# Joshua T. Vogelstein

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*Institute for Computational Medicine*
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## Current Positions

08/14 – now **Assistant Professor**, *Department of Biomedical Engineering.*
Johns Hopkins University

08/14 – now **Core Faculty**, *Institute for Computational Medicine & Center for Imaging Science.*
Johns Hopkins University

08/14 – now **Assistant Research Faculty**, *Human Language Technology Center of Excellence.*
Johns Hopkins University

08/12 – now **Affiliated Faculty**, *Institute for Data Intensive Engineering and Sciences.*
Johns Hopkins University

08/12 – now **Adjunct Faculty**, *Department of Computer Science.*
Johns Hopkins University

01/11 – now **Co-Founder and Co-Director**,
*Open Connectome Project.*

## Professional Experience

08/12 – 08/14 **Senior Research Scientist**, *Dept's of Statistical Sciences & Mathematics & Neurobiology.*
Duke University

08/12 – 08/14 **Affiliated Faculty**, *Kenan Institute for Ethics.*
Duke University

01/11 – 08/12 **Assistant Research Professor**, *Department of Applied Mathematics and Statistics.*
Johns Hopkins University

12/09 – 01/11 **Postdoctoral Fellow**, *Department of Applied Mathematics and Statistics.*
Johns Hopkins University

07/04 – 07/12 **Chief Scientist**,
*Global Domain Partners, LLC.*

06/01 – 09/01 **Research Assistant**, *Prof. Randy O'Reilly, Dept. of Psychology.*
University of Colorado

06/00 – 09/00 **Clinical Engineer**,
*Johns Hopkins Hospital.*

## Education

2003 – 2009 **Ph.D in Neuroscience**,
*Johns Hopkins School fo Medicine*,
Dissertation: OOPSI: a family of optical spike inference algorithms for inferring neural connectivity from population calcium imaging .

2009 – 2009 **M.S. in Applied Mathematics & Statistics**,
*Johns Hopkins University.*

1998 – 2002 **B.A. in Biomedical Engineering**,
*Washington University, St. Louis.*

## Funding

08/13 – 07/19 **NIH (Director's Transformative Research Award)**, *R01OD019123*,
Synaptomes of Mouse and Man.
The major goals of this project are to discovery the synaptic diversity and complexity in mammalian brains, specifically comparing and contrasting humans with mice, the leading experimental animal.

## Awards

2013 – 2014 **Senior Fellow at the Kenan Institute for Ethics**, *Duke University*.

## Publications

### Pre-Prints

**NC Weiler, FC Collman, JT Vogelstein, R Burns, SJ Smith**, *Molecular architecture of barrel synapses following experience dependent plasticity*, Accepted pending revisions at Nature Scientific Data.

### Peer-Reviewed Journal Publications

**CE Priebe, DL Sussman, M Tang, JT Vogelstein**, *Statistical inference on errorfully observed graphs*, Accepted at JASA, arxiv.

### Peer-Reviewed Conference Proceedings

**F Petralia, JT Vogelstein, D Dunson**, *Multiscale Dictionary Learning for Estimating Conditional Distributions*, Neural Information Processing Systems (NIPS), 2013, manuscript.

## Invited Talks

05/14 **Big Statistics in Brain Science**, *Baylor College of Medicine*, Department of Neuroscience.

## Poster Presentations

2013 **JT Vogelstein, CE Priebe**, *Nonparametric Two-Sample Testing on Graph-Valued Data*, Duke Workshop on Sensing and Analysis of High-Dimensional Data.

## Other Publications

**R Yuste, J MacLean, JT Vogelstein, L Paninski**, *Imaging Action Potentials with Calcium Indicators*, Cold Spring Harb Protoc; 2011; doi:10.1101/pdb.prot5650, abstract, pdf.

## Reviewing

**Annals of Applied Statistics (AOAS)**.

## Work in Progress (some pre-prints available upon request)

**Robust Bayesian Inference via Lq-Likelihood**, *Joint work with DB Dunson, CE Priebe, Y Qin.*

## Unpublished Work

**A Six Degree-Of-Freedom Two-Photon Microscope for Functional Imaging in Awake Behaving Primates**, *Joint work with CE Connor CE, et al.*