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Data of Birth: May 13, 1982
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Education

Ph.D. Information Systems and Computer Engineering, Technical University of Lisbon, 2012.

Thesis: *Topology Management for Unstructured Overlay Networks*.

Advisor: Professor Luís Rodrigues.

Final Mark: Pass with Distinction.

Ms.C. Computer Science and Engineering, University of Lisbon, 2007.

Thesis: *Gossip-based Broadcast Protocols*.

Advisor: Professor Luís Rodrigues.

Final Mark: 20 (out of 20).

Bs.C. Computer Science and Engineering, University of Lisbon, 2006.

Final Mark: 16 (out of 20).

Current Position

Postdoc Researcher, Distributed Systems Group, INESC-ID Lisboa, September 2012–now.

Past Positions

Junior Researcher, Distributed Systems Group, INESC-ID Lisboa, August 2007–September 2012.

Junior Researcher, DIALNP Research Group, at the Lasige Laboratory, University of Lisbon, August 2006–August 2007.

Software Developer, at CIISEG, Technical University of Lisbon, November 2001–August 2006.

Research Interests

Distributed Systems.

Fault-Tolerance.

Peer-to-Peer Systems.

Overlay Networks.

Gossip Protocols.

Cloud Computing.

Autonomic Systems.

Security.

Research

Journal Publications

2012

A-OSGi: a framework to support the construction of autonomic OSGi-based applications.

João Ferreira, **João Leitão** and Luís Rodrigues.

International Journal on Autonomous and Adaptive Communications Systems, Vol. 5, No. 3, pp. 292-310, 2012.

X-BOT: A Protocol for Resilient Optimization of Unstructured Overlay Networks.

João Leitão, João P. Marques, José Pereira, and Luís Rodrigues. IEEE Transactions on Parallel and Distributed Systems (Published online January 2012).

Book Chapters

2010

Gossip-Based Broadcast.

João Leitão, José Pereira and Luís Rodrigues.

In Handbook of Peer-to-Peer Networking, X. Shen, H. Yu, J. Buford, M. Akon (Eds.), Springer 2010.

ISBN: 978-0-387-09750-3

On Adding Structure to Unstructured Overlay Networks.

João Leitão, Nuno Carvalho, José Pereira, Rui Oliveira, and Luís Rodrigues.

In Handbook of Peer-to-Peer Networking, X. Shen, H. Yu, J. Buford, M. Akon (Eds.), Springer 2010.

ISBN: 978-0-387-09750-3

Conference and Workshop Publications

2013

Bounded Gossip: A Gossip Protocol for Large-Scale Datacenters.

Miguel Branco, **João Leitão**, and Luís Rodrigues.

Proceedings of the 28th Symposium On Applied Computing (SAC), Coimbra, Portugal March 18-22 2012.

2012

MobUser: publish-subscribe communication for mobile nodes.

Mauro Silva, **João Leitão**, and Carlos Ribeiro.

Proceedings of the 18th IEEE International Conference on Parallel and Distributed Systems (ICPADS), Singapore, December 2012.

2011

N-party BAR Transfer.

Xavier Vilaa, **João Leitão**, Miguel Correia, and Luís Rodrigues.

Proceedings of the 15th International Conference On Principles Of Distributed Systems (OPODIS), Toulouse, France, December 2011.

N-party BAR Transfer: Motivation, Definition, and Challenges.

Xavier Vilaa, **João Leitão**, and Luís Rodrigues.

Proceedings of the 3rd Workshop on Theoretical Aspects of Dynamic Distributed Systems (TADDS), Rome, Italy, 20-22 September 2011.

2010

Thicket: A Protocol for Building and Maintaining Multiple Trees in a P2P Overlay.

Mário Ferreira, **João Leitão**, and Luís Rodrigues.

Proceedings of the 29th IEEE Symposium on Reliable Distributed Systems (SRDS), New Delhi, India, 31 October-3 November 2010.

Flexible and Efficient Resource Location in Large-Scale Systems.

João Alveirinho, João G. Paiva, **João Leitão**, and Luís Rodrigues.

Proceedings of the 4th ACM SIGOPS/SIGACT International Workshop on Large-Scale Distributed Systems and Middleware (LADIS), Zurich, Switzerland, 28-29 July 2010.

