

# Stanford

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## Dennis Wall

Associate Professor of Pediatrics (Systems Medicine), of Biomedical Data Science and, by courtesy, of Psychiatry and Behavioral Sciences

Pediatrics - Systems Medicine

### CONTACT INFORMATION

- **Lab Contact**

Heidi Chau - Administrator, Wall Lab

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### Bio

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#### BIO

Dr. Dennis P. Wall, PhD is Associate Professor of Pediatrics, Psychiatry and Biomedical Data Sciences at Stanford Medical School. He leads a lab in Pediatric Innovation focused on developing methods in biomedical informatics to disentangle complex conditions that originate in childhood and perpetuate through the life course, including autism and related developmental delays. For over a decade, first on faculty at Harvard and now at Stanford University, and as healthcare has shifted increasingly to the use of digital technologies for data capture and finer resolutions of genomic scale, Dr. Wall has innovated, adapted and deployed bioinformatic strategies to enable precise and personalized interpretation of high resolution molecular and phenotypic data. Dr. Wall has pioneered the use of machine learning and artificial intelligence for fast, quantitative and mobile detection of neurodevelopmental disorders in children, as well as the use of use of machine learning systems on wearable devices, such as Google Glass, for real-time “exclinical” therapy. These same precision health approaches enable quantitative tracking of progress during treatment throughout an individual’s life enabling big data generation of a type and scale never before possible, and have defined a new paradigm for behavioral detection and therapy that has won Dr. Wall several awards including a spot in the top ten of the World’s top 30 autism researchers. Dr. Wall has acted as science advisor to several biotechnology and pharmaceutical companies, has created and advised on cutting-edge approaches to cloud computing, and has received numerous awards, including the Fred R. Cagle Award for Outstanding Achievement in Biology, the Vice Chancellor’s Award for Research, three awards for excellence in teaching, the Harvard Medical School Leadership award, and the Slifka/Ritvo Clinical Innovation in Autism Research Award for outstanding advancements in clinical translation. He completed his PhD at the University of California, Berkeley and a National Science Foundation postdoctoral fellowship in Computational Genetics at Stanford University before joining the faculty at Harvard Medical School.

#### ACADEMIC APPOINTMENTS

- Associate Professor, Pediatrics - Systems Medicine
- Associate Professor, Biomedical Data Science
- Associate Professor (By courtesy), Psychiatry and Behavioral Sciences
- Member, Bio-X
- Member, Maternal & Child Health Research Institute (MCHRI)
- Member, Wu Tsai Neurosciences Institute

## PROFESSIONAL EDUCATION

- Fellow, Stanford University , Bioinformatics and Computational Genetics (2003)

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## LINKS

- Wall Lab Website: <http://wall-lab.stanford.edu/>

## Research & Scholarship

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### CURRENT RESEARCH AND SCHOLARLY INTERESTS

Systems biology for design of clinical solutions that detect and treat disease

## Teaching

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### COURSES

#### 2018-19

- Translational Bioinformatics: BIOE 217, BIOMEDIN 217, CS 275, GENE 217 (Win)
- Translational Bioinformatics Lectures: BIOMEDIN 218 (Win)

#### 2017-18

- Translational Bioinformatics: BIOE 217, BIOMEDIN 217, CS 275 (Win)

#### 2016-17

- Translational Bioinformatics: BIOE 217, BIOMEDIN 217, CS 275 (Win)

#### 2015-16

- Personalized Genomic Medicine: BIOS 234 (Spr)

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### STANFORD ADVISEES

#### Med Scholar Project Advisor

Michelle Han

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### GRADUATE AND FELLOWSHIP PROGRAM AFFILIATIONS

- Biology (School of Humanities and Sciences) (Phd Program)

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## Publications

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### PUBLICATIONS

- **Effect of Wearable Digital Intervention for Improving Socialization in Children With Autism Spectrum Disorder: A Randomized Clinical Trial.** *JAMA pediatrics*  
Voss, C., Schwartz, J., Daniels, J., Kline, A., Haber, N., Washington, P., Tariq, Q., Robinson, T. N., Desai, M., Phillips, J. M., Feinstein, C., Winograd, T., Wall, et al  
2019

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