



# Marinho Pilla Barcellos

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Federal University of Rio Grande do Sul (UFRGS)  
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## Profile

I have worked with the following topics over the years: High-performance computing, Distributed Systems, Computer Networks, Internet Measurements, Network Security. Chair of the Computer Networks Research Group at UFRGS. Distinguished researcher: holder of CNPq Level 1D Fellowship.

## Employment

### **ASSOCIATE PROFESSOR; UFRGS, BRAZIL – 2008-PRESENT**

Postgraduate teaching. Undergraduate teaching. Supervision of graduate and undergraduate students. Administrative duties.

### **ADJUNCT PROFESSOR; PUC-RS CATHOLIC UNIVERSITY, BRAZIL – 2008-2009**

Undergraduate teaching. Research activities.

### **FULL-TIME ADJUNCT PROFESSOR; UNISINOS UNIVERSITY, BRAZIL – 1998-2008**

Postgraduate teaching. Undergraduate teaching. Supervision of graduate and undergraduate students. Administrative duties.

### **PART-TIME ASSISTANT PROFESSOR; UNISINOS UNIVERSITY, BRAZIL – 1993-1994**

Undergraduate teaching.

### **RESEARCH ASSOCIATE; UNIVERSITY OF MANCHESTER, BT RESEARCH LABS, UK – 2003-2004**

Research activities.

### **PART-TIME ASSISTANT PROFESSOR; UCS UNIVERSITY (CAXIAS DO SUL), BRAZIL – 1992-1993**

Undergraduate teaching.

### **PART-TIME ASSISTANT PROFESSOR; ULBRA UNIVERSITY, BRAZIL – 1992-1994**

Undergraduate teaching.

## Education

University of Newcastle upon Tyne, UK – Ph.D. Computer Science, 1998  
Federal University of Rio Grande do Sul, Brazil – M.Sc. Computer Science, 1993  
Federal University of Rio Grande do Sul, Brazil – B.Sc. Computer Science, 1989

## Key Skills

Research (20 journal papers, 54 conference papers, 2 General Co-Chair, 5 Program Co-Chair). Projects (9 Principal Investigator). Supervising (6 PhD complete and 5 ongoing, 19 MSc completed and 1 ongoing, 24 Undergraduates completed, 4 ongoing). Teaching (9 awards, 22 years experience, courses lectured on computer networks, systems security, and operating

systems). Advanced knowledge of Networking (TCP/IP) and Operating Systems (\*nix). Programming (Python, Shell scripting, C, C++, Java, Simula).

## International Journal Publications

1. Marinho Barcellos, Diego Aranha: Research in Security and Privacy in Brazil: IEEE Security & Privacy (to appear).
2. Rodrigo B. Mansilha, Marinho P. Barcellos, Emilio Leonardi, Dario Rossi: Exploiting parallelism in hierarchical content stores for high-speed ICN routers. *Computer Networks* 125: 132-145 (2017)
3. Daniel S. Marcon, Fabrício M. Mazzola, Marinho P. Barcellos: Achieving minimum bandwidth guarantees and work-conservation in large-scale, SDN-based datacenter networks. *Computer Networks* 127: 109-125 (2017)
4. Rodolfo Stoffel Antunes, Matheus B. Lehmann, Rodrigo B. Mansilha, Luciano Paschoal Gaspary, Marinho P. Barcellos: NDNrel: A mechanism based on relations among objects to improve the performance of NDN. *J. Network and Computer Applications* 87: 73-86 (2017)
5. Daniel S. Marcon, Miguel C. Neves, Rodrigo Ruas Oliveira, Luciano Paschoal Gaspary, Marinho P. Barcellos: PredCloud: Providing predictable network performance in large-scale OpenFlow-enabled cloud platforms through trust-based allocation of resources. *Computer Communications* 91-92: 44-61 (2016)
6. Marcelo Caggiani Luizelli, Leonardo Richter Bays, Luciana Salete Buriol, Antônio Marinho Pilla Barcellos, Luciano Paschoal Gaspary: How physical network topologies affect virtual network embedding quality: A characterization study based on ISP and datacenter networks. *J. Network and Computer Applications* 70: 1-16 (2016)
7. Leonardo Richter Bays, Rodrigo Ruas Oliveira, Luciana S. Buriol, Marinho P. Barcellos, Luciano Paschoal Gaspary: A toolset for efficient privacy-oriented virtual network embedding and its instantiation on SDN/OpenFlow-based substrates. *Computer Communications* 82: 13-27 (2016)
8. Weverton Luis da Costa Cordeiro, Flavio Roberto Santos, Marinho P. Barcellos, Luciano Paschoal Gaspary, Hanna Kavalionak, Alessio Guerrieri, Alberto Montresor: Making puzzles green and useful for adaptive identity management in large-scale distributed systems. *Computer Networks* 95: 97-114 (2016)
9. Pedro García López, Alberto Montresor, Dick H. J. Epema, Anwitaman Datta, Teruo Higashino, Adriana Iamnitchi, Marinho P. Barcellos, Pascal Felber, Etienne Rivière: Edge-centric Computing: Vision and Challenges. *Computer Communication Review* 45(5): 37-42 (2015)
10. Rodrigo Ruas Oliveira, Daniel S. Marcon, Leonardo Richter Bays, Miguel C. Neves, Luciano Paschoal Gaspary, Deep Medhi, Marinho P. Barcellos: Opportunistic resilience embedding (ORE): Toward cost-efficient resilient virtual networks. *Computer Networks* 89: 59-77 (2015)

