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Robert Moss

Appointments

Duke University, USA

2012–2014 **Visiting Assistant Professor**, Department of Mathematics.

CNRS, France

2010–2012 **Postdoc**, IR4M CNRS UMR8081, Université Paris-Sud.

University of Melbourne, Australia

2009–2010 **Research Officer**, Melbourne School of Population and Global Health.

Education

University of Melbourne, Australia

2005–2008 PhD, Renal modelling.

- Stawell Scholarship recipient, 2008
- Australian Postgraduate Award

2000–2004 BSc(Pure Maths), BE(Software, First Class Honors)

Publications

Peer-reviewed journal articles

May 2014 Moss & Layton. "Dominant factors that govern pressure natriuresis in diuresis and antidiuresis: a mathematical model", *AJP Renal* 306(9): F952–F969.

Jan 2014 Moss & Thomas. "Hormonal regulation of salt and water excretion: a mathematical model of whole-kidney function and pressure-natriuresis", *AJP Renal* 306(2): F224–248. **Selected for an Editorial Focus article** (link)

Dec 2012 Dafilis et al. "Drivers and consequences of influenza antiviral resistant-strain emergence in a capacity-constrained pandemic response", *Epidemics* 4(4): 219–226.

Jun 2012 Moss et al. "Virtual Patients and Sensitivity Analysis of the Guyton Model of Blood Pressure Regulation: Towards Individualized Models of Whole-Body Physiology", *PLoS Comp Biol* 8(6): e1002571.

Apr 2012 Bolton et al. "An analysis of the likely effectiveness of pharmaceutical and non-pharmaceutical interventions for mitigating influenza transmission in Mongolia", *Bull WHO* 90(4): 264–271.

Oct 2011 Hernández et al. "Integration of detailed modules in a core model of body fluid homeostasis and blood pressure regulation", *Prog Biophys Mol Biol* 107(1): 169–182.

May 2011 McCaw et al. "A decision support tool for evaluating the impact of a diagnostic-capacity and antiviral-delivery constrained intervention strategy on an influenza pandemic", *Influenza Other Respi Viruses 5(Suppl. 1): 212–215.*

Feb 2011 Moss et al. "Diagnosis and Antiviral Intervention Strategies for Mitigating an Influenza Epidemic", *PLoS ONE* 6(2): e14505.

Nov 2009 Moss et al. "Discrete network models of interacting nephrons, *Physica D* 238(22): 2166–2176.

May 2009 Moss et al. "A computational model for emergent dynamics in the kidney, *Phil. Trans. R. Soc. A* 367(1896): 2125–2140.

May 2009 Harris et al. "The Virtual Kidney: an e-Science interface and Grid Portal", *Phil. Trans. R. Soc. A* 367(1896): 2141–2159.

Presentations

Invited Talks

May 2014 Molecular to Systems Physiology.
Mathematical Biosciences Institute, Ohio State University.

Conferences

May 2011 French Society of Theoretical Biology (*presented in French*).
Autrans, France.

Apr 2010 NSW Epidemiology Special Interest Group.
NSW Department of Health.

Mar 2010 MISMS Oceania Regional Influenza Meeting.
Melbourne Business School.

Dec 2009 NHMRC H1N1 workshop.
Canberra, ACT.

Sep 2008 UK e-Science 2008 All Hands Meeting.
University of Edinburgh, Scotland.

Jul 2007 Complex 07: 8th Asia-Pacific Complex Systems Conference.
Gold Coast, Queensland.

- Best Talk in Track.

Feb 2007 The Kidney: Cellular, Tubular, and Vascular Physiology.
Mathematical Biosciences Institute, Ohio State University.

Seminars

Aug 2013 Department of Biomedical Physiology and Kinesiology,
Simon Frasier University.

Sep 2009 Department of Nephrology, Austin Hospital.

May 2009 Mathematics Department, University of Melbourne.

Dec 2008 Laboratory IBISC, Université d'Evry Val d'Essonne.

Aug 2008 PhD Completion Seminar.
Department of Computer Science and Software Engineering.
University of Melbourne.

Posters

Apr 2014 Experimental Biology 2014.

Apr 2013 Experimental Biology 2013.

Apr 2012 Experimental Biology 2012.

Apr 2011 Experimental Biology 2011.

Sep 2010 VPH 2010 Annual Conference.

Teaching

Lecturer

2013 Multivariable Calculus, Duke University

Team Supervisor

2007–2008 Software Engineering Project, University of Melbourne

Tutor

2005–2008 Software Engineering Methods & Testing, University of Melbourne

2001–2004 Software Engineering Principles & Tools, University of Melbourne

Grants & Awards

2010 The Origins of Renal Physiology, MDIBL.

2008 Stawell Scholarship recipient.

Professional Service

Manuscript Reviewer
American Journal of Physiology – Renal Physiology
BMC Infectious Diseases
Mathematical Medicine & Biology

References

Available upon request