

Kush Grover

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Education

- **Technical University of Munich** **Munich**
Ph.D. in Computer Science, Supervised by Prof. Jan Křetínský 2019–Present
- **Chennai Mathematical Institute** **Chennai**
Masters in Computer Science, CGPA: 9.09/10 2017–2019
- **Thesis: Learning 1-clock Timed Automaton**
Supervised by B. Srivathsan
- **Indian Statistical Institute** **Bangalore**
Bachelors in Mathematics, Percentage: 73.46% 2014–2017

Publications

- Jonis Kiesbye, Kush Grover, Pranav Ashok, Jan Kretinsky.
Planning Via Model Checking with Decision-Tree Controllers. In ICRA 2022.
(upcoming)
- Maximilian Weininger, Kush Grover, Shruti Mishra, and Jan Kretinsky. Guaranteed Trade-Offs in
Dynamic Information Flow Tracking Games. In CDC 2021. (paper)
- Kush Grover, Fernando dos Santos Barbosa, Jana Tumova, and Jan Kretinsky. Semantic
Abstraction-Guided Motion Planning for scLTL Missions in Unknown Environments. In RSS 2021.
(paper, presentation)

Research Interests

- Verification and Synthesis
- Model Checking
- Learning
- Temporal Logics
- Stochastic systems
- Quantum systems

Talks

- RSS 2021: Semantic Abstraction-Guided Motion Planning for scLTL Missions in Unknown
Environments.
- Highlights 2021 and MOVEP 2021: Semantic Abstraction-Guided Motion Planning for scLTL
Missions in Unknown Environments
- Highlights 2020 and MOVEP 2020: An Anytime Algorithm For Reachability in Uncountable
MDPs.

- May 2019: Thesis defense on 'Learning 1-clock Timed Automaton'.

Skills and experiences

Experiences.....

- **Teaching Assistant Experience:**
 - 2018-19: Theory of Computation, Model Checking and System Verification.
 - 2020-21: Model Checking, Quantitative Verification.
 - 2021-22: Model Checking, Quantitative Verification.
- **Conferences and Workshops attended:** SAT+SMT School 2018, CAALM 2019, Marktoberdorf 2019, Highlights 2020, MOVEP 2020, Highlights 2021, MOVEP 2021, RSS 2021, ETAPS 2022, Highlights 2022, MOVEP 2022.

Computer Skills.....

- **Programming Languages:** Python, C, C++, Haskell, Java
- \LaTeX
- Model Checkers: NuSMV, PRISM, STORM and UPPAAL.

Achievements

- Awarded INSPIRE Scholarship by DST, Govt. of India for higher studies.
- Secured rank 11 and 12 in national level examinations JEST 2017 and JEST 2019 respectively.

Interests and extra-curricular activity

- Travelling
- Football
- Gaming
- Guitar
- Photography

References

- **J. Křetínský** (Professor, Technical University of Munich)
Email: jan.kretinsky@tum.de
- **B. Srivathsan** (Assistant Professor, Chennai Mathematical Institute)
Email: sri@cmi.ac.in