## Luiz Eduardo Buzato

Institute of Computing (IC) University of Campinas (UNICAMP) Av. Albert Einstein, 1251 13084-971, Campinas, São Paulo Brazil Phone: +55 19 3521 5876 Fax: +55 19 3521 5847

 $\hbox{E-Mail: buzato@ic.unicamp.br}$ 

http://www.ic.unicamp.br/~buzato

#### A Education

| 2008-2009 | Postdoctorate at LABOS, School of Computer and Communication Sciences (SCCS), École Polytechnique Fédérale de Lausanne (EPFL), Lausanne, VD, Switzerland. |
|-----------|---|
| 1990-1994 | PhD, Computer Science, University of Newcastle upon Tyne, Newcastle upon Tyne, England, UK.   |
| 1987-1990 | MSc in Computer Engineering, UNICAMP, São Paulo, Brazil.  |
| 1981-1985 | Bachelor of Engineering, Computer Science, UNICAMP, São Paulo, Brazil.  |

## **B** Professional Experience

#### B.1 Academic

| Period            | Position            | Institution |  |
|-------------------|---------------------|-------------|--|
| 05/2000 - present | Associate Professor | IC, UNICAMP |  |
| 01/1995 - 04/2000 | Assistant Professor | IC, UNICAMP |  |
| 03/1988 - 12/1994 | Research Assistant  | IC, UNICAMP |  |

#### B.2 System Engineering, Management & Extension

| Period          | Position (Role)                            | Institution             |
|-----------------|--|-------------------------|
| 09/2014-06/2019 | Coordinator of the Extension Programme     | IC, UNICAMP             |
| 04/2002-05/2005 | Head of the Computing Centre               | CC, UNICAMP             |
| 08/1998-08/2000 | Head of Department                         | IC, UNICAMP             |
| 05/1998-04/2000 | Vice-Coordinador of the Graduate Programme | IC, UNICAMP             |
| 05/1996-04/1998 | Coordinator of the Informatics Commission  | IC, UNICAMP             |
| 03/1996-05/2000 | Member of the Institute's Governance Board | IC, UNICAMP             |
| 01/1986-02/1988 | Principal Software Engineer                | CC, UNICAMP             |
| 01/1980-12/1980 | Programmer                                 | MeadWestvaco (WestRock) |

## C Teaching

| Graduate Courses: 1995 - 2021              | # Classes | Average Class Size |
|--|-----------|--------------------|
| Advanced Distributed Algorithms            | 1         | 13                 |
| Concurrent Programming                     | 1         | 14                 |
| Distributed Algorithms                     | 3         | 12                 |
| Distributed Operating Systems              | 2         | 20                 |
| Distributed Systems                        | 2         | 22                 |
| Undergraduate Courses: 1988 - 2021         | # Classes | Average Class Size |
| Algorithms and Data Structures             | 1         | 46                 |
| Comparative Study of Programming Languages | 1         | 27                 |
| Computer Networks                          | 3         | 32                 |
| Concurrent Programming                     | 2         | 10                 |
| Database Systems                           | 1         | 44                 |
| Distributed Systems                        | 9         | 40                 |
| Distributed Systems Laboratory             | 6         | 41                 |
| Fundamentals of Computer Programming       | 5         | 50                 |
| Human-Computer Interfaces                  | 5         | 40                 |
| Operating Systems                          | 1         | 31                 |
| Extension Courses: 2000 - 2021             | # Classes | Average Class Size |
| Object-Oriented Design                     | 21        | 60                 |
| Practice of Software Engineering (Agile)   | 21        | 60                 |
| Computer Networks                          | 5         | 60                 |
| IoT Project                                | 1         | 60                 |

