Dahlia Malkhi, Ph.D.

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Last updated: December 9, 2019

Biographical sketch

Applied and foundational researcher since the early nineties in broad aspects of reliability and security in distributed systems, working on robust large-scale distributed systems infrastructure.

Joined Facebook/Calibra in June 2019 as a lead researcher. Previously, was a founding member and principal researcher of VMware Research. Spent ten years at Microsoft Research Silicon Valley from 2004 until the shutting of the lab in November 2014. Prior to joining Microsoft, was an associate professor at the Hebrew University of Jerusalem (1999-2007), left for a brief sabbatical, but was bitten by the Silicon Valley bug and remained there.

Notable milestones: ACM fellow, 2011. IBM Faculty award recipient 2003 and 2004. German-Israeli Foundation (G.I.F.) Young Scientist career award, 2002. Simons Institute advisory board member 2019-2021 and co-chair as of 2020. Associate editor of IEEE Transactions on Dependable and Secure Computing (TDSC) 2014-2016. Associate editor of the Distributed Computing Journal since 2002. Usenix ATC 2019 program chair. LADIS 2012 program chair. Locality 2007 program chair. PODC 2006 program chair. Locality 2005 program chair. DISC 2002 program chair. Supervised 6 PhD students and 10 MSc students, authored and co-authored over 100 publications in top journals and selective peer-reviewed conferences.

Professional Experience

Lead Researcher, Facebook/Calibra   (June 2019-present)
   Impacting the blockchain technology.

Principal Researcher and founding member, VMware Research Group   (December 2014-2019)
   Founding member of a new systems research group at the office of the CTO of VMware.

Principal Researcher, Microsoft Research, Silicon-Valley   (August 2004-November 2014)
   Started assignment as researcher, promoted to senior researcher in August 2005, promoted to principal researcher in August 2006, and promoted to partner level in January 2011.

Professor of Computer Science, Hebrew University of Jerusalem   (1999 - 2007)
   Started assignment as a *senior lecturer*, received tenure and promoted to an *associate professor* position on October 2002.

Senior Researcher, AT&T Labs-Research, New Jersey   (1995 - 1999)
    Secure Systems Research group. Started assignment as a Senior Technical Staff Member and
    promoted to Principal Technical Staff Member in 1997.

Research Associate, Principles of Parallel Processing group   (1988 - 1990)
    IBM T. J. Watson Research Center, NY.

Noteworthy Roles

- Member of the Simons Institute Advisory Board 2019-2021 (co-chair as of 2020).

- Program committee co-chair, Usenix ATC 2019.

- Associate editor, IEEE Transactions on Dependable and Secure Computing, 2014-2016.

- Associate editor, Distributed Computing (Springer-Verlag), 2002-present.

- Program committee chair 2006, member of the steering committee 2006-2008, ACM Symposium on Principles of Distributed Computing (PODC).

- Award committee chair 2006, member 2007, 2011, 2012, ACM PODC Edsger W. Dijkstra Prize in Distributed Computing.

- Program co-chair, Workshop on Locality Preserving Distributed Computing Methods (LOCALITY) 2005 and 2007.

- Program committee chair 2002, member of the steering committee, 2002-2004, International Symposium on DIStributed Computing (DISC).

- Program committee co-chair, Workshop on Large Scale Distributed Systems and Middleware (LADIS) 2012.

- PC member of many conferences, too many to list.

Paper awards

- Best paper at Usenix ATC 2016; with my intern Amy Tai, jointly with Michael Wei, Michael Freedman, and Ittai Abraham.

- Best paper at IEEE IPDPS, 2006; with my PhD student Coby Fernandess.

- Best paper at Usenix Security, 2004; with Noam Nisan, Benny Pinkas and my PhD student Yaron Sella.

- Best student paper at the International Symposium on Distributed Computing (DISC 2003); with my PhD student Ittai Abraham.

Keynotes

- *New Approaches in BFT*, Chicago Booth Cryptocurrencies and Blockchains Conference, Nov 2019.

