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Education

Ph.D. in Computer Science, FCT/Universidade NOVA de Lisboa, Dec. 2003.

Professional Experience

Jul 2014-today Associate Professor, DI/FCT/Universidade NOVA de Lisboa.

2004-Jul 2014 Assistant Professor, DI/FCT/Universidade NOVA de Lisboa.

Courses: Transactional Systems (Phd, lecturer: 08-15); Mobile and Pervasive Computing (Msc, lecturer: 07-10, 12-13); Advanced Topics in Distributed Systems (Msc, lecturer: 03-08); Distributed Systems (Bsc, lecturer: 04-10, 11-14); Informatics for Sciences and Engineering (Bsc, lecturer: 12-14).

Jan-Jul 2011 Invited Researcher, INRIA-Regal/Lip6;

Apr-Jul 2001 Research Intern, Microsoft Research, Cambridge, UK.

1998-2003 PhD Student and teaching assistant, DI/FCT/Universidade NOVA de Lisboa.

1997-1998 Software Engineer, Loyaltech Portugal.

Recent and Main Publications

Valter Balegas, Sérgio Duarte, Carla Ferreira, Rodrigo Rodrigues, Nuno Preguiça, Mahsa Najafzadeh, Marc Shapiro, “Putting the Consistency back into Eventual Consistency”, in *Proc. EuroSys '15*, 2015, ACM.

Cheng Li, Joao Leita, Allen Clement, Nuno Preguica, Rodrigo Rodrigues, Viktor Vafeiadis, “Automating the Choice of Consistency Levels in Replicated Systems”, in *Proc. Usenix ATC '14*, 2014, Usenix.

Paulo Sérgio Almeida, Carlos Baquero, Ricardo Gonçalves, Nuno Preguiça, and Victor Fonte, “Scalable and Accurate Causality Tracking for Eventually Consistent Stores”, in *Proc. DAIS 2014 (LNCS)*, 2014, Springer.

Sérgio Duarte, David Navalho, Heitor Ferreira, Nuno Preguiça, “Scalable Data Processing for Community Sensing Applications”, *Mobile Networks and Applications*, 18:3, 357-372, June 2013, Springer.

João Soares, João Lourenço, Nuno Preguiça, “MacroDB: Scaling Database Engines on Multicores”, in *Proc. Euro-Par'13 (LNCS 8097)*, Aug. 2013, Springer.

Masoud Saeida Ardekani, Pierre Sutra, Marc Shapiro, Nuno Preguiça, “On the Scalability of Snapshot Isolation”, in *Proc. Euro-Par'13 (LNCS 8097)*, Aug. 2013, Springer.

Cheng Li, Daniel Porto, Allen Clement, Johannes Gehrke, Nuno Preguiça, and Rodrigo Rodrigues, “Making geo-replicated systems fast as possible, consistent when necessary”, in *Proc. OSDI'12*, Oct. 2012, Usenix.

Rui Garcia, Rodrigo Rodrigues, and Nuno Preguiça, “Efficient middleware for byzantine fault tolerant database replication”, in *Proc. EuroSys '11*, Apr. 2011, ACM.

Marc Shapiro, Nuno Preguiça, Carlos Baquero and Marek Zawirski. “Conflict-free Replicated Data Types”, in *Proc. SSS 2011 (LNCS 6976)*, Oct. 2011, Springer.

Nuno Preguiça, Joan Marquès, Marc Shapiro, Mihai Letia, “A commutative replicated data type for cooperative”. In *Proc. ICDCS 2009*, June 2009, IEEE.

Paulo Sérgio Almeida, Carlos Baquero, Nuno Preguiça, David Hutchison, “Scalable Bloom Filters”, *Information Processing Letters*, 101:6, 2007, Elsevier.

Nuno Preguiça, et. al., “Reservations for Conflict Avoidance in a Mobile Database System”, in *Proc. MobiSys 2003*, May 2003, ACM.

More at <http://scholar.google.com/citations?user=lidiuDWsAAAAJ> (citation: 1168).

