



# Laxmi Parida

## Curriculum Vitae

### Education

- 1995–1998 **Phd**, *Courant Institute, New York University, New York.*  
1993–1995 **Masters**, *Courant Institute, New York University, New York.*

### Experience

- 2019 - **IBM Fellow**, *IBM T J Watson Research Center, Yorktown Heights.*  
current
- 2019 - **IBM Master Inventor**, *IBM T J Watson Research Center, Yorktown Heights.*  
current
- 2016 - 2019 **Distinguished Research Staff Member**, *IBM T J Watson Research Center, Yorktown Heights.*
- 2014 - 2016 **Principal Research Staff Member**, *IBM T J Watson Research Center, Yorktown Heights.*
- 2010 - **Manager, Computational Genomics**, *IBM T J Watson Research Center, Yorktown Heights.*  
current
- 1998 - 2014 **Research Staff Member**, *IBM T J Watson Research Center, Yorktown Heights.*

### Research Interests

- |                       |   |
|-----------------------|---|
| Data-driven Analytics | <ul style="list-style-type: none"><li>○ Topological Data Analysis</li><li>○ Pattern Discovery</li><li>○ Algorithms &amp; Bioinformatics</li></ul> |
| Disease Genomics      | <ul style="list-style-type: none"><li>○ Cancer Genomics</li><li>○ NeuroGenomics</li></ul>   |

*IBM T J Watson Research Center – Yorktown Heights, NY 10598 – USA*

☎ +1 (914) 945 1376 • ✉ [parida@us.ibm.com](mailto:parida@us.ibm.com)

🌐 [researcher.ibm.com/person/us-parida](https://researcher.ibm.com/person/us-parida)

[IBM Research Genomics Group Page](#); [NYU-page](#)

Other  
Computational  
Genomics

- Microbiome/Metagenomics
- Epidemiological Genomics
- Population Genomics
- Plant Genomics

---

## Honors and Awards

- Watson Health GM Award 2021 (Tackle Challenges through Collaboration, Diversity & Inclusion)
- International Society for Computational Biology (ISCB) Distinguished Fellow, 2020
- Continuous Surveillance Theme Lead for GTO2021, 2020
- Special Accomplishment for contributions to COVID-19 Technology Taskforce, 2020
- Member, IBM Academy of Technology, 2019
- Outstanding IDT Achievement Award, 2019
- SheCanSTEM Initiative Champion, 2019
- Invention Plateau 17, 2019
- IBM Fellow, 2019
- IBM Research Technical Accomplishment: Metagenomics in Sequence the Food Supply Chain, 2018
- IBM Corporate Award, (Watson for Genomics), 2017
- IBM Research Technical Accomplishment: Discovering Permutation Patterns in Genomes, 2016
- IBM Research Technical Accomplishment: Malware Phylogeny, 2016
- IBM Research Outstanding Technical Accomplishment- Genographic , 2016
- Cacao Innovator Award, The Pod magazine for Cargill Cocoa and Chocolate, 2015
- IBM Research Technical Accomplishment: Cacao, 2011
- IBM Research Technical Accomplishment: Genographic, 2011
- The Janet Fabri Memorial Prize for an outstanding dissertation, Courant Institute, September, 1998
- The Sandra Belestine Award for outstanding performance by women in Mathematics or Computer Science, Courant Institute, April, 1996
- Gold medal for First Rank in B.Sc. (major: Mathematics), Bombay University, 1993

*IBM T J Watson Research Center – Yorktown Heights, NY 10598 – USA*

☎ *+1 (914) 945 1376* • ✉ [parida@us.ibm.com](mailto:parida@us.ibm.com)

🌐 [researcher.ibm.com/person/us-parida](https://researcher.ibm.com/person/us-parida)

[IBM Research Genomics Group Page](#); [NYU-page](#)

---

## Editorial Experience

- Senior Associate Editor, Journal of Computational Biology
- Associate Editor, SIAM Journal of Discrete Mathematics
- Editorial Board, BMC Bioinformatics
- Associate Editor, IEEE/ACM Transactions on Computational Biology and Bioinformatics
- Guest Editor:
  - LNCS Volumes, 2010, 2016, 2017, 2018, 2019
  - LIPICs volume, Dagstuhl Publishing, 2018
  - BMC Genomics, 2014
  - BMC Bioinformatics, 2010
  - Information & Computation, Elsevier, 2011

