BODYinTRANSIT
Sensory-driven Body Transformation Experiences On-the-move

Ref. BODYinTRANSIT-PhD:
Pre-doctoral Position in sensory-driven body transformation experiences

The Universidad Carlos III de Madrid (UC3M) offers a full-time pre-doctoral position for the ERC Consolidator Grant Horizon2020 project **BODYinTRANSIT: Sensory-driven body transformation experiences on-the-move**.

Overall description of the research group and project: The successful candidate will join a new, diverse, multi-disciplinary and international research lab, i_mBODY lab, led by Prof. Ana Tajadura-Jiménez and which combines perspectives of Human-Computer Interaction (HCI), Cognitive Neuroscience and Artificial Intelligence. The main research focus is on multisensory body perception and body-centred technologies that can alter people's body perception, behaviour, emotion and social identity. The research group is part of the DEI Interactive Systems group at the UC3M Department of Informatics.

BODYinTRANSIT is a multidisciplinary project that combines neuroscience research on multisensory body perception; data modelling of the links between body perception, behaviour, emotion and social functioning; wearable-based embodied multisensory interaction design; and field studies in real-life and on-the-move contexts with physically inactive users, somatic practitioners, dancers and users with body image concerns, all with the aim to investigate **sensory-driven body transformation experiences on-the-move.** The project addresses scientific questions from these different perspectives, with both quantitative and qualitative methods, and with both, scientific and outreach goals.

The BODYinTRANSIT team is formed by HCI/computer scientists, psychologists and cognitive neuroscientists, data scientists, engineers, acousticians, philosophers, ethics experts, designers, professional dancers and clinical practitioners. The international research network for BODYinTRANSIT includes, among others, collaborations with University College London, Birkbeck - University of London, IRCAM - Paris, LMU - Munich, Tilburg University, Ritsumeikan University - Japan, and the Estonian Academy of Arts.

You can read more about the BODYinTRANSIT project and our current research in the following links:
The BODYinTRANSIT Project: https://bodyintransit.eu/
The Magicoutfit Project: www.magicoutfit.com
The Magic Lining project (science-art project): https://vertigo.starts.eu/calls/2017/residencies/magic-lining/detail/

Job Description:
An important challenge in computer science, as well as one of the biggest challenges in human-computer interaction and ubiquitous computing projects, is how to design interfaces between computers and bodies. Understanding how to design interfaces for body transformation experiences is not trivial, specially if particular effects on people are desired. The successful applicant will work on understanding, designing and evaluating user interfaces which combine body monitoring and sound/tactile feedback and which can alter the perceived body appearance and capabilities. A particular focus will be on the long-term effects of using these interfaces. It is expected that this research will inform the design of the technology underlying body transformation experiences, as well as advance basic research on body perception and the understanding on the potential applications of this technology in real-life contexts (e.g. home, training or dance studio, clinical contexts).

Some specific responsibilities that this position involves include:

- Conduct literature reviews of the state-of-the art of the project research area.
- Design, conduct and analyze data of experimental studies investigating multisensory-driven body transformation experiences, using a variety of psychophysical, psychophysiological and qualitative methods.

- Work directly with volunteers/users/patients in the lab and outside the lab in real-life contexts (e.g. home or in a medical center).
- Recruitment of volunteers for research studies. Communicate with user centers, clinics/ therapists, potential patient recruitment.
- Participate in building the setups and prototypes for the experimental studies.
- Report results at conferences and international peer-reviewed journals.
- Archive research data and publications.
- Participation in the group meetings.
- Participation in the organization of different outreach activities, such as school science exhibitions, public exhibitions, seminars and workshops.

Qualifications:

- A degree in the area of Computer Engineering or related areas (e.g. Human-Computer Interaction, Software Engineering, Computer Science, Telecommunication Engineering).
- Be eligible to be admitted to the UC3M Computer Science and Technology PhD program: https://www.uc3m.es/phdprogram/computer-science-technology#access
- Programming experience (e.g., Matlab, Python, R, e-prime, Neurobs);
- Excellent verbal and written communication skills in English;
- Excellent organization skills;
- Able to work independently and as part of a collaborative research team.
- Independent, decisive, imaginative, approachable and supportive.

