

Bhaskar Ray Chaudhury

☎ +49-1577-617-2380
✉ braycha@mpi-inf.mpg.de

Personal Details

Date of Birth **7th August 1993**,
Kochi, Kerala,
India.

Education

- 2017–2021 **PhD (Summa Cum Laude) in Computer Science (Dr. rer. nat.)**,
Max Planck Institute for Informatics and Saarland University, Saarbrücken, Germany,
Supervisors: Kurt Mehlhorn, Karl Bringmann.
- 2015–2017 **Graduate School of Computer Science**,
Saarland University, Saarbrücken, Germany.
- 2011–2015 **Bachelor in Technology (B. Tech.)**,
National Institute of Technology, Trichy, Tamil Nadu.

Awards

- 2020 **Best Paper with a Student Lead Author Award**,
21st ACM Conference on Economics and Computation (EC),
Paper: EFX Exists for Three Agents.
- Exemplary Paper in the Theory Track Award**,
21st ACM Conference on Economics and Computation (EC),
Paper: EFX Exists for Three Agents.

Publications

- 2021 **Dividing Bads is Harder than Dividing Goods: On the Complexity of Fair and Efficient Division of Chores** ,
Bhaskar Ray Chaudhury, Jugal Garg, Ruta Mehta, Peter McGlaughlin,
Submitted.
- Nash Social Welfare for 2-value Instances**,
Hannaneh Akrami, Bhaskar Ray Chaudhury, Kurt Mehlhorn, Golnoosh Shahkarami, Quentin Vermande,
Submitted.
- Improving EFX Guarantees through Rainbow Cycle Number**,
Bhaskar Ray Chaudhury, Jugal Garg, Kurt Mehlhorn, Ruta Mehta, Pranabendu Misra,
Proc. of the 22nd ACM Conference on Economics and Computation (EC).
- Fair and Efficient Allocations under Subadditive Valuations**,
Bhaskar Ray Chaudhury, Jugal Garg, Ruta Mehta,
Proc. of the 35th AAAI Conference on Artificial Intelligence (AAAI).

Competitive Allocation of a Mixed Manna,

Bhaskar Ray Chaudhury, Jugal Garg, Ruta Mehta, Peter McGlaughlin,
Proc. of the 32nd Symposium on Discrete Algorithms (SODA).

2020 **EFX Exists for Three Agents,**

Bhaskar Ray Chaudhury, Jugal Garg, Kurt Mehlhorn,
Proc. of the 21st ACM Conference on Economics and Computation (EC).

A Little Charity Guarantees Almost Envy-Freeness,

Bhaskar Ray Chaudhury, Telikepalli Kavitha, Kurt Mehlhorn, Alkmini Sgouritsa,
Proc. of the 31st Symposium on Discrete Algorithms (SODA),
Full version appeared in SIAM Journal on Computing (SICOMP).

2019 **Polyline Simplification has Cubic Complexity,**

Karl Bringmann, Bhaskar Ray Chaudhury,
Proc. of the the 35th Symposium on Computational Geometry (SoCG),
Invited to Journal on Computational Geometry (JoCG) special issue.

2018 **Sketching, Streaming and Fine-Grained Complexity of (Weighted) LCS,**

Karl Bringmann, Bhaskar Ray Chaudhury,
Proc. of the 38th Foundations of Software Technology and Theoretical Computer Science (FSTTCS).

Combinatorial Algorithms for General Linear Arrow-Debreu Markets,

Bhaskar Ray Chaudhury, Kurt Mehlhorn,
Proc. of the 38th Foundations of Software Technology and Theoretical Computer Science (FSTTCS).

On Fair Division of Indivisible Items,

Bhaskar Ray Chaudhury, Yun Kuen Cheung, Jugal Garg, Naveen Garg, Martin Hoefer, Kurt Mehlhorn,
Proc. of the 38th Foundations of Software Technology and Theoretical Computer Science (FSTTCS).

Invited Talks

2021 **On the Existence of EFX Allocations,**

Workshop on Fair Resource Allocation: Concepts, Algorithms and Complexity ,
22nd ACM Conference on Economics and Computation (EC 2021), Budapest, Hungary.

2021 **Discrete Fair Division,**

Colloquium Talk, University of Illinois at Urbana-Champaign,
Part of the Illinois Computer Science Speakers Series.

2020 **On the Existence of EFX Allocations,**

Colloquium Talk, University of Cologne.

2019 **Towards Efficient Almost Envy-Free Allocations,**

Workshop on Complexity in Algorithmic Game Theory,
39th IARCS Annual Conference on Foundations of Software Technology and Theoretical Computer Science (FSTTCS 2019), IIT Bombay.

Conference Talks

2018–2020 I gave the conference talk for all but one papers mentioned in “Publications”, in their respective conferences.

Teaching

Seminars **Reading Group in Algorithms**,
Organizer (Summer 2019, Summer 2020),
Max Planck Institute for Informatics (MPI-INF).

Topics in Fair Division,
Organizer (Winter 2019),
Max Planck Institute for Informatics (MPI-INF).

Lectures **Algorithms (CS 473)**,
Instructor (Fall 2021),
University of Illinois at Urbana Champaign (UIUC).

Algorithms and Data Structures,
Tutor (Winter 2016, Winter 2017),
Max Planck Institute for Informatics (MPI-INF).

Algorithmic Game Theory, Mechanism Design and Computational Economics,
Teaching Assistant (Winter 2017),
Max Planck Institute for Informatics (MPI-INF).

Peer Reviewing

Conferences ESA'21, EC'21, SODA'21, ICDCS'21, EC'20, SoCG'20, SOSA'20, ESA'20, WINE'20,
IPEC'20, ICALP'19, STACS'19, ESA'19, FSTTCS'19, WINE'19, SAGT'19, SoCG'18.

Journals ACM Transactions on Algorithms, SIAM Journal on Discrete Mathematics.