---

## Advisory Services

- Review panels of NSF, NIH, DOE
- Advisory Board: Cancer Research UK
- Advisory Board: NYU Tandon School of Engineering
- Program committee member (2015-21) in RECOMB, WABI, APBC, GIW, ISBRA, ISMB, ECCB, RECOMB-AB, RECOMB-CG, SPIRE, ICDM, KDD, BIBM, AAI, ECCB, ISMCO

---

## Technical Press/Youtubes (recent only)

### Videos:

- [TED talk](#) on Food Sustainability: *What if the best fertilizer was an algorithm ?*
- [She'sTech Keynote on Women in Computing](#), Brazil.
- [Dies Natalis Keynote](#), Wageningen, Netherlands.

### Press

- [Forbes](#): *A Future Of Safer Thanksgivings: Using Algorithms To Predict Food Dangers*
- [Wageningen Press](#): *Using Big Data to Breed Perfect Potatoes*
- [Forbes](#) Big Data Can Reveal Why Cancer Therapies Fail
- [Frontline Genomics News](#) *Using AI to Discover Dark Matter DNA*
- [Digital Trends](#) *IBM Research is using A.I. algorithms to unlock the secrets of dark matter DNA*
- [IEEE Press](#) *IBM Watson Makes a Treatment Plan for Brain-Cancer Patient in 10 Minutes; Doctors Take 160 Hours*
- [BBC](#): *How knowing your genetic code could lengthen your life*
- [Point-of-view: Génétique](#): *LES MATHÉMATIQUES ALGORITHMIQUES POUR DÉTERMINER LES CAUSES DES MALADIES*

### BLOG (IBM Research):

- [Helping to Untangle Cancer Drug Resistance with Data](#)
- [Dark Matter Matters: AI Makes DNA Dark Matter Useful](#)

IBM T J Watson Research Center – Yorktown Heights, NY 10598 – USA

☎ +1 (914) 945 1376 • ✉ [parida@us.ibm.com](mailto:parida@us.ibm.com)

🌐 [researcher.ibm.com/person/us-parida](https://researcher.ibm.com/person/us-parida)

[IBM Research Genomics Group Page](#); [NYU-page](#)

- [Cracking the Cancer Code with Watson Genomics](#)
- [Brainiacs: Applying Watson for Genomics to better understand brain tumors](#)
- [Genomics and AI push the boundary of precision medicine in blood cancer](#)

IBM mentions:



- [100 Icons of Progress](#)
  - [Sustainable Cacao](#)
  - [Genographic Project](#)

## Professional Activities

### Chairing Conferences

- [ACM BCB](#), Sept 13-16, 2020, Atlanta.
- [WABI](#), August 20-22, 2018, Helsinki, Finland.
- [ISMB \(Computational Biology Track\)](#), July 6-10, 2018, Chicago, USA.
- [ICDCIT](#), January 15-18, 2016, 2017, 2018, 2019 Bhubaneswar, India.
- Comparative Genomics ([RECOMB-CG 2014](#)), October 19-22, 2014, Cold Spring Harbor Laboratory, New York, USA.
- Models and Algorithms for Genome Evolution ([MAGE](#)), August 23-26, 2013, Cantons de l'Est, Montreal, Canada.
- [ICT Strategies](#) for bridging biology and precision medicine, ([Schloss Dagstuhl 2013](#)), August 18-23, 2013, Wadern, Germany. [Manifesto](#).
- Structure Discovery in Biology: Motifs, Networks and Phylogenies, ([Schloss Dagstuhl 2012](#)), July 16-20, 2012, Wadern, Germany.
- Combinatorial Pattern Matching ([CPM 2010](#)), June 21-23, 2010, New York, USA.
- Structure Discovery in Biology: Motifs, Networks and Phylogenies, ([Schloss Dagstuhl 2010](#)), June 06-11, 2010, Wadern, Germany, [Proceedings](#)
- Asia Pacific Bioinformatics Conference ([APBC 2010](#)), Jan 18-21, 2010, Bangalore, India [BMC Proceedings](#)
- Center for Discrete Mathematics and Theoretical Computer Science (DIMACS) workshop (April 27-29, 2009) on [Algorithmics in Human Population Genomics](#), Rutgers University, USA
- Symposium on Computational Biology & Bioinformatics [ISBB06](#), Dec 15-17, 2006, Bhubaneswar, India.
- Center for Discrete Mathematics and Theoretical Computer Science (DIMACS) workshop (June 20-22, 2005) on [Biology & Regularities in Data](#), Rutgers University, USA. [Program](#).

