Rupanshu Soi

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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

2024	**Relight: Automatic, Distributed Checkpointing with Fast-Forward Replay.** Elliott Slaughter, <u>RS</u>, Michael Bauer, and Alex Aiken. *In review.*
2021	**Index Launches: Scalable, Flexible Representation of Parallel Task Groups.** Paper. <u>RS</u>, 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. <u>RS</u>, Nischay Mamidi, Elliott Slaughter, Kumar Prasun, Anil Nemili, and SM Deshpande. *PAW-ATM 2020.*

Awards

2024	**Qualcomm Innovation Fellowship.**
2021	**MITACS Globalink Research Internship.**
2019	**BITS Pilani Merit Scholarship.** Spring, Fall 2019.
2019	**Sir CV Raman Prize.** Department of Physics, BITS Pilani.