11. Leonardo Richter Bays, Rodrigo Ruas Oliveira, Marinho P. Barcellos, Luciano Paschoal Gaspar, Edmundo Roberto Mauro Madeira: Virtual network security: threats, countermeasures, and challenges. *J. Internet Services and Applications* 6(1): 1:1-1:19 (2015)
12. Flavio Roberto Santos, Weverton Luis da Costa Cordeiro, Luciano Paschoal Gaspar, Antônio Marinho Pilla Barcellos: Beyond pollution and taste: A tag-based strategy to increase download quality in P2P file sharing systems. *Computer Communications* 36(2): 191-202 (2013)
13. Matheus Brenner Lehmann, Flavio Roberto Santos, Luciano Paschoal Gaspar, Marinho P. Barcellos: Denial-of-service attacks and countermeasures on BitTorrent. *Computer Networks* 56(15): 3479-3498 (2012)
14. Weverton Luis da Costa Cordeiro, Flavio Roberto Santos, Gustavo Huff Mauch, Marinho P. Barcellos, Luciano Paschoal Gaspar: Identity management based on adaptive puzzles to protect P2P systems from Sybil attacks. *Computer Networks* 56(11): 2569-2589 (2012)
15. Marinho P. Barcellos, Rodolfo Stoffel Antunes, Hisham H. Muhammad, Ruthiano S. Munaretti: Beyond network simulators: Fostering novel distributed applications and protocols through extendible design. *J. Network and Computer Applications* 35(1): 328-339 (2012)
16. Marinho P. Barcellos, Luciano Paschoal Gaspar, Weverton Luis da Costa Cordeiro, Rodolfo Stoffel Antunes: A conservative strategy to protect P2P file sharing systems from pollution attacks. *Concurrency and Computation: Practice and Experience* 23(1): 117-141 (2011)
17. Flavio Roberto Santos, Weverton Luis da Costa Cordeiro, Luciano Paschoal Gaspar, Marinho P. Barcellos: Funnel: Choking Polluters in BitTorrent File Sharing Communities. *IEEE Trans. Network and Service Management* 8(4): 310-321 (2011)
18. Eduardo Moschetta, Rodolfo Stoffel Antunes, Marinho P. Barcellos: Flexible and secure service discovery in ubiquitous computing. *J. Network and Computer Applications* 33(2): 128-140 (2010)
19. Luciano Paschoal Gaspar, Marinho P. Barcellos, André Detsch, Rodolfo Stoffel Antunes: Flexible security in peer-to-peer applications: Enabling new opportunities beyond file sharing. *Computer Networks* 51(17): 4797-4815 (2007)
20. Antônio Marinho Pilla Barcellos, João Frederico Lacava Schramm, Valdir Rossi Belmonte Filho, Cláudio F. R. Geyer: The HetNOS Network Operating System: A Tool for Writing Distributed Applications. *Operating Systems Review* 28(4): 34-47 (1994)

## International Conference and Workshop Publications

21. Pedro Marcos, Marco Chiesa, Lucas F. Müller, Pradeeban Kathiravelu, Christoph Dietzel, Marco Canini, Marinho P. Barcellos: Dynam-IX: a Dynamic Interconnection eXchange. *ACM CoNEXT 2018*: 1-13 (to appear)
22. Lucas Freire, Miguel C. Neves, Alberto E. Schaeffer Filho, Marinho P. Barcellos: Verification of P4 Programs in Feasible Time using Assertions. *ACM CoNEXT 2018*: 1-13 (to appear)

