

# MAX BERTOLERO

maxbertolero.org  
[mbertolero@me.com](mailto:mbertolero@me.com)

## EDUCATION

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### **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

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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

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**Senior Scientist** 2020-Present

Lifespan Informatics & Neuroimaging Center University of Pennsylvania, Philadelphia

**Post-Doctoral Scientist** 2017-2020

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

Max Bertolero

<b>Graduate Student</b> Mark D'Esposito's Cognitive Neuroscience Laboratory, University of California, Berkeley	2012-2017
<b>Teacher's Assistant, Guest Lecturer</b> University of California, Berkeley; Consciousness and the Brain, Fall 2012; Human Neuropsychology (Mark D'Esposito) Spring 2015	2012, 2015
<b>Researcher Assistant</b> Daphna Shohamy's Learning Lab, Columbia University, New York City	2010-2012
<b>Researcher Assistant</b> Ed Smith's Cognitive Neuroscience Laboratory, Columbia University, New York City	2009-2011
<b>Teacher's Assistant, Guest Lecturer</b> Columbia University; Science of Psychology (Patricia Lindemann) Fall 2009; Cognition and the Brain (Edward Smith) Spring 2010	2009-2010

## PUBLICATIONS

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### *Selected 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

### *Selected 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**

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### *Invited Talks & Keynote Addresses*

Yale Whistler Summer Workshop	2019
Keynote Address, Venture High School Graduation	2013
<a href="#">Valedictory Address</a> , Columbia University	2012

### *Talks*

<i>Dynamic Modularity and Integration</i> , Nanosymposium Talk. Society for Neuroscience	2015
<i>Reverse Inference Revisited</i> , Nanosymposium Talk. Society for Neuroscience	2015
<i>Human Brain Networks</i> , Nanosymposium Chair. Society for Neuroscience	2015
<i>Is Holism A Problem For Inductive Inference? A Computational Analysis</i> . Cognitive Science Society	2014

### *Posters*

<i>Functional connectivity is modularly represented in the genome</i> . Computational Cognitive Neuroscience	2018
<i>A Task General Optimal Network Structure for Cognitive Processing</i> . Society for Neuroscience	2016
<i>The Best Brain Atlas is No Brain Atlas</i> . Society for Neuroscience	2014
<i>Growing and Analyzing Complex Network Efficiency in Python</i> . Data Science Faire,	

## REVIEWER CONTRIBUTIONS

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

## PRESS

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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](#)