MAX BERTOLERO

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EDUCATION

PhD **University of California, Berkeley, Systems Neuroscience** 2017
Dissertation: Large-Scale Brain Network Mechanics
Chair: Mark D'Esposito; Committee: Robert Knight, Richard Ivry, & Christos Papadimitriou

BA **Columbia University, Philosophy, Psychology** 2012
Valedictorian; Summa Cum Laude; Philosophy Departmental Summa Cum Laude; Philosophy Departmental Honors (4.1 GPA); Philosophy Honor's Thesis: Plato, Chomsky, & Scientific Realism (with Katja Vogt); Psychology Departmental Summa Cum Laude; Psychology Departmental Honors (4.2 GPA); Psychology Honor's Thesis: Cognitive Control Deficits (with Edward Smith); Jennifer A. Pack Prize for top Psychology Student, class of 2012; Dean's list, every semester; Phi Beta Kappa Member; Phi Beta Kappa Prize winner; Columbia Honors Society Member

FUNDING & AWARDS

Ruth L. Kirschstein National Research Service Award (NRSA) Institutional Research Training Grant (Parent T32) 2017

National Science Foundation Graduate Research Fellow 2013

Diebold Graduate Student Fellowship Award 2012

Lenfest Merit Undergraduate Scholarship 2008-2012

POSITIONS & TEACHING EXPERIENCE

Post-Doctoral Scientist 2017-current
Complex Systems Group (PI: Danielle Bassett), Bioengineering Department, University of Pennsylvania, Philadelphia

Teacher Assistant's, Guest Lecturer 2017
University of Pennsylvania; Network Neuroscience (Danielle Bassett), Fall 2017

Graduate Student 2012-2017
Mark D'Esposito's Cognitive Neuroscience Laboratory, University of California, Berkeley

Teacher's Assistant, Guest Lecturer 2012, 2015
University of California, Berkeley; Consciousness and the Brain, Fall 2012; Human Neuropsychology (Mark D'Esposito) Spring 2015

Researcher Assistant 2010-2012
Daphna Shohamy's Learning Lab, Columbia University, New York City

Researcher Assistant 2009-2011
Ed Smith's Cognitive Neuroscience Laboratory, Columbia University, New York City

Teacher's Assistant, Guest Lecturer 2009-2010
Columbia University; Science of Psychology (Patricia Lindemann) Fall 2009; Cognition and the Brain (Edward Smith) Spring 2010

PUBLICATIONS

Journal Publications

Bertolero, MA; Yeo, BTT; Bassett, DS; D'Esposito, M. *A mechanistic model of connector hubs, modularity and cognition*". **Nature Human Behaviour** 2018

Hwang, Kai; Bertolero, Maxwell; Liu, William; D'Esposito, Mark. *The human thalamus is an integrative hub for functional brain networks*. **Journal of Neuroscience** 2017

Bertolero, MA; Yeo, B.T.T; D'Esposito, Mark. *The diverse club*. **Nature Communications** 2017

Bertolero, Maxwell A; Yeo, BT Thomas; D'Esposito, Mark. *The modular and integrative functional architecture of the human brain***. Proceedings of the National Academy of Sciences** 2015

Journal Papers in Review

Betzel, Richard F; Bertolero, Maxwell A; Bassett, Danielle S. *Non-assortative community structure in resting and task-evoked functional brain networks*. Under revision @ **Nature Neuroscience**

Betzel, Richard F; Bertolero, Maxwell A; Gordon, Evan M; Gratton, Caterina; Dosenbach, Nico UF; Bassett, Danielle S. *The community structure of functional brain networks exhibits scale-specific patterns of variability across individuals and time*. Under revision @ **NeuroImage**

Adebimpe, Azeez; Bertolero, Maxwell A; Khambhati, Ankit N; Mattar, Marcelo G; Romer, Daniel; Thompson-Schill, Sharon L; Bassett, Danielle S. *Dynamic constraints on activity and connectivity during the learning of value*. Submitted, **Journal of Neuroscience**.

Conference Papers

Bertolero, Maxwell A; Griffiths, Tom L. *Is Holism A Problem For Inductive Inference? A Computational Analysis*. **Proceedings of the Annual Meeting of the Cognitive Science Society** 2014

SPEAKING ENGAGEMENTS

Invited Talks & Keynote Addresses

Yale Whistler Summer Workshop 2019
Keynote Address, Venture High School Graduation 2013
Valedictory Address, Columbia University 2012

Talks

Dynamic Modularity and Integration, Nanosymposium Talk. Society for Neuroscience 2015

Reverse Inference Revisited, Nanosymposium Talk. Society for Neuroscience 2015

Human Brain Networks, Nanosymposium Chair. Society for Neuroscience 2015

Is Holism A Problem For Inductive Inference? A Computational Analysis. Cognitive Science Society 2014

Posters

Functional connectivity is modularly represented in the genome. Computational Cognitive Neuroscience 2018

A Task General Optimal Network Structure for Cognitive Processing. Society for Neuroscience 2016

The Best Brain Atlas is No Brain Atlas. Society for Neuroscience 2014

Growing and Analyzing Complex Network Efficiency in Python. Data Science Faire, University of California, Berkeley 2013

REVIEWER CONTRIBUTIONS

Proceeding of the National Academy of Sciences
NeuroImage
Cerebral Cortex
Journal of Cognitive Neuroscience
Network Neuroscience

PRESS

A mechanistic model of connector hubs, modularity and cognition
The importance of hubs in large-scale networks

The modular and integrative architecture of the human brain
'Connector hubs' are the champions of brain coordination

Columbia University Valedictory Address
The road to college less traveled
Danville man takes unique path to being a scientist

Skin Data Exhibit at the New Museum with Amanda Wachob
Art Inspired by Tattoo Data
Tattoo Artist Amanda Wachob Transforms Skin Into Watercolor Paintings
Tattoo Artist Amanda Wachob Will Be Inking Clients at the New Museum Store
New Museum Makes Push to Classify Tattoos as Art