Neuro-Urbanism Workshop, 1st to 5th December 2016

Neuro-Urbanism is a newly emerging discipline that assembles neuroscientists, cognitive psychologists, city planners, urban designers, architects, landscape architects to explore the impact of the design of our cities on stress and psychological wellbeing. This workshop will help develop your understanding of our experience of place whilst walking and navigating different settings. You will become an 'active researcher' gaining new skills in the use of human sensors to understand effects of place and measure the human response to the city.

Recent neuroscience research has indicated that city life affects the way in which emotions and stress are processed in the brain. Urban living is linked with higher stress responsiveness than rural living. The likelihood of suffering from mental health problems – such as depression, anxiety, psychosis and schizophrenia - appear to be increased in the city. By using geo-mobile neuroimaging, neuro-urbanism can build understanding the complexity of our city streets and the twist and turns in our thoughts, emotions and behaviors as we move through place.

The workshop combines lectures with practical hands-on experience in a range of methods for measuring human responses to place, including the use and application of mobile EEG to studio and planning practice and cognitive mapping methodologies to understand street dynamics. It brings together an interdisciplinary team of international researchers that are pioneering the use of mobile electroencephalography – mobile EEG – to explore the psychological effects of urban settings.

Invited international practitioners are Cognitive Psychologist, Dr Chris Neale (CN), Stockholm Environment Institute, University of York, UK and Architect, Panos Mavros (PN), The Bartlett Centre for Advanced Spatial Analysis (CASA) University College London UK. The workshop is coordinated by Professor Jenny Roe (JJR), Director of the Center for Design and Health and Professor Andrew Mondschein (AM), Urban and Environmental Planning. The workshop is intended for students on **PLAN 5500-002 Environment, Space and Psychology and PLAN 5710 Transportation and Environment**.

There are a maximum of 12 places available. Students on these two programs are asked to email Jenny Roe jjr4b@virginia.edu to reserve their place by **31 October 2016**. The workshop will be opened to graduate students SARC wide, after this date. If over subscribed a waiting list will be opened, with students invited on a first come, first served basis.

Neurourbanism Workshop Overview

Thursday 1st December	**Friday 2nd Dec**	**Saturday 3rd Dec**	**Sunday**	**Monday 5th Dec**
AM Seminar 1 (½ day) Launch Forum, Guest Lecture Neale 6pm	All day: Seminar 2 Lunch provided Guest Lecture Mavros 5pm	AM Seminar 3 (half day) Lunch provided		Lunchtime Gallery Talk SARC: Roe & Mondschein

Lectures (attendance is required at least one of the below lectures): refreshments and snacks will be provided.

Thursday 1st December at 6pm Exploring neural and psychological responses to urban

spaces in older people, Dr Chris Neale, Stockholm Environment Institute, University of York, U.K.

Friday, 2nd December at 5pm Quantifying the psychology of the urban experience and implications for design, Panos Mavros, The Bartlett Centre for Advance Spatial Analysis, School of Architecture, University College London; Post Doctoral Researcher, ETH Future Cities Laboratory, Singapore.

Workshop program

Thursday, 1st December AM (half day seminar) **Seminar 1**

- Background on mobile EEG, how it works, and how we use it
- Familiarisation with the headset and calibration
- Other cognitive mapping processes

Friday, 2nd December (full day) **Seminar 2**

AM

- 6 students will take a walking/wayfinding session with PM/AM.
- 6 students will take a lab-based session exploring using response to images/videos with/without sound: CN/JJR
- Both sessions will use the headset to gather Emotiv data.
- Both sessions will collect roughly 3 minute segments of EEG data for ease of analysis.
- Further measures will include subjective scales and other cognitive mapping methods.
- Lunch provided

PM

- Data analysis (both groups together)
- Working on presentation of results in the form of a poster.

Saturday, 3rd December AM (half day)

- Presentation of results from each group with lunch.
- Some of these presentations will be selected for the Monday lunchtime Gallery Talk,

Monday, 5th December lunchtime SARC Gallery Talk

- A selection of presentations and overview of workshop by AM and JJR

Any questions ?

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