Other Publications in International Journals, Conferences and Workshops

ICDCS (2001), CSCW (2000), Euro-Par (2010,2011), DISC (brief:2012), PODC (brief:2012), DEBS (2003), OSR (2010,2015), ADBIS-DASFAA (2001), HotPar (2011), HotOS (2001), EWDC (2013), CoopIS (2003), W-PSDS (2014), PaPoC (2015), PaPEC (2014), CloudDP (2013), BEATCS (2011), Mobiquitous (2011), ICPADS (2010), Ladis (2009), HotDep (2008), IJCIS (2006), IWCES (2006, 2007), CoopIS (2003), ERSADS (1999, 2001), SAC (1999, 2015), COOTS (1997), CRIWG (1997, 1998, 2005, 2009)

Keynotes and tutorials

Keynotes: “SwiftCloud: Fault-Tolerant Geo-Replication Integrated all the Way to the Client Machine”, at Workshop on Planetary-Scale Distributed Systems, Oct. 2014.

Tutorials: “From strong to eventual consistency: getting it right” (with Marc Shapiro), at International Conference on Principles of Distributed Systems (OPODIS), 2013.

Awards and projects

Awards: Google Research Award - joint with Marc Shapiro (2009).

Awards to students: Fraunhofer Portugal Challenge Awards - MSc, David Navalho (2010).

Research Grants: Amazon AWS in Education Grant (2012,2014).

Research Projects:

SyncFree - Large-scale computation without synchronisation, (Local PI, 2013-16, FP7, EU).

Hyrax - CrowdSourcing of Mobile devices for Edge-Cloud Development (2014-18, FCT/MCT - CMU Portugal, Portugal)

SwiftComp - Fast and Efficient Incremental Computation for Cloud Computing Environments (Principal Investigator - PI, 2013-15, FCT/MCT, Portugal)

RepComp - Replication of components to improve the performance and reliability of multicore systems (PI, 2010-13, FCT/MCT)

Byzantium - Efficient Byzantine fault-tolerant database replication (PI, 2008-11, FCT/MCT)

FEW - Files EveryWhere (PI, 2005-08, FCT/MCT)

Concordant: CRDTs for Consistency without concurrency control, in Cloud and P2P systems (local PI, 2010-13, ANR, France)

Synergy-VM: A Blueprint for the Next Generation Execution Environments (2011-14, FCT/MCT)

LiveFeeds - P2P Dissemination of Web Syndication Content (2008-2011, FCT/MCT)

Post-graduation activities

Phd students: 3 on-going.

MSc students: 24 concluded; 3 on-going.

Software

Third-party software based on publications:

Riak Data Type, <http://docs.basho.com/riak/2.0.0/theory/concepts/crdts/>;

Dotted Version Vectors at Basho's Riak,

<http://docs.basho.com/riak/latest/theory/concepts/context/#Dotted-Version-Vectors>;

Other industry uses of Conflict-free Replicated Data Types:

http://en.wikipedia.org/wiki/Conflict-free_replicated_data_type#Industry_use.

Software associated with publications:

Dotted Version Vectors/Sets, PODC 2012, DAIS'14,

<https://github.com/ricardobcl/Dotted-Version-Vectors>

Scalable Bloom Filters, IPL 2007, <https://sites.google.com/site/scalablebloomfilters/>

Service

Program committee: international conferences (selected): EuroSys shadow PC co-chair (2015), OPODIS (2014), PaPEC (2014), TRIOS (2013), IPIN (2011-13), Euro-Par - Mobile Comp. track (2005, 2007:global chair), ICDCS (2006), Mobisys (2004).

Steering committee: Workshop on Principles and Practice of Consistency for Distributed Data.

Project evaluation committee: *LACCIR Collaborative ICT Research Federation and its Virtual Institute*, 2007, 2008, 2009, 2011, 2012.

Scientific committee: international programming contests: South Western Europe Regional ACM Programming Contest (2006, 2007).