Dávid Samu

Curriculum vitae

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POSITION

Jul **2016** – *Jul* **2017** **Postdoctoral Research Fellow**, Theoretical and Cognitive Neuroscience Group, University Pompeu Fabra

Apr **2014 –** *Apr* **2016** **Postdoctoral Research Associate**, Centre for Speech, Language and the Brain, Dept. of Psychology, University of Cambridge

ACADEMIC EDUCATION

Sep **2009** – *Oct* **2013** **Ph.D. Computational Neuroscience,** Dept. of Informatics, University of Sussex
Thesis title: *Module hierarchy and centralisation in the anatomy and dynamics of human cortex*

Oct **2008** – *Sep* **2009** **M.Sc. Evolutionary and Adaptive Systems**, Dept. of Informatics, University of Sussex (distinction)
Thesis title: *A high fidelity brain–machine interface in a hybrid system.*

Sep **2003** – *Jul* **2008** **M.Sc. Computer Engineering**, Dept. of Control Engineering and Information Technology, Budapest University of Technology and Economics (excellent)
Dissertation title: *Biologically plausible navigation based on modelling of the grid cell system and the hippocampus.*

INTERNSHIPS

Jun **2016 –** *Jul* **2016** **Neurophysiology Lab Research Assistant**, Pasternak Primate Neurophysiology Lab, Dept. of Neuroscience, University of Rochester

Apr **2014** – *Nov* **2014** **Magnetoencephalography Experimenter**, Cognition and Brain

Sciences Unit, Medical Research Council, University of Cambridge, Cam-CAN project

Jan **2009** – *Jul* **2009** **Electrophysiology Lab Research Assistant**, Dept. of Neuroscience, University of Sussex, StpdC project

Feb **2008** – *Aug* **2008** **Undergraduate Researcher**, Budapest Computational Neuroscience Group, Hungarian Academy of Sciences, EU FP6 – ICEA project

TEACHING EXPERIENCE

Graduate Teaching Assistant, Dept. of Informatics, University of Sussex

Object Oriented Programming	MSc	2009, 2010, 2011 (*Autumn*)
Databases	Yr 2 UG	2011 (*Autumn*)
Program Design	Yr 1 UG	2009, 2010 (*Spring*)
Math for Computing	Yr 1 UG	2009, 2010, 2011 (*Autumn*)

Tutor, Dept. of Mathematical Analysis, Budapest University of Technology and Economics

Calculus	Yr 1 UG	2007 (*Autumn*)

INDUSTRIAL EXPERIENCE

Aug **2013** – *Dec* **2013** Data Scientist and Quantitative Analyst, Aentropico Ltd, Rio de Janeiro, Brazil

Oct **2009** – *May* **2010** Robotics Software Engineer, NeuroRobotics Ltd, Brighton, UK (part time)

JOURNAL PUBLICATIONS

7. **Samu, D.,** Tyler, L.K., Cam-CAN, and Henson, R.N.; Demographic and lifestyle factors of successful cognitive ageing. *In preparation*.

6. **Samu, D.**, Campbell, K.L., Tsvetanov, K.A., Shafto, M.A., Cam-CAN, and Tyler, L.K.; Predicting preservation versus decline: Maintenance of brain responsivity underlies differential age-related patterns across cognitive domains. *Submitted*.

5. Campbell, K.L.*, **Samu, D.***, Davis, S.W., Geerlings, L., Mustafa, A., Cam-CAN, and Tyler, L.K. (2016) Robust resilience of the frontotemporal syntax system to aging. *Journal of Neuroscience,* 36(19): 5214-5227 (* denotes equal contribution)

4. **Samu, D.**, Seth, A.K., and Nowotny, T. (2014) Influence of Wiring Cost on the Large-Scale Architecture of Human Cortical Connectivity. *PLoS Computational Biology,* 10(4):e1003557

3. **Samu, D.**, Crossley, M., Marra, V., Kemenes, I., Staras, K., Kemenes, G., and Nowotny, T. (2012) Single electrode dynamic clamp with StdpC. *Journal of Neuroscience Methods,* 211(1):11-21

2. Kemenes, I., Marra, V., Crossley, M., **Samu, D.**, Staras, K., Kemenes, G., and Nowotny, T. (2011) Dynamic clamp with StdpC software. *Nature Protocols,* 6(3): 405-17

1. **Samu, D.**, Erős, P., Újfalussy, B., and Kiss, T. (2009) Robust path integration in the entorhinal grid cell system with hippocampal feed-back. *Biological Cybernetics,* 101(1): 19-34

INVITED TALKS

May **2016** *Neural, demographic and lifestyle factors of cognitive ageing.*
Memory and Language Lab, Eötvös Loránd University, Hungary

GRANTS, AWARDS and SCHOLARSHIP

2011 Best PhD poster award, Dept. of Informatics, University of Sussex

2009 – 2012 Graduate Teaching Assistant, Dept. of Informatics, University of Sussex

2008 – 2009 Pegge Scholarship, Dept. of Informatics, University of Sussex

RESEARCH SKILLS and TOOLS

Experimentation	MRI MEG Neurophysiology
Neurophysiology	Plexon Neo OpenElectrophy Elephant
Neuroimaging	SPM FSL FreeSurfer GIFT
Programming	R Python Matlab C C++ JavaScript
IT	Linux/Unix LaTeX LibreOffice

LANGUAGES

Hungarian	native
English	fluent in writing and speaking
Spanish	intermediate level

REFERENCES

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