#### D Selected Publications

- Cason, D; Buzato, L.E., Time Hybrid Total Order Broadcast: Exploiting the inherent synchrony of broadcast networks. Journal of Parallel and Distributed Computing (JPDC), print, v. 77, p. 26-40, 2015. Qualis: A. Impact Factor: 3.734.
- 2. Cason, D.; Buzato, L.E., On-Time Fast Paxos, Technical Report TR-IC-17-02. submitted for publication.
- 3. Vieira, G.M.D.; Buzato, L.E., Treplica: Ubiquitous Replication. In: 26th Brazilian Symposium on Computer Networks and Distributed Systems (SBRC), Rio de Janeiro, 2008. Proc. of the 26th SBRC, 2008, p. 1-8. Qualis: A.
- 4. Viera, Gustavo M. D.; Garcia, Islene C.; Buzato, L.E., Seamless Paxos Coordinators. Cluster Computing, v. 17, p. 463-473, 2013. Qualis: A. Impact Factor: 3.458.
- 5. Vieira, Gustavo M. D.; Buzato, L.E., On the coordinator's rule for Paxos. Information Processing Letters, v. 1, p. 1-6, 2008. Qualis: A. Impact Factor: 1.598.
- 6. Oliva, A.; Buzato, L. E., The Design and Implementation of Guaraná. In: Fifth USENIX Conference on Object-Oriented Technologies and Systems (COOTS'99), 1999, San Diego, California, USA. Proceedings of Fifth USENIX Conference on Object-Oriented Technologies and Systems (COOTS'99). Berkeley, CA: USENIX Association, 1999. p. 203-216. Qualis: A.
- 7. Garcia, I. C.; Vieira, G. M. D.; Buzato, L. E. . RDT-Partner: An Efficient Checkpointing Protocol that Enforces Rollback-Dependency Trackability. In: 19th Brazilian Symposium on Computer Networks (SBRC'01), 2001, Florianópolis. Annals of the 19th Brazilian Symposium on Computer Networks, 2001. Acceptance Rate: 34% Qualis: A.

- 8. Garcia, I. C.; Buzato, L. E. . Progressive Construction of Consistent Global Checkpoints. In: 19th IEEE International Conference on Distributed Computing Systems, 1999, Austin, Texas. Proceedings of the 19th IEEE International Conference on Distributed Computing Systems. Los Alamitos, CA: IEEE Computer Society, 1999. p. 55-62. Qualis: A.
- 9. Nakai, A; Madeira, E.; Buzato, L.E.; On the use of Resource Reservation for Web Services Load Balancing. Journal of Network and Systems Management, v. 1. p. 1-37, 2014. Qualis: B. Impact Factor: 2.139.
- 10. Nakai, A. M.; Madeira, E.R.M.; Buzato, L.E., Load Balancing for Internet Distributed Services using Remote Resource Reservation. In: 5th Latin-American Symposium on Dependable Computing (LADC), 2011, São José dos Campos. Proc. of the 5th LADC, IEEE, p. 156-165, 2011. Qualis: A.
- 11. Bittencourt, L.F.; Madeira, E.R.M.; Buzato, L.E., A Path Clustering Heuristic for Scheduling Task Graphs onto a Grid. In: 24th Brazilian Symposium on Computer Networks and Distributed Systems, 2006, Curitiba, Brazil. Proc. of the 24th SBRC, 2006. Qualis: A.
- 12. Cicerre, F. R. L.; Madeira, E. R. M.; Buzato, L. E., Structured Process Execution Middleware for Grid Computing. Concurrency and Computation: Practice and Experience, UK, v. 18, n. 9-10, p. 581-594, 2006. Acceptance Rate: 32%. Qualis: A. Impact Factor: 1.536.
- 13. Cicerre, F. R. L.; Madeira, E. R. M.; Buzato, L. E., A Hierarchical Process Execution Support for Grid Computing. In: 2nd ACM International Workshop on Middleware for Grid Computing (MGC 2004), 2004, Toronto. Proceedings of the MGC 2004 2nd International Workshop on Middleware for Grid Computing. New York: ACM Pres, 2004. p. 87-92. Acceptance Rate: unavailable. Qualis: B.
- 14. Buzato, L. E.; Calsavara, A. . Stabilis: A Case Study in Writing Fault-Tolerant Distributed Applications using Persistent Objects. In: Fifth International Workshop on Persistent Object Systems, 1992, San Miniato. Proceedings of the Fifth International Workshop on Persistent Object Systems. Berlin: Springer-Verlag, 1992. p. 333-355. Qualis: A.

