

Daniel Rammer

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EDUCATION

Ph.D. in Computer Science

August 2017 – July 2021 (expected)

Colorado State University

Fort Collins, CO

- Advisor / Co-Advisor: Dr. Shrideep Pallickara / Dr. Sangmi Lee Pallickara
- Dissertation: Harnessing Spatiotemporal Data Characteristics to Facilitate Large-Scale Analytics over Voluminous, High-Dimensional Observational Datasets

M.S. in Computer Science

August 2014 – May 2018

Colorado State University

Fort Collins, CO

- Advisor: Dr. Christos Papadopoulos
- Thesis: Monitoring and Characterizing Application Service Availability
- GPA: 3.87 / 4.0

B.S. in Computer Science

August 2008 – May 2013

University of Wisconsin, Oshkosh

Oshkosh, WI

- Major GPA: 3.6 / 4.0

PROFESSIONAL EXPERIENCE

Graduate Research Assistant - Distributed Systems

August 2017 – Present

Colorado State University

Fort Collins, CO

- *Project Sustain*: Backend development for suite of tools to establish end-to-end understanding over urban sustainability data.
- *Atlas*: An HDFS-compliant distributed spatiotemporal file system allowing targeted retrieval over spatial and temporal filtering criteria. Interoperates with Apache Spark through a domain-specific optimized DataFrame implementation.
- *Anamnesis*: Facilitates near in-memory analytics speeds by querying distributed data sketches with an HDFS-compliant interface.

Graduate Teaching Assistant - Distributed Systems

August 2018 – December 2018

Colorado State University

Fort Collins, CO

- Managed projects (lab work and group term) and presented periodic lectures covering modern distributed system paradigms at a graduate level.

Graduate Research Assistant - Network Security

May 2014 – August 2017

Colorado State University

Fort Collins, CO

- *Proddle*: Implemented and oversaw global application service monitoring framework to identify Internet outages and characterize the cause.
- *BGPmon*: Managed capture and distributed storage of global BGP messages to detect prefix hijacks and routing anomalies.

Solutions Developer

August 2012 – May 2014

VersiFit Technologies (Atomic Learning)

Appleton, WI

- *ETL*: Developed tooling to extract, transform, and load data into education-based data warehousing deployments.

PUBLICATIONS

Daniel Rammer, Kevin Bruhwiler, Paahuni Khandelwal, Sam Armstrong, Shrideep Pallickara and Sangmi Pallickara. Small is Beautiful: Distributed Orchestration of Spatial Deep Learning Workloads. Proceedings of the 13th IEEE/ACM Conference on Utility and Cloud Computing. Leicester, UK. 2020. [31% Acceptance Rate]

Daniel Rammer, Sangmi Lee Pallickara, and Shrideep Pallickara. Towards Timely, Resource-Efficient Analyses Through Spatially-Aware Constructs within Spark. Proceedings of the 13th IEEE/ACM Conference on Utility and Cloud Computing. Leicester, UK. 2020. [31% Acceptance Rate]

Kevin Bruhwiler, Paahuni Khandelwal, **Daniel Rammer**, Samuel Armstrong, Sangmi Lee Pallickara, and Shrideep Pallickara. Lightweight, Embeddings Based Storage and Model Construction Over Satellite Data Collections. Proceedings of the IEEE International Conference on Big Data (IEEE BigData). Atlanta, USA. 2020. [15.5% Acceptance Rate]

Daniel Rammer, Sangmi Lee Pallickara, and Shrideep Pallickara. ATLAS: A Distributed File System for Spatiotemporal Data. Proceedings of the 12th IEEE/ACM Conference on Utility and Cloud Computing. Auckland, NZ. 2019. [29.2% Acceptance Rate]

Daniel Rammer, Thilina Buddhika, Matthew Malensek, Shrideep Pallickara, and Sangmi Lee Pallickara. Enabling Fast Exploratory Analyses Over Voluminous Spatiotemporal Data Using Analytical Engines. IEEE Transactions on Big Data. 2019. [5.16 Impact Factor]

Daniel Rammer, Walid Budgaga, Thilina Buddhika, Shrideep Pallickara, and Sangmi Lee Pallickara. Alleviating I/O Inefficiencies to Enable Effective Model Training Over Voluminous, High-Dimensional Datasets. Proceedings of the IEEE International Conference on Big Data (IEEE BigData). Seattle, USA. 2018. [18.9% Acceptance Rate]

AWARDS / MERITS

Academic All-American

NCAA Division III Track & Field

University of Wisconsin, Oshkosh

March 2010

- Competing at the National Championship while displaying academic excellence.

INTERESTS / HOBBIES

Fitness: I'm sure my most impressive performances are behind me, but running, exercise, and various athletics provide an important change of pace.

Outdoors: I grew up spending many weekends camping, fishing, and hunting in the Northwoods of Wisconsin. Backpacking and hiking has allowed me to explore secluded regions in the Colorado Rockies.