

# Saurin Bipin Parikh

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Integrative Systems Biology Program	Email: <a href="mailto:saurinbp@gmail.com">saurinbp@gmail.com</a>
Dept. of Computational and Systems Biology	Website: <a href="https://www.sauriini.com">https://www.sauriini.com</a>
Center for Evolutionary Biology and Medicine	Github: <a href="https://github.com/sauriini">https://github.com/sauriini</a>

**Physician – Engineer – Scientist**  
**Problem solver**

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## PERSONAL

Nationality: Indian  
Visa Sponsorship: Required

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## EDUCATION

### **Doctor of Philosophy in Integrative Systems Biology**

*University of Pittsburgh School of Medicine*  
Pittsburgh, Pennsylvania, USA  
August 2018 to Present

### **Master of Science in Bioengineering**

*University of Pittsburgh Swanson School of Engineering*  
Pittsburgh, Pennsylvania, USA  
August 2016 to April 2018

### **Bachelor of Medicine, Bachelor of Surgery (M.B.,B.S.) [MD equivalent]**

*Smt. NHL Municipal Medical College*  
Ahmedabad, Gujarat, India  
July 2008 to June 2014

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## WORK EXPERIENCE

### **Graduate Research Assistant**

*Carvunis Lab, Department of Computational and Systems Biology*  
University of Pittsburgh School of Medicine  
August 2017 to Present

### **Technology Fellow**

*Coulter Translational Research Partners II Program*  
University of Pittsburgh Swanson School of Engineering  
January 2017 to June 2017

### **Student Intern**

*PECA Labs*  
January 2017 to April 2017

## SKILLS

### Programming Expertise

- Data management, data analytics, data visualization and version control
- MATLAB, R, Python, Bash, SQL, MySQL, Git, github

### Subject Expertise

- Human health and biology
- Evolutionary biology, systems biology, computational biology
- *De novo* gene birth, genome engineering, next-generation sequencing, genomics
- Phenomics, high-throughput screening, robotic handling
- Biostatistics

### Medical Product Development

- Product ideation, prototyping, stakeholder discovery, intellectual property analysis, human factor engineering, reimbursement strategy, clinical trial design

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## PUBLICATIONS

### Under review

Wacholder, A., **Parikh, S. B.**, Castilho Coelho, N., Acar, O., Houghton, C., Chou, L., Carvunis, A.-R. A vast evolutionary transient translome contributes to phenotype and fitness. **Cell Systems**.

### Published

**Parikh, S. B.\***, Van Oss, S. B.\*, Castilho Coelho, N.\*, Wacholder, A., Belashov, I., Zdancewicz, S., Michaca, M., Xu, J., Kang, Y. P., Ward, N. P., Yoon, S. J., McCourt, K. M., McKee, J., Ideker, T., VanDemark, A. P., DeNicola, G. M., & Carvunis, A.-R. (2022). On the illusion of auxotrophy: *met15Δ* yeast cells can grow on inorganic sulfur thanks to the previously uncharacterized homocysteine synthase Yll058w. **Journal of Biological Chemistry**, 0(0).

<https://doi.org/10.1016/j.jbc.2022.102697>

\*these authors contributed equally

**Parikh, S. B.**, Houghton, C., Van Oss, S. B., Wacholder, A., & Carvunis, A.-R. (2022). Origins, evolution, and physiological implications of *de novo* genes in yeast. **Yeast**, 39(9), 471–481.

<https://doi.org/10.1002/yea.3810>

**Parikh, S. B.**, Castilho Coelho, N., & Carvunis, A.-R. (2021). LI Detector: a framework for sensitive colony-based screens regardless of the distribution of fitness effects. **G3**, 11(2).

<https://doi.org/10.1093/g3journal/jkaa068>

Vakirlis, N., Acar, O., Hsu, B., Castilho Coelho, N., Van Oss, S. B., Wacholder, A., Medetgul-Ernar, K., Bowman, R. W., 2nd, Hines, C. P., Iannotta, J., **Parikh, S. B.**, McLysaght, A., Camacho, C. J., O'Donnell, A. F., Ideker, T., & Carvunis, A.-R. (2020). *De novo* emergence of adaptive membrane proteins from thymine-rich genomic sequences. **Nature Communications**, 11(1), 781.

<https://doi.org/10.1038/s41467-020-14500-z>

Widdowson, C., Ganhotra, J., Faizal, M., Wilko, M., **Parikh, S.**, Adhami, Z., & Hernandez, M. E. (2016). Virtual reality applications in assessing the effect of anxiety on sensorimotor integration in human postural control. **2016 38th Annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC)**, 33–36. <https://doi.org/10.1109/EMBC.2016.7590633>

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#### **TALKS** (\*presented by)

**Parikh, S. B.\***, Castilho Coelho, N., Carvunis, A.-R. (2019). LI Detector: Measuring small fitness effects in high throughput. EPiC, Evolution in Philadelphia Group, Philadelphia, PA, USA.

**Parikh, S. B.\***, Castilho Coelho, N., Carvunis, A.-R. (2020). LI Detector: Measuring small fitness effects in high throughput. Pittsburgh Area Yeast Meeting (PAYM), Pittsburgh, PA, USA.

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#### **POSTERS** (\*presented by)

Chou, L.\* , **Parikh, S. B.**, Castilho Coelho, N., Carvunis, A.-R. (2022). Searching the phenotypic impact of proto-genes in *Saccharomyces cerevisiae*. Integrative Systems Biology Open day, Pittsburgh, PA, USA.

**Parikh, S. B.\***, Castilho Coelho, N., Carvunis, A.-R. (2020). LI Detector: a framework for sensitive colony-based screens regardless of the distribution of fitness effects. Molecular Mechanisms in Evolution and Ecology Conference. European Molecular Biology Laboratory (EMBL), Online Conference.

**Parikh, S. B.\***, Castilho Coelho, N., Carvunis, A.-R. (2020). All Sizes Matter! Integrative Systems Biology Open day, Pittsburgh, PA, USA.

Castilho Coelho, N.\* , Vakirlis, N., Iannotta, J., McCourt, K., Acar, O., **Parikh, S. B.**, Van Oss, S. B., O'Donnell, A. F., Carvunis, A.-R. (2019). Proto-biology: Exploring the potential of a yeast proto-gene in *S. cerevisiae*. Yeast Research: Origins, Insights, Breakthroughs Meeting. Cold Spring Harbor, NY, USA.

**Parikh, S. B.\***, Carvunis, A.-R. (2018). How To Innovate: A Novel Method to Explore Evolutionary Novelty. Biomedical Graduate Student Association (BGSA) Symposium, Pittsburgh, PA, USA.

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#### **AWARDS**

##### **Travel Award**

September 2019

Biomedical Graduate Student Association (BGSA), University of Pittsburgh

##### **Randall Family Big Idea Competition – Third Place**

March 2017

Innovation Institute, University of Pittsburgh

**StartUp Blitz – Finalist**

January 2017

Innovation Institute, University of Pittsburgh

**ADDITIONAL INFORMATION****Licenses and Certifications**

- **Medical License and Registration**

June 2014 to Present

Registration No. G-52091, Gujarat Medical Council, India

**Committee Involvement**

- **Integrative Systems Biology (ISB) Program Admissions Committee**

August 2020 to April 2021

- **Integrative Systems Biology (ISB) Program Representative at Biomedical Graduate Student Association (BGSA)**

August 2019 to July 2020

**Hobbies**

Hiking, biking, cooking and photography.

**Languages**

- English – Fluent
- Hindi – Fluent
- Gujarati – Fluent