23. Felipe Boeira, Mikael Asplund, Marinho P. Barcellos: Mitigating Position Falsification Attacks in Vehicular Platooning. IEEE VNC 2018: 1-6 (to appear)
24. Felipe Boeira, Mikael Asplund, Marinho P. Barcellos: Vouch: A Secure Proof-of-Location Scheme for VANETs. ACM MSWiM 2018: 1-8.
25. Lucas Freire, Miguel C. Neves, Lucas Leal, Kirill Levchenko, Alberto E. Schaeffer Filho, Marinho P. Barcellos: Uncovering Bugs in P4 Programs with Assertion-based Verification. ACM SOSR 2018: 4:1-4:7
26. MAZZOLA, F.; MARCON, D.S.; NEVES, M.C. BARCELLOS, M.P. It's About Time: Analyzing Flow Table Update Latency in SDN Switch Architectures, IFIP Networking 2018 Conference, pp.1-9, Zurich, May 14-16.
27. Yousef Alowayed, Marco Canini, Pedro Marcos, Marco Chiesa, Marinho P. Barcellos: Picking a Partner: A Fair Blockchain Based Scoring Protocol for Autonomous Systems. ACM ANRW 2018: 33-39
28. Felipe Boeira, Marinho P. Barcellos, Edison Pignaton de Freitas, Alexey Vinel, Mikael Asplund: Effects of colluding Sybil nodes in message falsification attacks for vehicular platooning. IEEE VNC 2017: 53-60
29. Daniel S. Marcon, Marinho P. Barcellos: Packer: Minimizing multi-resource fragmentation and performance interference in datacenters. IFIP Networking 2017: 1-9
30. Andrés F. Ocampo, Juliver Gil-Herrera, Pedro Heleno Isolani, Miguel C. Neves, Juan Felipe Botero, Steven Latré, Lisandro Zambenedetti Granville, Marinho P. Barcellos, Luciano Paschoal Gaspar: Optimal Service Function Chain Composition in Network Functions Virtualization. AIMS 2017: 62-76
31. Matheus B. Lehmann, Marinho P. Barcellos, Andreas Mauthe: Providing producer mobility support in NDN through proactive data replication. IEEE NOMS 2016: 383-391
32. Alexandre Gustavo Wermann, Marcelo Cardoso Bortolozzo, Eduardo Germano da Silva, Alberto E. Schaeffer Filho, Luciano Paschoal Gaspar, Marinho P. Barcellos: ASTORIA: A framework for attack simulation and evaluation in smart grids. IEEE NOMS 2016: 273-280
33. Rodrigo B. Mansilha, Lorenzo Saino, Marinho P. Barcellos, Massimo Gallo, Emilio Leonardi, Diego Perino, Dario Rossi: Hierarchical Content Stores in High-Speed ICN Routers: Emulation and Prototype Implementation. ACM ICN 2015: 59-68
34. Daniel S. Marcon, Miguel C. Neves, Rodrigo Ruas Oliveira, Leonardo Richter Bays, Raouf Boutaba, Luciano Paschoal Gaspar, Marinho P. Barcellos: IoNCloud: Exploring application affinity to improve utilization and predictability in datacenters. IEEE ICC 2015: 5497-5503
35. Tobias Petry, Rafael da Fonte Lopes da Silva, Marinho P. Barcellos: Off the wire control: Improving the control plane resilience through cellular networks. IEEE ICC 2015: 5308-5313
36. Marcelo Caggiani Luizelli, Leonardo Richter Bays, Luciana Salete Buriol, Marinho P. Barcellos, Luciano Paschoal Gaspar: Piecing together the NFV provisioning puzzle: Efficient placement and chaining of virtual network functions. IEEE IM 2015: 98-106. *Best Student Paper Award.*

