



## Matthew Golub

Postdoctoral Research Fellow, Electrical Engineering

### Bio

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#### PROFESSIONAL EDUCATION

- Doctor of Philosophy, Carnegie Mellon University (2015)
- Bachelor of Science, Stanford University , EE-BS (2009)
- Master of Science, Stanford University , EE-MS (2009)

### Publications

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#### PUBLICATIONS

- **Computation Through Neural Population Dynamics.** *Annual review of neuroscience*  
Vyas, S., Golub, M. D., Sussillo, D., Shenoy, K. V.  
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- **New neural activity patterns emerge with long-term learning.** *Proceedings of the National Academy of Sciences of the United States of America*  
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- **Universality and individuality in neural dynamics across large populations of recurrent networks.** *Advances in neural information processing systems*  
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- **Reverse engineering recurrent networks for sentiment classification reveals line attractor dynamics.** *Advances in neural information processing systems*  
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2018; 7
- **Computation through Cortical Dynamics.** *Neuron*  
Driscoll, L. N., Golub, M. D., Sussillo, D.  
2018; 98 (5): 873–75

- **Learning by neural reassociation** *NATURE NEUROSCIENCE*  
Golub, M. D., Sadtler, P. T., Oby, E. R., Quick, K. M., Ryu, S. I., Tyler-Kabara, E. C., Batista, A. P., Chase, S. M., Yu, B. M.  
2018; 21 (4): 607-+
- **Brain-computer interfaces for dissecting cognitive processes underlying sensorimotor control** *CURRENT OPINION IN NEUROBIOLOGY*  
Golub, M. D., Chase, S. M., Batista, A. P., Yu, B. M.  
2016; 37: 53–58
- **Internal models for interpreting neural population activity during sensorimotor control** *ELIFE*  
Golub, M. D., Yu, B. M., Chase, S. M.  
2015; 4
- **Neural constraints on learning** *NATURE*  
Sadtler, P. T., Quick, K. M., Golub, M. D., Chase, S. M., Ryu, S. I., Tyler-Kabara, E. C., Yu, B. M., Batista, A. P.  
2014; 512 (7515): 423-U428
- **Motor cortical control of movement speed with implications for brain-machine interface control** *JOURNAL OF NEUROPHYSIOLOGY*  
Golub, M. D., Yu, B. M., Schwartz, A. B., Chase, S. M.  
2014; 112 (2): 411–29
- **Learning an Internal Dynamics Model from Control Demonstration.** *JMLR workshop and conference proceedings*  
Golub, M. D., Chase, S. M., Yu, B. M.  
2013: 606-614
- **Internal Models Engaged by Brain-computer Interface Control**  
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