



## Fully funded PhD studentship

We are seeking applications for a 3-year full-time PhD student to work on human facial expressivity and social relationships.

The PhD will be supervised by Professor Bridget Waller as part of ERC Consolidator Project [FACEDIFF](#) 'Individual differences in facial expressivity: Social function, facial anatomy and evolutionary origins'. FACEDIFF is a five-year project examining individual differences in facial expressivity and how this is related to social network size and success at social interaction in humans and macaques. Communicating with others via the face is crucial for navigating our social world. Deficits in facial expression production can have debilitating effects on social interaction. Despite this, we know surprisingly little about individual differences in facial expressivity in the typical population, what causes these differences and whether such differences impact on individual lives. In part, this could be due to an historical focus on the universal nature of facial expression, assigning individual difference to random 'noise', rather than an evolutionarily relevant characteristic. The FACEDIFF project will diverge from this classic approach and test the novel hypothesis that individual differences in facial expressivity equip individuals' differentially to engage with their social environment: expressivity has a benefit (social engagement) but also a cost (over-exposure and thus risk of being cheated by others) and is related to the size and quality of an individual's social network. FACEDIFF will combine psychological, anatomical and cross-species methods to provide the first thorough interdisciplinary investigation of individual differences

The advertised position will be situated within the FACEDIFF project with the strand of research focussed on human facial expression, social interaction and social networks. The PhD student will work within a larger interdisciplinary team with an overarching plan to investigate the relationship between variation in facial muscles and the quality of social bonds with others. The successful PhD candidate will conduct laboratory based behavioural experiments at Nottingham Trent University in which pairs of participants (friends or strangers) take part in dyadic and individual tasks (e.g. cold pressor test: immerse their hands in water of varying temperatures to induce mild pain and stress). Behavioural and physiological measures will be recorded. The goal is to monitor how variation in facial muscle-use affects facial communication and emotional recognition during these tasks, and how this affects social dynamics during social interaction.

Candidates with prior experience conducting experimental research in humans, and those with a strong interest in social, behavioural or comparative/evolutionary psychology are preferred. Training and support in some specific research skills such as social network analysis and FACS (Facial Action Coding System) will be provided, but the successful candidate will need to have a demonstrable interest in standard quantitative approaches to experimental data.

## Enquiries

Please contact Professor Bridget Waller via email ([bridget.waller@ntu.ac.uk](mailto:bridget.waller@ntu.ac.uk)) for informal discussions in advance of applying. Also, please see [www.FACEDIFF.co.uk](http://www.FACEDIFF.co.uk) for more information about the overarching project. Any questions please don't hesitate to get in touch!

## Qualifications

Entrants must have an excellent academic record, with an undergraduate degree in psychology, behavioural science or related field. A master's degree in a relevant field (or equivalent research experience) would be preferred, and experience of experimental social research with humans is essential.

## Funding

The PhD will be funded by European Research Council Consolidator Grant FACEDIFF 'Individual differences in facial expressivity: Social function, facial anatomy and evolutionary origins' awarded to Bridget Waller. Funding will be provided for tuition fees, stipend for three years and research/conference expenses. Ideal start date October 2021, but this is negotiable.

## How to apply

Application deadline EXTENDED: 09/07/2021, expiry time 11:59 pm

Please apply via the following link:

<https://www.ntu.ac.uk/research/find-a-phd-opportunity/projects/social-sciences/individual-differences-in-facial-expression-during-social-interaction>

Please include a short proposal for the PhD outlining how you would tackle the research questions posed in the brief. Your proposal should focus on the goals and general methodology rather than precise details. The word limit stated in the application page is 1500 words which should include your reference list and timeline.

## Interview details

Interviews will take place from w/c 19<sup>th</sup> July 2021

## References

- 1) Waller, B. M., Cray Jr, J. J., & Burrows, A. M. (2008). Selection for universal facial emotion. *Emotion*, 8(3), 435. <https://doi.org/10.1037/1528-3542.8.3.435>
- 2) Fridlund A. (1994). Human facial expression: an evolutionary view. New York: Academic Press. <https://doi.org/10.1016/C2009-0-02293-4>
- 3) Schmidt, K. L., & Cohn, J. F. (2001). Human facial expressions as adaptations: Evolutionary questions in facial expression research. *American Journal of Physical Anthropology: The Official Publication of the American Association of Physical Anthropologists*, 116(S33), 3-24. <https://doi.org/10.1002/ajpa.20001>
- 4) Barrett, L. F., Adolphs, R., Marsella, S., Martinez, A. M., & Pollak, S. D. (2019). Emotional expressions reconsidered: Challenges to inferring emotion from human facial movements. *Psychological Science in the Public Interest*, 20(1), 1-68. <https://doi.org/10.1177/1529100619832930>
- 5) Waller, B. M., Julle-Daniere, E., & Micheletta, J. (2020). Measuring the evolution of facial 'expression' using multi-species FACS. *Neuroscience & Biobehavioral Reviews*, 113, 1-11. <https://doi.org/10.1016/j.neubiorev.2020.02.031>