### PC Services

- Program committee member (2015-21) in RECOMB, WABI, APBC, GIW, ISBRA, ISMB, ECCB, RECOMB-AB, RECOMB-CG, SPIRE, ICDM, KDD, BIBM, AAAI, ECCB, ISMCO

## Patents

IBM T J Watson Research Center – Yorktown Heights, NY 10598 – USA

☎ +1 (914) 945 1376 • ✉ [parida@us.ibm.com](mailto:parida@us.ibm.com)

🌐 [researcher.ibm.com/person/us-parida](https://researcher.ibm.com/person/us-parida)

[IBM Research Genomics Group Page](#); [NYU-page](#)

- **45+** [List at US PTO](#)

---

## Publications

- **1 monograph**  
[Pattern Discovery in Bioinformatics: Theory and Algorithms](#)  
Author: Laxmi Parida  
Publisher: Chapman & Hall/CRC; 1 edition (July 16, 2007), 532 pages,  
ISBN-10: 1584885491, ISBN-13: 978-1584885498.
- **8** edited volumes
- **200+** peer-reviewed publications, as listed here:
  - [my DBLP](#) (Computer Science)
  - [my Pubmed](#) (Biomedical and Life Sciences)
  - [my zbMATH](#) (Mathematics)

---

## Invited Talks

- **150 presentations list** including Plenary, Keynotes, Colloquia, Tutorials, Public Talks

---

## Phd students supervised/mentored

- Marta Mele (2009). Current: Post-doctoral Research Fellow, Department of Stem Cell and Regenerative Biology, Harvard.
- Pier Francesco (2011). Current: Post-doctoral Research Fellow, Harvard School of Public Health and the Broad Institute
- Marc Pybus (2013)
- Deniz Yorukoglu (2014)
- Oyetunji Ogundijo (2015)
- Delasa Aghamirzhai (2015)
- Eliran Avni (2015)
- Anna Paola Carrieri (2014-15)
- Sarah Percival (2020-21)
- Negin Karisani (2020-21)

---

## Post-doctoral Fellows supervised

- Niina Haiminen (2009-10). Subsequent position: Research staff member, Computational Genomics, IBM T J Watson Research
- Asif Javed (2009-12). Subsequent position: Research scientist, Genome Institute of Singapore, A\*STAR, Singapore
- Filippo Utro (2011-14), Subsequent position: Research staff member, Computational Genomics, IBM T J Watson Research
- David Haws (2012-14), Subsequent position: Research staff member, Watson Cognitive, IBM T J Watson Research

*IBM T J Watson Research Center – Yorktown Heights, NY 10598 – USA*

☎ *+1 (914) 945 1376* • ✉ [parida@us.ibm.com](mailto:parida@us.ibm.com)

🌐 [researcher.ibm.com/person/us-parida](https://researcher.ibm.com/person/us-parida)

[IBM Research Genomics Group Page](#); [NYU-page](#)

- Dan He (2012-14). Subsequent position: Research staff member, Computational Genomics, IBM T J Watson Research
- Aldo Guzman Saenz, 2016-2018, Subsequent position: Research staff member, Watson Cognitive, IBM T J Watson Research
- Chaya Levovitz, 2015-2018, Subsequent position: Research staff member, Watson Cognitive, IBM T J Watson Research
- Sheema Sameen, 2016-2019
- Enrico Siragusa, 2016-2018, Subsequent position: Scientist at Amazon
- Subrata Saha, 2017-2020, Subsequent position: Scientist at Columbia University
- Aritra Bose, 2019-2021 Subsequent position: Research staff member, Watson Cognitive, IBM T J Watson Research.

*IBM T J Watson Research Center – Yorktown Heights, NY 10598 – USA*

 +1 (914) 945 1376 •  [parida@us.ibm.com](mailto:parida@us.ibm.com)

 [researcher.ibm.com/person/us-parida](https://researcher.ibm.com/person/us-parida)

*IBM Research Genomics Group Page; NYU-page*