37. Daniel S. Marcon, Marinho P. Barcellos: Predictor: Providing fine-grained management and predictability in multi-tenant datacenter networks. IEEE IM 2015: 71-79
38. Rodolfo Stoffel Antunes, Matheus B. Lehmann, Rodrigo B. Mansilha, Christian Esteve Rothenberg, Luciano Paschoal Gaspary, Marinho P. Barcellos: CCNrel: Leveraging relations among objects to improve the performance of CCN. IEEE IM 2015: 199-206
39. Lucas F. Müller, Rodrigo Ruas Oliveira, Marcelo Caggiani Luizelli, Luciano Paschoal Gaspary, Marinho P. Barcellos: Survivor: An enhanced controller placement strategy for improving SDN survivability. IEEE GLOBECOM 2014: 1909-1915.
40. Marcelo Caggiani Luizelli, Leonardo Richter Bays, Marinho P. Barcellos, Luciano Paschoal Gaspary: HIPER: Heuristic-based infrastructure expansion through partition reconnection for efficient Virtual Network Embedding. ACM/IEEE/IFIP CNSM 2014: 91-99
41. Leonardo Richter Bays, Rodrigo Ruas Oliveira, Luciana Salete Buriol, Marinho P. Barcellos, Luciano Paschoal Gaspary: A heuristic-based algorithm for privacy-oriented virtual network embedding. IEEE NOMS 2014: 1-8
42. Flavio Roberto Santos, Marinho P. Barcellos, Luciano Paschoal Gaspary: Slowing down to speed up: Protecting users against massive attacks in content distribution systems. IEEE NOMS 2014: 1-7
43. Marcelo Caggiani Luizelli, Leonardo Richter Bays, Luciana Salete Buriol, Marinho P. Barcellos, Luciano Paschoal Gaspary: Reconnecting Partitions on Physical Infrastructures: Towards an Expansion Strategy for Efficient Virtual Network Embedding. SBC SBRC 2014: 335-343
44. Matheus B. Lehmann, Rodolfo Stoffel Antunes, Marinho P. Barcellos: Exploring your neighborhood: Comparing connection strategies in swarming networks through evolving graphs. IEEE P2P 2013: 1-10
45. Marcelo Caggiani Luizelli, Leonardo Richter Bays, Luciana Salete Buriol, Marinho P. Barcellos, Luciano Paschoal Gaspary: Characterizing the impact of network substrate topologies on virtual network embedding. ACM/IEEE/IFIP CNSM 2013: 42-50
46. Daniel Stefani Marcon, Rodrigo Ruas Oliveira, Miguel Cardoso Neves, Luciana Salete Buriol, Luciano Paschoal Gaspary, Marinho P. Barcellos: Trust-based grouping for cloud datacenters: Improving security in shared infrastructures. IFIP Networking 2013: 1-9
47. Rodrigo Ruas Oliveira, Daniel S. Marcon, Leonardo Richter Bays, Miguel C. Neves, Luciana S. Buriol, Luciano Paschoal Gaspary, Marinho P. Barcellos: No more backups: Toward efficient embedding of survivable virtual networks. IEEE ICC 2013: 2128-2132
48. Flavio Santos, Weverton Luis da Costa Cordeiro, Marinho P. Barcellos, Luciano Paschoal Gaspary, Fabio Victor Hecht, Burkhard Stiller: Slowing down to speed up: Mitigating collusion attacks in Content Distribution Systems. IEEE IM 2013: 435-442
49. Weverton Luis da Costa Cordeiro, Flavio Roberto Santos, Marinho P. Barcellos, Luciano Paschoal Gaspary: Make it green and useful: Reshaping puzzles for identity management in large-scale distributed systems. IEEE IM 2013: 387-394