Plus:

- Proven research experience, specially in areas relevant to the research project;
- Proven research experience with human volunteers/users;
- Experience working as part of a team;
- Knowledge of statistics;
- Strong interpersonal skills to work effectively as part of a highly collaborative research team, and to perform studies with volunteers in research studies, as well as to build and maintain relationships with academics and collaborating instructions representing user groups.
- Pro-active personality, detail focused.
- Verbal and written communication skills in Spanish;

What we offer:

- Total duration of the contract: 3 years (+ optional fourth year), through renewable 1-year contracts.
- Annual gross salary starting at 21600 €, commensurate with qualifications.
- Start date: Spring 2023.
- Possibility to obtain an international PhD degree, with research stay(s) at collaborating international labs.
- The position includes ad hoc training in specific research skills and career development initiatives.
- Become part of a young, dynamic, highly qualified, collaborative team.
- Opportunity to travel to international venues to present research activities.
- Health coverage under the National Health System.

How to apply (Please check carefully):

The application involves a three-step process. There is a hard deadline for the last two steps, January the 31st 2023, at 23:59 (CET). Since steps 2) and 3) require the candidate to complete the previous step, it is highly encouraged that you start your application as early as possible. Also, the applicant is strongly advised to contact Dr. Ana Tajadura-Jiménez (atajadur@inf.uc3m.es) to help in the process – input from Dr. Ana Tajadura-Jiménez is required to complete step 2.

Interested candidates need to:

1 – Send the following application package in English in a single PDF file to atajadur@inf.uc3m.es with the following subject: "**BODYinTRANSIT_PhD_family name of the applicant**".

- A motivation letter (max. 2 pages), explaining why the PhD candidate wants to pursue this PhD, highlighting
- the candidate's strengths and assets useful for the completion of their PhD studies.
- A full CV (up to 5 pages). Include here any experience in Research, Industry, Science communication, Science management, and any research publications, as well as a list of 3 highlights of your CV.
- A copy of your university degree certificates/diplomas (Bachelor's and Master's degrees or equivalent)
- A copy of your academic transcript of records of undergraduate studies (Bachelor's degree) and graduate studies
- (Master's degree), including grades
- 2-3 references (with contact details and email), that can provide you with a recommendation letter if further required in the process. Optionally, you can include these recommendation letters in your application package.

2 – Apply for admission at UC3M (https://www.uc3m.es/phdprogram/admission/application) before **January the 31st 2023 at 23:59 (CET).** You can find more information about how to apply here: https://www.uc3m.es/phdprogram/admission/admissionphd-programs. Here, you need Dr. Tajadura-Jiménez to provide you with two documents, which you will receive once you complete step 1).

3 – Apply for the PhD position/contract (step 2 needs to be completed before, as you will be asked to upload the confirmation of application to the Doctoral School) **by February the 3rd, 2023 at 23:59 (CET):** https://www.uc3m.es/ss/Satellite/Empleo/es/Detalle/Ficha_C/1371350712021/1371272207002/Predoctoral_proyectos_de_investigacion_-_CONVOCATORIA_I08-2223 (Reference Number: 211)

All candidates will have feedback with a message as proof of delivery. Top candidates will be invited to an individual online interview organized by UC3M. The final decision criteria will be based on merits (70%) and the interview (30%).

The Universidad Carlos III de Madrid hires on the basis of merit and is strongly committed to equity and diversity within its community. All qualified applicants are encouraged to apply, they will receive consideration for employment without regard to race, colour, religion, sex, sexual orientation, gender identity, national origin, disability status, protected veteran status, or any other characteristic protected by law. Note that if the successful applicant is neither a European citizen nor a permanent resident of Europe, he or she must be issued a work permit prior to commencing the position.

More Information and Help:
Enquiries can be made to Dr. Ana Tajadura-Jiménez, email: atajadur@inf.uc3m.es. Please use the following subject in your email: "**BODYinTRANSIT_PhD_family name of the applicant**".

Brief description of the institution:
Universidad Carlos III de Madrid (UC3M) is a state public university established in 1989. Its main goal is providing specialized training in Engineering, Law and Social Sciences, Humanities, Communication and Library Science; and becoming a leading European research center. Research is a fundamental pillar of UC3M, which strives to attract talent and create new research areas. The UC3M is among the top Spanish universities for their participation in European level R&D&I programmes. The University has five centers: 2 Faculties, 1 Technical School, 1 School of Graduate Studies and 1 Doctoral School within 4 Campuses. UC3M is divided in 28 Academic Departments, 28 University Research Institutes and 133 Research Groups. UC3M has 22.600 students, over 1200 doctoral students and near 2000 Faculty.

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