During the Forum, we explored honesty during human-robot interaction and we gave performative demos of our robot	2022
○	FameLab National Finalist for Leiden University, The Netherlands. My pitch is available here .	2020

ATTENDED SCHOOLS AND WORKSHOP

○	Human Robot Interaction Pioneers. Workshop exclusive for awarded Pioneers. 3rd March 2025, Melbourne, Australia	2025
○	Evolution of Emotions in Human and Non-Human Animals, 7 th -8 th December 2023, Durham, UK	2023
○	Moderation and Mediation Summer School, 29 th June – 6 th July 2023, Leiden, The Netherlands	2023
○	Human and Technology Winterschool, 1 st -5 th November 2021, TU Delft, The Netherlands	2021
○	Advanced Multilevel Modeling Winterschool, 22 nd -28 th April 2020, Leiden University, The Netherlands	2020
○	Basic Multilevel Modeling Winterschool, 18 th -26 th January 2020, Leiden University, The Netherlands	2020