# E Research Grants (Government & Industry)

The table below summarizes the funding obtained from governmental research agencies and industry. The column Project Name contains a mnemonic key that points to the summary of the project, found after the table. The column Role refers to my role in the project as Principal Investigator (PI) or a Member (Me); the column Source refers to the source of funding: Government (G) or Industry (I).

| Period            | Project Name                               | Amount Awarded (US\$) | Role | Source |
|-------------------|--|-----------------------|------|--------|
| 03/2019 - current | Hardware-Assisted Distributed Lock Manager | 35,000.00             | Me   | G      |
| 07/2019 - 12/2019 | Blockchain Performance Analysis            | 20,000.00             | PI   | I      |
| 03/2014 - 12/2014 | Active Database Replication                | 30,000.00             | PI   | I      |
| 04/2006 - 12/2019 | Management of Mobile Services              | 462,224,80            | Me   | G      |
| 03/2006 - 11/2020 | Grid Workflow Applications                 | 20,000.00             | PI   | G      |
| 08/2004 - 07/2005 | Secure and Available Web Services          | 50,000.00             | PI   | G      |
| 02/2000 - 11/2004 | Advanced Geoprocessing Services            | 947,000.00            | Me   | G      |
| 11/1998 - 10/2002 | Reconfiguration of Distributed Systems     | 125,000.00            | Me   | G      |
| 06/1998 - 05/2000 | High-Performance Laboratory Cluster        | 630.000,00            | PI   | G      |
| 06/1997 - 05/1998 | Distr. Management Communication Networks   | 67,500.00             | PI   | I      |
| 09/1996 - 08/1998 | Soft. Arch. Reliable Distributed App.      | 85,730.00             | PI   | G      |
| 03/1988 - 02/1990 | Routing Multi-layer Circuits               | 35,000.00             | PI   | I      |
|                   | Total                                      | 2,507,454.80          |      |        |

### F Supervised PhDs

- 1. Daniel Cason. The Role of Synchrony on the Performance of Paxos. Funding Agency: FAPESP. 2017. Currently a Postdoctorate at Università della Svizzera Italiana (USI), Switzerland and Research Engineer at Informal Systems.
- Alan Massaru Nakai. New Mechanisms for Workload Balancing on Computer Grids. Funding Agency: FAPESP. 2012. Co-Advisor. Currently Lead Software Architect at EMBRAPA (Brazilian Agricultural Research Agency), Ministry of Agriculture.
- 3. Gustavo M. D. Vieira. Algorithms and Software Architectures for Dependable Web Services. Funding Agency: CNPq. 2010. Currently Assistant Professor at Federal University of São Carlos, Brazil.
- 4. Fabio R. de L. Cicerre. Hierarchical Grid Execution of Distributed Applications. Funding Agency: CNPq. (Process number: 145562/1998-0). 2007. Currently Lead Software Architect, São Paulo Revenue Agency, São Paulo, Brazil.
- 5. Islene C. Garcia. Progressive Views of Distributed Applications. Funding Agency: FAPESP (Processo 99/01293-2). 2001. Currently Assistant Professor at the Institute of Computing, University of Campinas, Brazil.

## G Quantitative Indices

Journal articles (peer reviewed): 6

Conference proceedings (peer reviewed): 49

books: 2

book chapters: 1

Advised PhD Theses: 5

Advised MSc Dissertations: 18

Google Scholar: h-index 15, i-10 index 28 (08/2021).

Master Students supervided: 18

Scientific Initiations supervised: 4

Software: treplica replication toolkit (Paxos, Fast Paxos, On-time Fast Paxos), guaraná reflexive java virtual machine, distributed checkpoint-recovery simulator, stabilis distributed atomic actions supervisor.

#### H Links

Google Scholar

CNPq Lattes (Portuguese)