50. Rodrigo Ruas Oliveira, Leonardo Richter Bays, Daniel S. Marcon, Miguel C. Neves, Luciana Salete Buriol, Luciano Paschoal Gaspary, Marinho P. Barcellos: DoS-resilient virtual networks through multipath embedding and opportunistic recovery. SAC 2013: 597-602
51. Daniel S. Marcon, Luiz F. Bittencourt, Ramide Dantas, Miguel C. Neves, Edmundo R. M. Madeira, Stenio Fernandes, Carlos Alberto Kamienski, Marinho P. Barcellos, Luciano Paschoal Gaspary, Nelson L. S. da Fonseca: Workflow specification and scheduling with security constraints in hybrid clouds. LatinCloud 2013: 29-34
52. Matheus B. Lehmann, Lucas F. Müller, Rodolfo Stoffel Antunes, Marinho P. Barcellos: Disconnecting to connect: Understanding optimistic disconnection in BitTorrent. IEEE P2P 2012: 138-148
53. Leonardo Richter Bays, Rodrigo Ruas Oliveira, Luciana Salete Buriol, Antônio Marinho Pilla Barcellos, Luciano Paschoal Gaspary: Security-aware optimal resource allocation for virtual network embedding. ACM/IEEE/IFIP CNSM 2012: 378-384
54. Adler Hoff Schmidt, Rodolfo Stoffel Antunes, Marinho P. Barcellos, Luciano Paschoal Gaspary: Characterizing dissemination of illegal copies of content through monitoring of BitTorrent networks. IEEE NOMS 2012: 327-334
55. Weverton Luis da Costa Cordeiro, Flavio Roberto Santos, Gustavo Huff Mauch, Marinho P. Barcellos, Luciano Paschoal Gaspary: Securing P2P systems from Sybil attacks through adaptive identity management. ACM/IEEE/IFIP CNSM 2011: 1-6
56. Rodrigo B. Mansilha, Leonardo Richter Bays, Matheus B. Lehmann, Alan Mezzomo, Giovanni Facchini, Luciano Paschoal Gaspary, Marinho P. Barcellos: Observing the BitTorrent universe through Telescopes. IEEE IM 2011: 321-328
57. Rafael V. Coelho, Jonata T. Pastro, Rodolfo Stoffel Antunes, Marinho P. Barcellos, Ingrid Jansch-Pôrto, Luciano Paschoal Gaspary: Challenging the feasibility of authentication mechanisms for P2P live streaming. LANC 2011: 55-63
58. Thaís Vasconcelos Batista, Nabor C. Mendonça, Américo Sampaio, Carlos Alberto Kamienski, Nelson L. S. Da Fonseca, Edmundo R. M. Madeira, Luciano Paschoal Gaspary, Marinho P. Barcellos, Noemi de La Rocque Rodriguez, Karin K. Breitman, Djamel Sadok, Silvio Meira, Stenio F. L. Fernandes, Flávia Coimbra Delicato, Paulo F. Pires: AltoStratus: A Collaboration Network Focused on the New Research Challenges and Opportunities in Cloud Computing. SBES 2011: 138-143
59. Flavio Roberto Santos, Weverton Luis da Costa Cordeiro, Luciano Paschoal Gaspary, Marinho P. Barcellos: Choking polluters in BitTorrent file sharing communities. IEEE NOMS 2010: 559-566
60. Luciano Paschoal Gaspary, Weverton Luis da Costa Cordeiro, Sidnei Roberto Selzler Franco, Marinho P. Barcellos, Gerson Geraldo Homrich Cavalheiro: AGRADC: An architecture for autonomous deployment and configuration of grid computing applications. IEEE ISCC 2009: 805-810
61. Marinho P. Barcellos, Daniel Bauermann, Henrique Sant'anna, Matheus B. Lehmann, Rodrigo B. Mansilha: Protecting BitTorrent: Design and Evaluation of Effective Countermeasures against DoS Attacks. SRDS 2008: 73-82

62. Marinho P. Barcellos, Rodrigo B. Mansilha, Francisco V. Brasileiro: TorrentLab: investigating BitTorrent through simulation and live experiments. IEEE ISCC 2008: 507-512
63. Marlom A. Konrath, Marinho P. Barcellos, Rodrigo B. Mansilha: Attacking a Swarm with a Band of Liars: evaluating the impact of attacks on BitTorrent. Peer-to-Peer Computing 2007: 37-44
64. André Detsch, Luciano Paschoal Gaspary, Marinho P. Barcellos, Ricardo Nabinger Sanchez: Flexible Security Configuration & Deployment in Peer-to-Peer Applications. IEEE NOMS 2006: 209-219
65. Marinho P. Barcellos, Giovanni Facchini, Hisham H. Muhammad: Bridging the Gap between Simulation and Experimental Evaluation in Computer Networks. Annual Simulation Symposium 2006: 286-293
66. Karl Jeacle, Jon Crowcroft, Marinho P. Barcellos, Stefano Pettini: Hybrid reliable multicast with TCP-XM. CoNEXT 2005: 177-187
67. Marinho P. Barcellos, Maziar Nekovee, M. Koyabe, Michael Daw, J. Brooke: Evaluating high-throughput reliable multicast for grid applications in production networks. CCGRID 2005: 442-449
68. Juliano F. da Silva, Luciano Paschoal Gaspary, Marinho P. Barcellos, André Detsch: Policy-based access control in peer-to-peer grid systems. GRID 2005: 107-113
69. Marinho P. Barcellos, André Detsch: Congestion Control with ECN Support in Poll-Based Multicast Protocols. IEEE ISCC 2005: 724-729
70. Marinho P. Barcellos, Maziar Nekovee, Michael Daw: High-Performance Reliable Multicasting for Grid Applications. GRID 2004: 342-349
71. André Detsch, Luciano Paschoal Gaspary, Antônio Marinho Pilla Barcellos, Gerson G. H. Cavalheiro: Towards a flexible security framework for peer-to-peer based grid computing. Middleware for Grid Computing 2004: 52-56
72. Hisham H. Muhammad, Marinho P. Barcellos: Simulating Group Communication Protocols Through an Object-Oriented Framework. Annual Simulation Symposium 2002: 143-150
73. Congyue Liu, Paul D. Ezhilchelvan, Marinho Pilla Barcellos: A Multicast Transport Protocol for Reliable Group Applications. Networked Group Communication 1999: 170-187
74. Marinho P. Barcellos, Paul D. Ezhilchelvan: An End-to-End Reliable Multicast Protocol Using Polling for Scaleability. INFOCOM 1998: 1180-1187

