

## Narmada Sambaturu

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New Biological Sciences Building,  
Indian Institute of Science,  
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Website: <https://narmadasambaturu.github.io/>

**Research Interests** Computational Biology, Network approaches to Systems Biology, Epidemiology, Vaccines and immunotherapy, Cancer Genomics, Host-pathogen interactions.

**Education** **Doctor of Philosophy, Mathematical Biology Program,** 2015 - ongoing  
National Mathematics Initiative,  
Indian Institute of Science, Bangalore, India.  
Supervisors: Prof. Nagasuma Chandra, Prof. N. Srinivasan.

**Master of Science, School of Computing,** 2012 - 2015  
National University of Singapore, Singapore.  
Supervisor: Prof. Wing-Kin Sung.

**Bachelor of Engineering, Computer Science and Engineering,** 2005 - 2009  
M.S.Ramaiah Institute of Technology, Bangalore, India.  
affiliated to Visvesvaraya Technological University.

**Research Experience**

- **PhD student,** 2015 - ongoing  
Mathematical Biology Program, National Mathematics Initiative,  
Indian Institute of Science, Bangalore, India.  
Supervisors: Prof. Nagasuma Chandra, Prof. N. Srinivasan.
- **Visitor,** Oct 2016 - Dec 2016  
Department of Applied Mathematics,  
School of Mathematics,  
University of Leeds, Leeds, UK  
Research advisors: Prof. Carmen Molina-París, Prof. Grant Lythe.
- **Junior Research Fellow,** Mar 2015 - Jul 2015  
Indian Institute of Science, Bangalore, India.  
Research advisor: Prof. Nagasuma Chandra.
- **Intern,** Aug 2006  
Bioinformatics Centre,  
Indian Institute of Science, Bangalore, India.  
Research advisor: Prof. K. Sekar.

**Work Experience** **Developer, Tata Consultancy Services** 2009 - 2011  
Technology Excellence Group,  
Bangalore, India.

**Teaching Experience**

- Teaching Assistant for course *Current trends in drug discovery.* Jan 2018 - Mar 2018  
Indian Institute of Science, Bangalore, Karnataka, India.
- Learning Enabler, Tata Consultancy Services. Jan 2010 - Feb 2010  
Common Initial Learning Program. Bidadi, Karnataka, India.

## Publications

1. **Narmada Sambaturu**, Sumanta Mukherjee, Martín López-García, Carmen Molina-París, Gautam I. Menon, and Nagasuma Chandra.  
*Role of genetic heterogeneity in determining the epidemiological severity of H1N1 influenza.*  
PLoS Computational Biology 14(3) (2018): e1006069.
2. **Narmada Sambaturu**, Madhulika Mishra, and Nagasuma Chandra.  
*EpiTracer - An Algorithm for Identifying Epicenters in Condition-specific Biological Networks.*  
BMC genomics 17.4 (2016): 543.
3. **Narmada Sambaturu**, Madhulika Mishra, and Nagasuma Chandra.  
*EpiTracer - An Algorithm for Identifying Epicenters in Condition-specific Biological Networks.*  
Proceedings of the 2015 IEEE International Conference on Bioinformatics and Biomedicine (BIBM). IEEE Computer Society, 2015. (Best Student Paper)
4. **Narmada Sambaturu**  
*Towards Handling Repeats in Genome Assembly.*  
MSc dissertation, 2014.
5. Jayavel Sridhar, **Narmada Sambaturu**, Radhakrishnan Sabarinathan, Hong-Yu Ou, Zixin Deng, Kanagaraj Sekar, Ziauddin Ahamed Rafi, and Kumar Rajakumar.  
*sRNAsScanner: A Computational Tool for Intergenic Small RNA Detection in Bacterial Genomes.*  
PLOS ONE 5, no. 8 (2010): e11970
6. Annapurna P Patil, **Narmada Sambaturu**, Krittaya Chunhavitakul.  
*Convergence Time Evaluation of Algorithms in MANETs*  
International Journal of Computer Science and Information Security, IJCSIS 2009, Vol. 5, No. 1, pp. 144-149, September 2009

## Workshop and conference presentations

- **Narmada Sambaturu** and Nagasuma Chandra.  
Poster. *OptiNeo – an algorithm to optimise the number of neo-antigenic peptides for cancer immunotherapy.*  
Nature Big Data and Cancer Precision Medicine, Boston, Massachusetts, Oct 1 - 2 2018.
- **Narmada Sambaturu**, Sridhar Hannenhalli, and Nagasuma Chandra.  
Poster. *Cutting through the complexity of genomic data: A general method to identify candidate genes.*  
RECOMB/ISCB Conference on Regulatory and Systems Genomics with DREAM Challenges, New York, NY, Nov 19 - 21 2017.
- **Narmada Sambaturu**, Sumanta Mukherjee, Martín López-García, Carmen Molina-París, Gautam I. Menon, and Nagasuma Chandra.  
Talk. *Role of genetic heterogeneity in determining the epidemiological severity of H1N1 influenza.*  
Discussion meeting on Mathematical Models of Infection, Immunity and Inflammation, Indian Institute of Science, Bangalore. April 2017.

## Graduate Coursework

- PhD (IISc): Current Trends in Drug Discovery, Special Topics in Theoretical Biology.
- MSc (NUS): Advanced Combinatorial Methods in Bioinformatics, Advanced Algorithms, Knowledge Discovery and Data Mining, Modeling and Analysis Techniques in Systems Biology, Advanced Topics in Data Mining.

**Awards**

- Best Student Paper Award, 2015 IEEE International Conference on Bioinformatics and Biomedicine (BIBM).
- One of 50 students selected from all over India for participation in a summer camp in Biotechnology at M.S.Swaminathan Research Foundation, Chennai, India (April 2013).
- All India Rank 25 in Secondary School Certificate (Std X) (2003).