Observable Non-Sybil Quorums Construction in One-Hop Wireless Ad Hoc Networks.

Diogo Mónica, **João Leitão**, Luís Rodrigues, and Carlos Ribeiro.

Proceedings of the 40th Annual IEEE/IFIP International Conference on Dependable Systems and Networks, Chicago, Illinois, USA, June, 2010.

Mobile Users are not Static Users on the Move.

João Garcia, **João Leitão**, and Paulo Ferreira.

Proceedings of the 28th Brazilian Symposium on Computer Networks and Distributed Systems (SBRC), Gramado, Brazil, May, 2010.

Balancing Gossip Exchanges in Networks with Firewalls.

João Leitão, Robbert van Renesse, and Luís Rodrigues.

Proceedings of the 9th International Workshop on Peer-to-Peer Systems (IPTPS '10), San Jose, CA, USA, 27 April, 2010.

RASM: A Reliable Algorithm for Scalable Multicast.

Mouna Allani, **João Leitão**, Benoit Garbinato and Luís Rodrigues.

Proceedings of the 18th Euromicro International Conference on Parallel, Distributed and Network-Based Computing (PDP), Italy, Pisa, Feb, 2010.

2009

A-OSGi: A framework to support the construction of autonomic OSGi-based applications.

João Ferreira, **João Leitão** and Luís Rodrigues.

Proceedings of the Third International ICST Conference on Autonomic Computing and Communication Systems, Limassol, Cyprus, Sep, 2009.

X-BOT: A Protocol for Resilient Optimization of Unstructured Overlays.

João Leitão, João P. Marques, José Pereira and Luís Rodrigues.

Proceedings of the 28th IEEE International Symposium on Reliable Distributed Systems, Niagara Falls, New York, U.S.A., Sep, 2009.

On the Use of Radio Resource Tests in Wireless ad hoc Networks.

Diogo Mónica, **João Leitão**, Luís Rodrigues, and Carlos Ribeiro.

Proceedings of the 3rd Workshop on Recent Advances on Intrusion-Tolerant Systems (WRAITS), Estoril, Portugal, Jun, 2009.

2008

Large-Scale Peer-to-Peer Autonomic Monitoring.

João Leitão, Liliana Rosa and Luís Rodrigues.

Proceedings of the Distributed Autonomous Network Management Systems Workshop (DANMS), New Orleans, USA, Oct, 2008.

2007

Epidemic Broadcast Trees.

João Leitão, José Pereira and Luís Rodrigues.

Proceedings of the 26th IEEE International Symposium on Reliable Distributed Systems, Beijing, China, October, 2007.

HyParView: a membership protocol for reliable gossip-based broadcast.

João Leitão, José Pereira and Luís Rodrigues.

Proceedings of the 37th Annual IEEE/IFIP International Conference on Dependable Systems and Networks, Edinburgh, UK, June, 2007.

Other Publications

Topology Management for Unstructured Overlay Networks.

João Leitão.

Ph.D.'s Thesis, Technical University of Lisbon, Sep, 2012.

Rollerchain: a DHT for High Availability (Poster).

João Paiva, **João Leitão**, and Luís Rodrigues.

Proceedings of the Workshop on Posters and Demos Track (PDT '11) of Middleware, Lisbon, Portugal, December, 2011.

Overnesia: a resilient overlay network for virtual super-peers (Technical Report).

João Leitão, Luís Rodrigues.

INESC-ID, Technical Report 56, 2008.

On the Structure of Unstructured Overlay Networks (Fast Abstract).

João Leitão, José Pereira and Luís Rodrigues.

In Supplement of the 38th Annual IEEE/IFIP International Conference on Dependable Systems and Networks, Anchorage, Alaska, USA, June, 2008.

Gossip-based Broadcast Protocols.

João Leitão.

Master's Thesis, University of Lisbon, May, 2007.

Publications in Portuguese

MobUser: Uma plataforma para partilha de informação centrada no utilizador para dispositivos móveis (Short paper).

Mauro Silva, **João Leitão**, and Carlos Ribeiro.

Actas do quarto Simpósio de Informática, Caparica, Portugal, Sep, 2012.