- *Byzantine Fault Tolerance meets Flexibility*, Richard M. Karp Distinguished Lecture, Nov 2019

- *Beyond Classical BFT Approaches*, CES 2019

- *Flexible BFT*, at BC '19

- *Flexible BFT: Separating BFT Protocol Design from the Fault Model* , at Tokenomics 2019

- *Flexible Byzantine Fault Tolerance*, at she256 conference 2019 ,

- *Blockchains in the Lens of BFT*, at Khoury Distinguished Lecture Series, March 2019

- *Three-Step BFT Replication Rule*, at Swiss Blockchain Winter School, Feb 2019

- *BFT in the lens of Blockchains and Blockchains in the lens of BFT*, Gerald M. Masson Distinguished Lecture Series, Johns Hopkins University , Oct 2018

- *Blockchain in the lens of BFT*, Usenix ATC '18

- *Blockchain in the lens of Byzantine Fault Tolerance*, BITCOIN '18

- *Nakamoto Consensus in the lens of Byzantine Fault Tolerance*, Tsinghua-Cornell Blockchain Winter School 2017

- *BFT Reconfiguration*, Swiss Blockchain Summer School 2017

- *Beyond Paxos*, BIRS workshop 11/2016

- *Randomized Gossip Methods: From Grapevine to SWIM*, PWL Conference 2016

- *Foundations of Reliable Distributed Systems in Practice*, Women in Theory workshop 2016

- *CorfuDB: Transactional Data Services over a Shared Log*, Distinguished Colloquium Series, Princeton, fall 2014

- *What happens when systems go elastic?*, International Symposium on Stabilization, Safety, and Security of Distributed Systems (SSS) 2012, Toronto, Canada.

- *CORFU: Going Beyond Paxos*, International Symposium on DIStributed Computing (DISC) 2011, September 2011, Rome, Italy.

- *CORFU: Transactional Storage at the Speed of Flash*, LADIS '2011, August 2011, Seattle, Washington.

- *Dynamic Reconfiguratoin in Distributed Systems*. In workshop on Theoretical Aspects of Dynamic Distributed Systems (TADDS 2010), September 2010, Boston, MA.

- *Backend Consistency for Large-Scale Live Services.* In 9th International Workshop on Peer-to-Peer Systems (IPTPS '10), April 2010, San Jose, California.

- *Virtually Synchronous Paxos.* In "30 year perspective on replication", November 2007, Ascona, Swizerland.

- *FairPlay - A Secure Two-Party Computation System.* In EU Workshop on Secure Multiparty Protocols (SMP 2004), October 2004, Amsterdam, The Netherlands.

- *Locality Aware network Solutions.* In Frontiers in Distributed Information Systems (FDIS 2004), July 2004, San Francisco.

- *Locality Aware network Solutions.* In the 6th Workshop on Distributed Data and Structures (WDAS'2004), July 2004, Lausanne, Switzerland.

- *From Byzantine Agreement to Practical Survivability.* In the International Workshop on Self-Repairing and Self-Configurable Distributed Systems (RCDS 2002) October 2002, Osaka, Japan.

- Invited tutorial, *Distributed Systems Security.* In the Porquerolles spring school on Distributed Computing, May 2003, Porquerolles, France.

Advised Students

PhD students:

Grisha Chockler, graduated 2003;
Yaron Sella, graduated 2004;
Elan Pavlov, graduated 2005;

Ittai Abraham, graduated 2008;
Danny Bickson, graduated 2007;
Yaacov Fernandess, graduated 2010.

MSc students:

Yaacov Fernandess, graduated 2002 ;
Ofer Margoninsky, graduated 2002 ;
Keren Horowitz, graduated 2002 ;
Danny Bickson, graduated 2003 ;
David Rabinowitz, graduated 2004;
Barak Merimovich, graduated 2004;
Elliot Jaffe, graduated 2005;
Tzachy Reinman, graduated 2006;

Oren Dobzinksy started 2001;
Nir Sonenschein, started 2003.

PhD thesis-committee external member:

Michael Wei, UCSD;
Leandre Jehl, Norway;
Richar Ekwall, Swiss Federal Institute of Technology (EPFL), Switzerland;
Adnan Agabria, The Technion, Israel;
David Breitgand, The Hebrew University of Jerusalem, Israel;
Xavier Defago, Swiss Federal Institute of Technology (EPFL), Switzerland;
Carlo Marcetti, University of Rome "La Sapienza", Italy;
Ronen Kat, University of Beer-Sheva, Israel;
Konstantin Shagin, The Technion, Israel;
Roie Melamed, The Technion, Israel;
Nuno Santos, EPFL, Switzerland.

Publications

I co-authored over 150 publications in top conference and journal venues. I do my best to maintain my recent publications under `https://wordpress.com/view/dahliamalkhi.wordpress.com`; dblp does a pretty decent job of keeping track of all publications.