## Other International Publications (abstracts, posters, demos)

75. Pedro Marcos, Marco Chiesa, Lucas F. Müller, Pradeeban Kathiravelu, Christoph Dietzel, Marco Canini, Marinho P. Barcellos: Dynam-IX: a Dynamic Interconnection eXchange. SIGCOMM Posters and Demos 2018: 12-14 (MSR Student Research Competition, 3rd place)

76. Pedro Marcos, Marco Chiesa, Lucas F. Müller, Pradeeban Kathiravelu, Christoph Dietzel, Marco Canini, Marinho P. Barcellos: Dynam-IX: a Dynamic Interconnection exchange. ANRW 2018: 94
77. Lucas Freire, Miguel C. Neves, Alberto E. Schaeffer Filho, Marinho P. Barcellos: POSTER: Finding Vulnerabilities in P4 Programs with Assertion-based Verification. ACM CCS 2017: 2495-2497
78. Felipe Boeira, Marinho P. Barcellos, Edison Pignaton de Freitas, Alexey Vinel, Mikael Asplund: On the impact of sybil attacks in cooperative driving scenarios. IFIP Networking 2017: 1-2
79. Miguel C. Neves, Kirill Levchenko, Marinho P. Barcellos: Sandboxing Data Plane Programs for Fun and Profit. ACM SIGCOMM Posters and Demos 2017: 103-104 (MSR Student Research Competition, 3rd place)
80. Pedro Marcos, Alexandre Wermann, Marinho Barcellos, Leandro Bertholdo: DYNAMIX: A Dynamic Agreement Marketplace on Internet eXchange Points: ACM CoNEXT Student Workshop 2016
81. Rodrigo Ruas Oliveira, Marinho Barcellos: Control Plane Cooperation Design: towards robust programmable WANs. ACM CoNEXT Student Workshop 2016

## International Book Chapters

1. Daniel Steffani Marcon, Rodrigo Ruas Oliveira, Luciano Paschoal Gaspar, Marinho Barcellos, Datacenter Networks and Relevant Standards, Chapter 4. In Book Cloud Services, Networking and Management. Editors Nelson Fonseca, Raouf Boutaba: IEEE-Wiley Series on Network Management, April 2015, 400pp. [link to Wiley Online Library](#)

## Selected Presentations and Seminars

1. Marinho Barcellos: Using IXPs to Measure Improvements of Source Address Validation Filtering in Inter-Domain Traffic: AIMS 2018, San Diego (CAIDA), March 13-15, 2018. [link to event](#)
2. Marinho Barcellos: An Overview of the Brazilian Academic Security Landscape, I US-BR Workshop on Cybersecurity, Brasilia, December 2015. [link to slides](#)
3. Marinho Barcellos: Global Problems, Global Solutions: prospecting opportunities for joint research on Computer Security, I US-BR Workshop on Cybersecurity, Brasilia, December 2015. [link to slides](#)
4. Marinho Barcellos: Virtualized Networks for Cloud Computing: state-of-the art and open challenges. Half-day Tutorial presented at 28th ACM Symposium on Applied Computing (SAC 2013), Coimbra, 18-22 March 2013 [link to event](#)
5. Marinho Barcellos: Virtualized Networks for Cloud Computing: state-of-the art and open challenges. Half-day Tutorial presented at 4th IEEE Latin American Conference on Network Communications (LATINCOM 2012). Cuenca, Ecuador. [link to event](#)