PEC: Protocolo Epidémico para Centros de dados.

Miguel Branco, **João Leitão**, and Luís Rodrigues.

Actas do quarto Simpósio de Informática, Caparica, Portugal, Sep, 2012.

ChainReaction: uma Variante de Replicação em Cadeia com Coerência Causal+.

Sérgio Almeida, **João Leitão**, and Luís Rodrigues.

Actas do quarto Simpósio de Informática, Caparica, Portugal, Sep, 2012.

Transferência de Dados entre Grupos de Processos no Modelo BAR (Best Paper Award).

Xavier Vilaa, **João Leitão**, and Luís Rodrigues.

Actas do terceiro Simpósio de Informática, Coimbra, Portugal, Sep, 2011.

Thicket: Construção e Manutenção de Múltiplas Árvores numa Rede entre Pares.

Mário Ferreira, **João Leitão**, and Luís Rodrigues.

Actas do segundo Simpósio de Informática, Minho, Portugal, Sep, 2010.

Curiata: Uma arquitectura P2P auto-organizável para uma localização flexível e eficiente de recursos.

João Alveirinho, **João Leitão**, João Paiva, and Luís Rodrigues.

Actas do segundo Simpósio de Informática, Minho, Portugal, Sep, 2010.

Construção Observável de um Sistema de Quorum Não Sybil na Vizinhança Rádio de uma Rede Ad-Hoc Sem Fios. Diogo Mónica, **João Leitão**, Luís Rodrigues, and Carlos Ribeiro. Actas do primeiro Simpósio de Informática, Lisboa, Portugal, Sep, 2009.

Aplicação da informática na criação de um dicionário. Case Study: Lexicon. **João Leitão**.

Actas do Colóquio Internacional: LEXICON - Dicionário de Grego Português, Lisboa, Portugal, 2008.

Oral Presentations

Conferences and Workshops

HyParView: a membership protocol for reliable gossip-based broadcast, at the COST 295 1st Workshop on Dynamic Networks, May 7-8 2007, Universit degli Studi di Salerno, Salerno, Italy

HyParView: A Membership Protocol for Reliable Gossip-Based Broadcast, at the 37th Annual IEEE/IFIP international Conference on Dependable Systems and Networks (DSN07), Edinbourg, UK, June 28, 2007.

Epidemic Broadcast Trees, at the 26th IEEE International Symposium on Reliable Distributed Systems (SRDS07), Beijing, CHINA, October 12, 2007

Topology Aware Gossip Overlays, at the COST 295 Dynamo, Discussion Workshop and MC Meeting, February 18-20 2008, University of Freiburg, Freiburg, Germany

X-BOT: A Protocol for Resilient Optimization of Unstructured Overlays, at the 28th IEEE International Symposium on Reliable Distributed Systems (SRDS'10), Niagara Falls, New York, U.S.A., Sep, 2009.

Balancing Gossip Exchanges in Networks with Firewalls at the 9th International Workshop on Peer-to-Peer Systems (IPTPS'10), San Jose, CA, USA, 27 April, 2010.

MobUser: Uma plataforma para partilha de informação centrada no utilizador para dispositivos móveis at the 4th Portuguese Symposium on Informatics, Universidade Nova de Lisboa, Portugal, 7 September, 2012.

Invited Talks

Managing the topology of unstructured overlay networks. at GRASCOMP 2012 - Doctoral School Day in Cloud Computing, Universit Catholique de Louvain, Louvain-la-Neuve, Belgium, 20th of November 2012.

Managing the topology of unstructured overlay networks. at Eurecom - Networking and Security Group, Sophia-Antipolis, France, 2nd of October 2012.

Aplicação da informática na criação de um dicionário - case study: Lexicon at the Colóquio "Lexicografia e Semântica Lexical: caminhos a seguir na feitura de um Dicionário de Grego", 24 and 25 November 2006, Faculdade de Letras da Universidade de Lisboa, Lisboa, Portugal

Professional Activities

Reviewer

IEEE Transactions on Parallel and Distributed Systems.

Elsevier Computer Communications.

External Reviewer

IEEE Transactions on Parallel and Distributed Systems.

