

RUPANSHU SOI

rsoi@stanford.edu

Education

- 2022–Now **Stanford University.** PhD in Computer Science.
Advisor: Alex Aiken.
- 2018–22 **BITS Pilani.** B.E. in Computer Science (with Distinction).
Thesis: Scaling Implicit Parallelism with Index Launches. [PDF](#).
Advisor: Elliott Slaughter, SLAC National Accelerator Laboratory.

Experience

- 2022 **NVIDIA Graphics.** Automated generation of error-checking code in the PTXAS parser.
- 2021 **SLAC National Accelerator Laboratory.** Program analysis and optimizations in the Regent compiler.
- 2021 **Université du Québec à Montréal.** Charting LLVM using a microservice reverse-engineering approach.
- 2020 **BITS Pilani.** Development of an implicitly parallel meshfree solver in Regent.

Publications

- 2023 **Relight: Automatic, Distributed Checkpointing with Fast-Forward Replay.**
Elliott Slaughter, [RS](#), Michael Bauer, and Alex Aiken.
In review.
- 2021 **Index Launches: Scalable, Flexible Representation of Parallel Task Groups.** [Paper](#).
[RS](#), Michael Bauer, Sean Treichler, Manolis Papadakis, Wonchan Lee, Patrick McCormick,
Alex Aiken, and Elliott Slaughter.
SC 2021.
- 2020 **An Implicitly Parallel Meshfree Solver in Regent.** [Paper](#).
[RS](#), Nischay Mamidi, Elliott Slaughter, Kumar Prasun, Anil Nemili, and SM Deshpande.
PAW-ATM 2020.

Awards

- 2021 **MITACS Globalink Graduate Fellowship.** 15,000 CAD for graduate study in Canada. Declined.
- 2019 **BITS Pilani Merit Scholarship.** Spring, Fall 2019.
- 2019 **Sir CV Raman Prize.** Department of Physics, BITS Pilani.