



### Fully funded 1+3 ESRC Position

Dr. Rachael Jack, Prof. Philippe Schyns, and Dr. Colin Urquhart are offering an exciting and fully ESRC funded 1+3 M.S.c + Ph.D. opportunity on the project ***Building a Culturally Flexible Generative Model of Face Signalling for Social Robots*** at the Institute of Neuroscience & Psychology, University of Glasgow, UK in collaboration with Dimensional Imaging (DI4D), Glasgow, UK.

#### **The project:**

This ambitious project aims to mathematically model the human face as an algebraic generator of dynamic social signals, and build a psychologically and culturally valid generative model of social face signalling that is transferrable to social robots. The project will use a multidisciplinary approach that combines social and cultural psychology with dynamic 3D structural face computer graphics, vision science psychophysical methods, and mathematical psychology.

Since the project involves interdisciplinary knowledge and skills, we are keen to identify someone with experience of both computational (e.g., programming) and social psychology, for example via a joint degree or complementary research experience/interests.

#### **Research environment:**

The successful applicant will experience a unique research environment, undertake a specific programme of specialist research skill development, and have access to (1) state-of-the-art 4D structural face imaging technology; (2) specialist in-house training on quantitative methods and statistical analyses (e.g., 4D image processing, model fitting); (3) a strategic research agenda and an intellectually stimulating environment; (4) postgraduate/postdoctoral communities; (5) a dedicated Research Technologist specializing in 3D and 4D computer graphics; (6) a dedicated IT support team providing data storage (>4 Petabytes), high-security data management systems, high-performance equipment and software; (7) an online Subject Pool (18,000+ members, 106 nationalities); and (8) international collaborators via Jack, Schyns, and DI4D.

#### **The Team:**

*Primary supervisor:* Dr. Rachael E. Jack  
<http://www.gla.ac.uk/schools/psychology/staff/rachaeljack/>

*Secondary supervisor:* Prof. Philippe G. Schyns  
<http://www.gla.ac.uk/researchinstitutes/neurosciencepsychology/staff/philippeschyns/>

*Industrial partner:* Dr. Colin Urquhart  
<http://www.di4d.com/>

The successful applicant will join an internationally renowned high performance interdisciplinary research team, and will receive regular close supervision from Jack & Schyns via weekly lab meetings to develop specialist knowledge and skills including 3D & 4D face capture and generation, advanced MATLAB programming, lab preparation, data collection, computing face signalling models, analyzing high-dimensional data, scientific writing, and producing high-quality data visualizations for presentations and publications. The successful applicant will also work closely with DI4D, possibly other interested parties (e.g., gaming industry), and potential users (e.g., Facebook virtual reality). The successful applicant will also present at national and international academic conferences, participate in public engagement activities, and submit their work to high-impact and specialist peer reviewed academic journals.

**Required qualifications:**

- o Outstanding academic record. At least a 2:1 Honours Bachelor's degree in Cognitive Science, Psychology, Neuroscience, Computer Science, Engineering, or related fields;
- o Excellent team working, organizational, interpersonal, and communication skills;
- o Demonstrated interest or research experience in psychology, social robotics, communication, or related fields;
- o Undergraduate level knowledge of statistics and data analysis;
- o Strong work ethic

**Preferred qualifications:**

- o Strong computer programming skills (e.g., MATLAB, OpenGL, Python, Java)

**Residential eligibility:**

Candidates **MUST** have been ordinarily resident in the UK for at least 3 years prior to the start of the project (although this can include a short period of absence such as a year abroad). See Annex 1: Residential guidelines here for more details:

<http://www.esrc.ac.uk/files/skills-and-careers/studentships/postgraduate-funding-guide/>

Check your eligibility here: <https://glasgow.onlinesurveys.ac.uk/esrc-award-eligibility-checker-201718-copy-2>

**Start date:**

September/October 2017

**Application guidelines:**

Prepare one PDF document containing: (a) a CV; (b) university degree transcript; (c) AND a cover letter addressed to Dr. Rachael Jack, including contact details of 3 referees. Send the PDF document to [Rachael.Jack@glasgow.ac.uk](mailto:Rachael.Jack@glasgow.ac.uk). Also see here: <https://www.findaphd.com/search/ProjectDetails.aspx?PJID=84687>

Review of applications will take place on a rolling basis.