International Symposium on DIStributed Computing (DISC) - 2008.

International Symposium on Distributed Objects, Middleware, and Applications (DOA) 2007/2008/2009.

IEEE Workshop on Dependable Parallel, Distributed and Network-Centric Systems (DPDNS) - 2009.
Annual IEEE/IFIP International Conference on Dependable Systems and Networks (DSN) - 2007/2009.
International Conference on Distributed Computing Systems (ICDCS) - 2010/2012.
IEEE International Parallel & Distributed Processing Symposium (IPDPS) 2008.
ACM/IFIP/USENIX International Middleware Conference (Middleware) 2007/2008.
International Conference On Principles Of Distributed Systems (OPODIS) 2008/2009/2011.
ACM Symposium on Principles of Distributed Computing (PODC) 2010.
IEEE International Conference on Self-Adaptive and Self-Organizing Systems (SASO) 2009.
International Symposium on Reliable Distributed Systems (SRDS) 2007/2010.
International Symposium on Stabilization, Safety, and Security of Distributed Systems (SSS) 2009.
Portuguese Symposium on Informatics (INFORUM) 2012.

Conference Organizations

Local Organization Chair

2nd ACM Symposium on Cloud Computing, 2011, Cascais, Portugal.

Registration Chair

23rd ACM Symposium on Operating Systems Principles (SOSP) 2011, Cascais, Portugal.
 ACM/IFIP/USENIX 12th International Middleware Conference 2011, Lisboa, Portugal.

Other

Member of the ACM, 2008–Present.
 Member of the IEEE, 2008–Present.
 Member of the Usenix, 2010–Present.

Advising

Ms.C. Students

Mauro André Mendes Silva (Co-Advisor).
 Thesis *MobUser: An User-Centric Platform for information sharing among mobile devices.*
 Technical Institute, Technical University of Lisbon, 2012.
 Final Mark: 17.

During my PhD I have collaborated on the work of the following Ms.C. students

Miguel Jorge Cardoso Branco (Expected: 2012). Thesis: *To be defined.*
 Sergio Filipe Garrau dos Santos Almeida (Expected: 2012). Thesis: *To be defined.*
 Xavier Araújo Morgado Vilaça (2011). Thesis: *N-Party BAR Transfer.*
 Mário Rui Vazão Vasco Ferreira (2010). Thesis: *Live Streaming in Overlay Networks.* (Awarded the 2009/2019 *Prémio Prof. Luís Vidigal.*)
 João Pedro Fernandes Alveirinho (2010). Thesis: *Resource Location in P2P Systems.*

João Tiago de Jesus Elias Ferreira (2009). Thesis: *A-OSGi: A framework to support the construction of autonomic OSGi-based applications*.

Diogo Mónica (2009). Thesis: *Thwarting the Sybil Attack in Wireless Ad Hoc Networks*.

Honors, Awards, & Fellowships

Best Paper Award at the Portuguese Third Symposium on Informatics (2011) with the paper: *Transferência de Dados entre Grupos de Processos no Modelo BAR*.

Student Grant for attending the COST 295 Dynamo, Discussion Workshop and MC Meeting.

Ph.D. Grant from the Fundação para a Ciência e Tecnologia (2008).

Student Grant for attending the COST 295 1st Workshop on Dynamic Networks (2007).

Student Grant for attending the 37th Annual IEEE/IFIP international Conference on Dependable Systems and Networks (DSN07).

Miscellaneous

Member of the research team in the following research projects

ADAAS - Assuring Dependability in Architecture-based Adaptive Systems.
Founded by FCT under grant (CMU-PT/ELE/0030/2009).

HPCoLSI - High-Performance Computing over the Large-Scale Internet.
Founded by FCT under grant (PTDC/EIA-EIA/102212/2008).

REDICO - Dynamic reconfiguration of communication protocols.
Founded by FCT under grant (PTDC/EIA/71752/2006).

P-SON: Probabilistically-Structured Overlay Networks.
Founded by FCT under grant (POSC/EIA/60941/2004).

Other Activities

One year studies of Japanese (at the New University of Lisbon) (2006/2007).

Jodo (Martial Art). Graduation: Ikkyu.

Iaido (Martial Art). Graduation: (none).