## Professional Service

**ACM SIGCOMM** Director of Diversity and Outreach. 2017-present. [link](#)

**General Co-Chair** of ACM SIGCOMM 2016, with Jon Crowcroft. It was the first time the premier conference in computer networks and communication happened in the Southern hemisphere, with 440 attendees, 11 technical sessions, 5 workshops, 5 tutorials, posters and demos. Marinho P. Barcellos, Jon Crowcroft, Amin Vahdat, Sachin Katti: [Proceedings of the ACM SIGCOMM 2016 Conference](#), Florianopolis, Brazil, August 22-26, 2016. ACM 2016, ISBN 978-1-4503-4193-6. <http://conferences.sigcomm.org/sigcomm/2016/>

**General Co-Chair** SBC Brazilian Symposium on Computer Networks and Distributed Systems (SBRC 2010), with Luciano Gaspar. It was a 5-day conference with 760 attendees among postgraduate students, faculty and network operators, with 8 workshops, 5 tutorials, 3 keynotes, and 3 panels. There were 271 full papers submitted and 68 accepted, presented in one of the 20 technical sessions of the main track. <http://sbrc2010.inf.ufrgs.br/index.html>

**TPC Co-Chair** Passive and Active Measurements (PAM 2019), with David Choffnes. The first time PAM happens in South America. <http://pam2019.niclabs.cl>

**TPC Co-Chair** SBC Brazilian Symposium on Computer Networks and Distributed Systems (SBRC 2016), with Antonio Loureiro. The technical program had 81 full papers selected by a committee of 122 members over 229 double-blind submissions with four reviews on average, rebuttal and discussion. The program was comprised of 27 technical sessions. <http://www.sbrc2016.ufba.br/comite/comite-de-programa/en/>

**TPC Co-Chair** SBC Brazilian Symposium on Information Security and Computational Systems (SBSeg 2014) with Diego Aranha. The technical program had 22 full papers selected by a committee of 49 members over 66 double-blind submissions (plus 26 extended abstracts) with minimum five reviews, rebuttal and discussion. The program was comprised of 7 technical sessions. <http://www.sbseg2014.dcc.ufmg.br/eng/committees/>

**TPC Co-Chair** IEEE Peer-to-Peer Conference (IEEE P2P 2015), with Jay Lorch. The technical program had 14 full papers selected by a committee of 35 members over 33 double-blind submissions with minimum five reviews each. There were three technical sessions. Yong Liu, Marinho P. Barcellos, Jay R. Lorch, Anyi Wang: 2015 IEEE International Conference on Peer-to-Peer Computing, P2P 2015, Boston, MA, USA, September 21-25, 2015. IEEE 2015, ISBN 978-1-5090-0300-6. <http://wan.poly.edu/p2p2015/>

**TPC Co-Chair** SBC Brazilian Symposium on Information Security and Computational Systems (SBSeg 2008) with André dos Santos. SBSeg 2008 technical program had 17 full papers selected by a committee of 46 members over 56 double-blind submissions (plus 24 extended abstracts) with minimum of four reviews, rebuttal and discussion. The program was comprised of 4 technical sessions. <http://sbseg2008.inf.ufrgs.br>

**TPC Keynote Chair** SBC Brazilian Symposium on Computer Networks and Distributed Systems (SBRC 2015). Keynotes: Vern Paxson (UC Berkeley), Aditya Akella (UW-Madison), Arun Venkataramani (UMASS), Chandu Thekkath (Microsoft Research), Radia Perlman (EMC). [http://sbrc2015.ufes.br/eng/?page\\_id=724](http://sbrc2015.ufes.br/eng/?page_id=724)

**TPC Keynote Chair** SBC Brazilian Symposium on Information Security and Computational Systems (SBSEg 2015). Keynotes: Kirill Levchenko (UCSD), Nikita Borisov (Illinois at Urbana-Champaign), Rafael Misoczki (Intel Labs), Miriam von Zuben ([CERT.br](http://CERT.br)). <https://siaiap34.univali.br/sbseg2015/en/committee>

**Chair of SBC SIG** on Information Security and Computational Systems (elected for mandate 2010-2012)

**Vice-Chair of SBC SIG** on Information Security and Computational Systems (elected for mandate 2008-2010)

Association for Computing Machinery (ACM) Senior member UJ58352 (1997-present)

Brazilian Computing Society (SBC) member #2059 (1985-present)

Program Committees: IEEE INFOCOM 2019, ACM IMC 2017, ACM SIGCOMM posters 2018, IFIP Networking (2014-present), ITC-29, IEEE P2P (2010-2015), SBC SBRC (2002-present), SBC SBSEg (2008-present).

