

## Agreement letter for provision of a commissioned research project

16 January 2017

Darren K. Indyke (Vice-President)  
Enhanced Education  
A U.S. Virgin Islands non-profit corporation  
6100 Red Hook Quarter, B3  
St. Thomas, USVI 00802

Dear Mr Indyke

### **Re: Hyperscanning EEG Study of Induced Experiences**

Further to your recent discussions with Professor Joydeep Bhattacharya, we have pleasure in offering to undertake the commissioned research project described below.

Please note this letter and the relationship between the parties is subject to *Goldsmiths' Standard Terms & Conditions for Provision of a Commissioned Research Project*, a copy of which is attached. Capitalised terms used in this letter may be defined therein. In the event of any conflict the terms of this letter shall prevail. We would draw your particular attention to Clauses 5 (Intellectual Property), 6 (Confidentiality); and 7 (Warranty & Limitations on Liability).

---

### **Current Description of the research project**

#### **TEAM**

##### Principal Investigator (PI)

Professor Joydeep Bhattacharya  
Department of Psychology, Goldsmiths, University of London

##### Co-Investigator (Co-I)

Professor Andreas A Ioannides  
Lab for Human Brain Dynamics, AAI Scientific Cultural Services Ltd, Nicosia, Cyprus.

##### Collaborator

Dr Peter Fenwick  
Emeritus Institute of Psychiatry, Kings College University of London

#### **AIM**

The principal aim is to explore neural and physiological correlates of meditation experiences in an expert meditator and pupils.

#### **THE RESEARCH DESCRIPTION**

The principal participant will be Alain Forget, whose pupils often report experiences while meditating with him. A pilot study indicated abnormal gamma activity in AFs brain at this time, and causal linking with the student's brain. The mental set of the teacher and student is important so a pairwise meditating/not meditating and attending/not attending stimulus protocol will be used. Subjective reports after each session will be collected. The research will primarily involve EEG hyperscanning method (i.e. simultaneously monitoring two brains). In addition to multivariate EEG signals, additional physiological signals (ECG, GSR etc) will also

be monitored. This way we ensure obtaining a rich source of signals generated by both brain and body from the teacher (AF) and his pupil under different instructions. The experimental protocol will be jointly decided by the PI and the Collaborator, and the data collection will take place at the PI's laboratory at Goldsmiths.

The recorded data will be analysed in a comprehensive fashion. Specifically, the neural signals will be source localized to reveal the brain regions involved during such induced experiences. Further, we will apply network analysis to uncover the cortical connectomes within interacting teacher-pupil pair. The data analysis will primarily take place at the Co-I's laboratory in Cyprus.

#### EXPECTED OUTCOME

We anticipate the following principal findings: (i) identification of brain areas and brain network underlying meditation induced experiences, (ii) characterization of the information transfer between the brains of teacher and pupil, and (iii) revealing the concomitant brain-body interaction. In short we anticipate generating novel insights about this less understood yet potentially important mode of information transfer between humans.

#### INDICATIVE TIMELINE

Finalization of experimental protocol: February 28, 2017

Development, testing and finalization of EEG hyperscanning facilities: March 31, 2017

Screening and recruitment of participants (pupils and teacher): April 31, 2017

EEG hyperscanning data collection: July 31, 2017

Data preprocessing and quality control: August 31, 2017

EEG and physiological data analysis: November 30, 2017

Write-up of reports, conference presentation(s) and academic article(s): January 31, 2018

---

#### Price & payment terms

In consideration of the Goldsmiths undertaking the research project, the Client will pay Goldsmiths the sum of £85,000.

The Client is paying this sum by way of a philanthropic donation, and is not receiving anything in return. There is therefore no supply being made and accordingly this research project is outside the scope of VAT

---

#### Special Condition

Goldsmiths will pay the Co-I, Professor Andreas Ioannides in Cyprus, an amount of up to £20,000 upon receipt of a suitable invoice to fund his collaboration on the research project.

We believe that as this is collaborative research, the contribution to the Co-I Professor Andreas Ioannides in Cyprus should also not be subject to VAT (or any equivalent tax). If this contribution is found to be subject to VAT (or any equivalent tax) then the sum of up to £20,000 shall be deemed to be inclusive of any such tax.

If you are in agreement with the contents of this letter, and the description of the services to be provided, please counter-sign and return a copy of this letter to the address above.

We very much look forward to working with you on this Project.

Yours faithfully

---

for and on behalf of Goldsmiths' College

Name: Professor David Oswell

Position: Pro Warden (Research & Enterprise)

Date: \_\_\_\_\_

---

Read and accepted by:



for and behalf of Enhanced Education

Name: Darren K. Indyke

Position: Vice-President

Date: 1/20/17