## Personal information

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|---|---|
| Surname(s) / First name(s) | **Fraza, Charlotte** |
| Nationality(-ies) | Dutch |

## Education and training

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|---|---|
| Place and Date | Donders Institute, 2020 - current |
| Title of qualification | **Ph.D. in Neuroscience** |
| Thesis | Next-Generation Normative Models for Precision Psychiatry |
| Place and Date | Radboud University, 2017 - 2020 |
| Title of qualification | **MSc Cognitive neuroscience** |
| Average grade | 8 out of 10 |
| Aquired skills | Neuroimaging Electrophysiological methods, Haemodynamic methods, Quantitive brain networks, Cognition and complexity, Machine learning, Computational neuroscience |
| Thesis | The Underlying Brain Networks of Superior Memory |
| Place and Date | University Jean Monnet, (UJM) France, University of Granada, (UGR) Spain, University of Eastern Finland (UEF) Finland, Toyohashi University of technology (TUT), 2015 - 2017 |
| Title of qualification | **MSc of Science in Computer Science, Color in Science and Industry, Erasmus+** |
| Ranking student | Second at present |
| Acquired skills | Human cognition, Statistical analysis of big data, Machine Learning, Computer Vision, Pattern Recognition, Computer Programming, Image Processing, Color Science |
| Thesis | Objective Estimation of the Flow State Using Event Related Potentials |
| Place and Date | University Sungkyunkwan, 2013 - 2014 |
| Title of qualification | **Minor in Korean language and culture** |
| Place and Date | Utrecht University, 2012 - 2015 |
| Title of qualification | **BSc in theoretical Physics** |
| Acquired skills | Mathematical techniques, Special relativity, Mechanics, Linear algebra, Waves and Optics, Electromagnetism, Statistical physics, Fourier Theory, Quantum mechanics, Thermodynamics, Numerical methods, c/c++ programming, Fluid dynamics |
| Thesis | The Correspondence Principle of Niels Bohr |

## Publications

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|---|---|
| Scholar Profile | `https://scholar.google.com/citations?user=HxHkfRAAAAAJ&hl=en&oi=ao` |



For more information call me

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|---|---|
| First Author | Fraza, Charlotte J., et al. "Warped Bayesian linear regression for normative modelling of big data." Neuroimage 245 (2021): 118715.<br>Fraza, Charlotte, et al. "The Extremes of Normative Modelling." bioRxiv (2022)<br>Fraza, Charlotte, et al. "Unraveling the Link between CNVs, General Cognition, and Individual Neuroimaging Deviation Scores from a Reference Cohort. medRxiv (2023)" |

## Teaching and Presenting

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|---|---|
| NeuroMatch | Computational Neuroscience TA at the NeuroMatch course - 2022 |
| CursenDonk | Lecturer for the Statistics Course for Psychiatrists for the 'Corsendonkcurses - Klinisch onderzoek in de psychiatric) - 2022 |
| Computational Psychiatry Course | Speaker at the Computional Psychiatry course in Zurich - 2023 |
| Thesis Supervision | Supervising master thesis Xuan Quy "Correlating brain deviations derived from neuroimaging normative models with neurobehavioral dimension" |
| Whistler Scientific Workshop | Moderator at the Brain Functional Organization, Connectivity, and Behavior Whistler Scientific Workshop - 2023 |
| Radboudumc Investment Day | Presented the application CogniCare: Precision Mental Health in your Pocket |
| OHBM | Poster presentations at the OHBM Annual Meeting 2021-2022-2023 |

## Work experience

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|---|---|
| Date | December 2023 - Current |
| Place | Nijmegen |
| Organiser | Pint of Science Festival Nijmegen 2024. |
| Date | March 2020 - September 2020 |
| Place | Donders Institute Nijmegen |
| Research assistant | Using normative models to explore diffusion tensor imaging data to understand brain variations in the population at an individual level. |
| Date | October 2017 - January 2018 |
| Place | Freie Universität Berlin |
| Research intern | Internship in the neural mechanisms of real-world visual categorical decision-making. Under the guidance of Dr. Cichy Radoslaw Martin. |
| Date | June 2016 - September 2016 |
| Place | Olympus Imaging Technology Dept., Tokyo, Japan |
| Research intern | Using deep Neural Networks, Convolutional Neural Networks for object recognition tasks and alter the algorithm for the Analysis and Visualization of Deep Neural Networks. |
| Date | September 2015 - September 2017 |
| Place | University Jean Monnet, (UJM) France, University of Granada, (UGR) Spain, Norwegian University of Science and Technology (NTNU) Norway |
| Student delegate | Represented all the students of the COSI master program, during the 2015-2017 intake and acted as the main focal point between the Academic, Management Board and Quality Assurance Board. |
| Date | November 2015 - December 2015 |
| Place | University Jean Monnet, (UJM) France |
| Industrial project | Successfully attained a solution to a big data color recognition problem posed by the Munsjko company in Sweden using probabilistic models. Under the guidance of Dr Alain Tremeau. |
| Date | September 2015 - September 2016 |

Place: University Jean Monnet, (UJM) France, University of Granada, (UGR) Spain

Website manager: The / COlour in Science and Industry / website manager. Working extensively with Wordpress and css, updating and extending the websites content.

## Personal skills and competences

Youtube: Computational Neuroscience Channel for PhD students - `https://www.youtube.com/@CharlotteFraza` - 57000 subscribers

Website: NeuroSnips website, with weekly blog posts on Neuroscience, Studying, and AI - `https://www.charfraza.com/`

Mother tongue(s): **Dutch**

Other language(s): French, German, Spanish, Korean, English

| *Self-assessment* *European level*(*) | Understanding | | Speaking | | Writing |
|---|---|---|---|---|---|
| | Listening | Reading | Spoken interaction | Spoken production | |
| **French** | B1 | B1 | B1 | B1 | B1 |
| **German** | B1 | B1 | B1 | B1 | B1 |
| **Spanish** | A1 | A1 | A1 | A1 | A1 |
| **Korean** | B1 | B1 | B1 | B1 | B1 |
| **English** | C1 | C1 | C1 | C1 | C1 |
| **Japanese** | A1 | A1 | A1 | A1 | A1 |

(*) *Common European Framework of Reference (CEF) level*

Language certificate: of Advanced French (DELF) B2 advanced user, obtained while studying in France for 6 months.

Language certificate: of Advanced Korean Level 6 (according to the Topik standard), obtained while studying in Korea for 12 months.

Language certificate: of Advanced English (CAE), C1 Proficient user

Computer skills and competences: Matlab, c++, c, R, Python, Latex, web scraping, HTML, CSS, Git

## Honours and awards

Selected for the COSI scholarship for the best-ranked students with outstanding academic performance during 2015-2016.

Selected by the University of Zürich for the summer school in medical imaging with a scholarship.

Selected by the University of Oxford for the international colour conference, to attend with scholarship.

Selected twice for the explo'RA scholarship funded by the French administrative area Rhône Alpes government.

Selected with the Toyota funding program to perform a research internship at Toyohashi University of Technology in collaboration with Caltech.

## Additional information

**Personal interests**

Professional: Combining the field of theoretical physics and machine learning to understand more about inter-individual differences in intelligence and mental dysfunction.

Personal: disseminating science through new media platforms.

**References**

Prof. A.F. Marquand (Andre) - Principal investigator - Donders Centre for Cognitive Neuroimaging

Prof. C.F. Beckmann (Christian) - Principal investigator - Donders Centre for Cognitive Neuroimaging