Niraj Tolia receives 2023 Parallel Data Lab Distinguished Alumni Award

By Michael Cunningham

Carnegie Mellon University's Parallel Data Lab (PDL) has recognized Niraj Tolia (BS '02, MS '03, Ph.D. '07), CEO and Co-Founder of Alcion, as the recipient of its 2023 Distinguished Alumni Award. PDL announced the honor at its 29th Annual Workshop and Retreat, held November 6-8 at the Omni Bedford Springs Resort in Bedford, PA.

"It is truly humbling to receive the Distinguished Alumni Award from PDL, the research group that played such a pivotal role in shaping my career," said Tolia. "The supportive atmosphere and the unwavering support I received during my time with PDL were instrumental in my growth as a technologist and as an individual. They not only provided me with invaluable knowledge and experience, but also made me feel like an integral part of their academic family. This award is a testament to the nurturing environment PDL provides, and I am deeply honored to be associated with such an exceptional group of individuals."

PDL is academia's premiere data systems research center, and it has served as a learning laboratory for hundreds of cross-disciplinary Carnegie Mellon undergraduate, master's, and Ph.D. students since it first launched in 1992. The Distinguished Alumni Award recognizes PDL alumni who have excelled in their careers at addressing a broad spectrum of data infrastructure challenges and opportunities.

"Niraj was an obvious choice for PDL Distinguished Alumni," said Greg Ganger, PDL director. "His remarkable success creating new data systems technologies and building multiple successful companies to productize them is a great example for the new generation of PDL students. Of course, I saw first-hand how creative, collaborative and capable he was while he was here as a student, and those attributes are hallmarks of the PDL community. His ability to combine that with vision, entrepreneurial energy, team building, and culture establishment have made him a leader in the field. We are proud that PDL has been a part of his journey, and thrilled to have him back to talk to all of our PDL researchers as PDL Distinguished Alumni."

Niraj Tolia joined PDL as a Ph.D. candidate in Computer Engineering, and he says that it served as an instrumental training ground that helped him develop the tools that he would later utilize to launch a successful entrepreneurial career in distributed systems, storage, and data management.

"Being part of PDL was eye-opening and instructive in many different ways," said Tolia. "In particular, my exposure to PDL's industry partners was transformative. It provided me with invaluable insights into the intricate challenges of real-world distributed systems problems and

equipped me with the skills to bridge the gap between cutting-edge research and practical implementation. Learning to translate and communicate our complex findings in a way that not only resonated with our industry partners but also influenced their work was a remarkable and rewarding journey."

After earning his Ph.D. from Carnegie Mellon University in 2007, Tolia began his career at HP Labs, conducting research on next-generation, data-centric datacenters and Infrastructure-as-a-Service (IaaS) systems. He then went on to serve in multiple technical leadership and executive roles at industry-defining startups, including Maginatics (acquired by Dell EMC) and Kasten (acquired by Veeam Software). The impact of this work on storage and data protection can be seen in the industry-leading products, first created at the startups, that have continued to grow post acquisition. Today, Tolia is the CEO and Co-Founder of Alcion, which provides a security-first, AI-driven Backup-as-a-Service (BaaS) platform that helps Microsoft 365 administrators quickly and intuitively protect data from cyber threats and accidental data loss.

Tolia says that PDL has a reputation within the storage industry of developing top-notch systems professionals who add a lot of value to their respective organizations from the moment they enter the workforce.

"PDL presents a very unique opportunity and, when leveraged properly, can give students an invaluable boost for their careers," said Tolia. "Technical skills will carry someone far, but for the next steps in the career, it is about all these soft skills working across groups and companies. The exposure to this crucial set of skills that PDL provides to students is hard to find in most other universities."

With this recognition, Niraj Tolia joins previous PDL Distinguished Alumni Award honorees: Daniel Stodolsky (2022), Bianca Schroeder (2015), Erik Riedel (2010), Howard Gobioff (2008), and Hugo Patterson (2007).

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About the Parallel Data Lab

Since its inception in 1992, Carnegie Mellon University's Parallel Data Lab (PDL) has pushed the state-of-the-art with new data system architectures, technologies, and design methodologies. PDL researchers regularly interact and collaborate with technical leaders at the many top data systems companies and institutions that support its work, including at its annual PDL events. PDL's innovative and industry-influencing research spans computer storage systems, database systems, cloud computing infrastructure, ML/AI systems, and other related topics. For example, its NASD (Network Attached Secure Disks) project developed scalable storage architectures that continue to be central to modern large-scale storage systems. Its seminal work on storage automation, database automation, high-performance parallel ML, integration of new storage technologies, and more also continue to impact the field. Perhaps

most importantly, great new PDLers each year join the hundreds of PDL alumni already in R&D roles throughout the data systems industry. Learn more about PDL.