

# James Chuang, PhD

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## areas of interest

- data science, data engineering, data visualization
- statistics, machine learning
- genomics, synthetic biology

## education

**2019** PhD, Biomedical Engineering, Boston University

thesis title: Genomic analyses of transcription elongation factors  
and intragenic transcription

research advisor: Fred Winston, PhD  
Professor of Genetics  
Harvard Medical School

**2013** BSc, Biomedical Engineering, Johns Hopkins University

research advisor: Jef D. Boeke, PhD, Dsc  
Director, Institute for Systems Genetics  
Professor of Biochemistry and Molecular Pharmacology  
NYU Langone Health

## publications (\*equal contribution)

**2020** Reim NI\*, **Chuang J\***, Jain D\*, Alver BH, Park PJ, Winston F (2020). **The conserved elongation factor Spn1 is required for normal transcription, histone modifications, and splicing in *Saccharomyces cerevisiae***. Nucleic Acids Research, doi:[10.1093/nar/gkaa745](https://doi.org/10.1093/nar/gkaa745)

**2018** Doris SM\*, **Chuang J\***, Viktorovskaya O, Murawska M, Spatt D, Churchman LS, Winston F (2018). **Spt6 is required for the fidelity of promoter selection**. Molecular Cell, doi:[10.1016/j.molcel.2018.09.005](https://doi.org/10.1016/j.molcel.2018.09.005)

**2018** **Chuang J**, Boeke JD, Mitchell LA (2018) **Coupling yeast golden gate and VEGAS for efficient assembly of the violacein pathway in *Saccharomyces cerevisiae***. Synthetic Metabolic Pathways, doi:[10.1007/978-1-4939-7295-1\\_14](https://doi.org/10.1007/978-1-4939-7295-1_14)

**2017** Aquino P, Honda B, Jaini S, Lyubetskaya A, Hosur K, Chiu JG, Ekladios I, Hu D, Jin L, Sayegh MK, Stettner AI, Wang J, Wong BG, Wong WS, Alexander SL, Ba C, Bensussen SI, Chou K, **Chuang J**, Gastler DE, Grasso DJ, Greifenberger JS, Guo C, Hawes AK, Israni DV, Jain SR, Kim J, Lei J, Li H, Li D, Li Q, Mancuso CP, Mao N, Masud SF, Meisel CL, Mi J, Nykyforchyn CS, Park M, Peterson HM, Ramirez AK, Reynolds DS,

Rim NG, Saffie JC, Su H, Su WR, Su Y, Sun M, Thommes MM, Tu T, Varongchayakul N, Wagner TE, Weinberg BH, Yang R, Yaroslavsky A, Yoon C, Zhao Y, Zollinger AJ, Stringer AM, Foster JW, Wade J, Raman S, Broude N, Wong WW, Galagan JE (2017). **Coordinated regulation of acid resistance in *Escherichia coli***. BMC Systems Biology, doi:[10.1186/s12918-016-0376-y](https://doi.org/10.1186/s12918-016-0376-y)

- 2015** Mitchell, LA\*, **Chuang J\***, Agmon N, Khunsriraksakul C, Phillips NA, Cai Y, Truong DM, Veerakumar A, Wang Y, Mayorga M, Blomquist P, Sadda P, Trueheart J, Boeke JD (2015). **Versatile genetic assembly system (VEGAS) to assemble pathways for expression in *S. cerevisiae***. Nucleic Acids Research, doi:[10.1093/nar/gkv466](https://doi.org/10.1093/nar/gkv466)
- 2015** Agmon N, Mitchell LA, Cai Y, Ikushima S, **Chuang J**, Zheng A, Choi W, Martin JA, Caravelli K, Stracquadanio G, Boeke JD (2015). **Yeast golden gate (yGG) for the efficient assembly of *S. cerevisiae* transcription units**. ACS Synthetic Biology, doi:[10.1021/sb500372z](https://doi.org/10.1021/sb500372z)
- 2013** Mitchell LA, Cai Y, Taylor M, Noronha AM, **Chuang J**, Dai L, Boeke JD (2013). **Multi-change isothermal mutagenesis: a new strategy for multiple site-directed mutations in plasmid DNA**. ACS Synthetic Biology, doi:[10.1021/sb300131w](https://doi.org/10.1021/sb300131w)

## teaching

- 2016** Teaching assistant, Control systems in biomedical engineering  
Prof. Ahmad S. Khalil  
ENG BE 402
- 2015** Teaching assistant, Biomedical measurements II  
Prof. Andrew C. Jackson  
ENG BE 492