Thesis Committees: 12 PhD, 49 MSc

## Project Coordination & participation

### PRINCIPAL INVESTIGATOR

P4Sec: Security of programmable data planes. 2017-present. (NSF, RNP/CTIC) [link](#)

GT-IPE Analytics: Internet measurements and analytics. 2017-present (RNP) [link](#)

Phoenix: towards survivable SDNs. 2014-2017 (CNPq)

LiveSec: increasing the security of live P2P streaming systems. 2012-2014 (CNPq)

SecFuNet - Security of Future Internet Architectures. Local PI. 2011-2014 (EC, CNPq)

GT-UniT: Using telescopes to observe the Torrent universe. 2010-2013 (RNP) [link](#)

P2P-SeC: Security of P2P systems. 2008-2010 (CNPq)

Simmcast: Simulation of multicast protocols. 2003-2005 (CNPq)

GT-Reliable Multicast. 2003-2004 (RNP)

### MEMBER

BigCloud. Networks for BigData and Cloud Computing. 2018-2020 (MCTI, FAPESP) [link](#)

ProSeg - Security of SmartGrids. Member. 2014-2016 (CNPq)

GT-ICN. Information-Centric Networking. (RNP) [link](#)

## Teaching Experience

### UFRGS, COMPUTER SCIENCE AND COMPUTER ENGINEERING PROGRAMS

- **5 Faculty Best Lecturer Awards:** award provided to two faculty members every semester according to graduating students' vote among department faculty members (~80-strong): 2017/1, 2016/2, 2016/1, 2015/1, 2011/2
- Novel Internet Architectures, postgraduate, 60h, 2018/2, 2017/2, 2016/2, 2015/2, 2014/2, 2013/2
- Systems Security, postgraduate, 60h, 2018/1, 2017/1, 2016/1, 2015/1, 2014/1, 2013/1, 2012/1, 2011/1
- Computer Networks, undergraduate, 60h, 2018/2, 2018/1, 2017/2, 2017/1, 2016/2, 2016/1, 2015/2, 2015/1, 2014/2, 2014/1, 2013/2, 2013/1, 2012/2, 2012/1, 2011/2, 2011/1, 2010/2, 2010/1
- P2P Networks, Postgraduate, 60h, 2010/2, 2011/2, 2012/2
- Operating Systems, undergraduate, 60h, 2010/1, 2009/1, 2008/2

### PUC-RS, COMPUTER SCIENCE AND ENGINEERING, INFORMATION SYSTEMS PROGRAMS

- Distributed Systems, undergraduate, 60h, 2008/1, 2008/2
- Programming for Engineering II (C++), undergraduate, 60h, 2008/1, 2008/2

### UNISINOS UNIVERSITY

- **4 Faculty Best Lecturer Awards:** award provided to two faculty members every semester according to graduating students' vote among department faculty members (around 40 at the time): 2007/2, 2007/1, 2006/1, 2002/2
- High-Performance Computing, postgraduate, 45h, 2007/2,
- Computer Networks and Protocols, 2007/1, 2006/1, 2005/1, 2004/2, 2003/1, 2002/1, 2001/1, 2000/1
- Distributed Systems, postgraduate, 45h, semesters
- Computer Networks, undergraduate, 60h, semesters
- Distributed Systems, undergraduate, 60h, semesters
- Operating Systems, undergraduate, 60h, semesters
- Operating Systems Laboratories, undergraduate, 60h, semesters

### UCS

- Distributed Systems, , undergraduate, 60h, 1993/1, 1992/1
- Topics in Operating Systems, undergraduate, 60h, 1992/2

**ULBRA**

- Foundations of Operating Systems, undergraduate, 60h, 1994/1
- Operating Systems, undergraduate, 60h, 1993/1
- Introduction to Computing, undergraduate, 60h, 1992/2