Arthur Jacobs | Curriculum Vitae

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Male, Brazilian citizen, born on 10/Sep/1992.

Education

PhD in Computer Science   **August 2017 – June 2021 (Expected)**
Federal University of Rio Grande do Sul   *Porto Alegre, RS — Brazil*

Study Abroad, Brazil Scientific Mobility Program   **January 2014 – December 2014**
University of Maryland   *College Park, MD — US*

BSc in Computer Science   **March 2011 – December 2016**
Federal University of Rio Grande do Sul   *Porto Alegre, RS — Brazil*

Research Experience

Doctoral Researcher   **August 2017 – Current**
Networks Lab, Federal University of Rio Grande do Sul   *Porto Alegre, RS — Brazil*
- Worked under the supervision of Prof. Lisandro Z. Granville, researching network management topics, such as Network Functions Virtualization and Software Defined Networking.

- Developed an affinity metric for Virtualized Network Functions, to identify and prevent performance degradations and resource contention in virtualized Service Function Chains.

- Constructed a refinement method for network intents expressed as natural language enabling operators to deploy network configurations using a conversational interface, such as Google Assistant.

Undergraduate Researcher   **August 2012 – May 2013**
Networks Lab, Federal University of Rio Grande do Sul   *Porto Alegre, RS — Brazil*
- Worked under the supervision of, then, PhD student Cristiano B. Both, in a joint project with company Datacom Inc., researching on using artificial intelligence to generate alarms for network operators.

- Developed monitoring web platform using Java, and the Vaadin web framework.

Undergraduate Researcher   **August 2011 – August 2012**
Networks Lab, Federal University of Rio Grande do Sul   *Porto Alegre, RS — Brazil*
- Worked under the supervision of, then, PhD student Oscar M. Caicedo, researching on management on virtualized network using Mashup applications.

- Investigated network virtualization background and related works on the research topic.

Research Publications

Peer-Reviewed Conference Papers

o M. V. B. da Silva, **A. S. Jacobs**, R. J. Pfitscher, L. Z. Granville, "IDEAFIX: Identifying Elephant Flows in P4-Based IXP Networks", In *2018 IEEE Global Communications Conference (GLOBECOM)*,

pages 1-6, Abu Dhabi, United Arab Emirates (2018).

- **A. S. Jacobs**, R. J. Pfitscher, R. L. dos Santos, M. F. Franco, E. J. Scheid and L. Z. Granville, "Artificial Neural Network Model to Predict Affinity for Virtual Network Functions", In *2018 IFIP/IEEE Network Operations and Management Symposium (NOMS)*, pages 1-9, Taipei, Taiwan (2018).

- R. J. Pfitscher, E. J. Scheid, **A. S. Jacobs**, M. F. Franco, R. L. dos Santos, A. E. Schaeffer-Filho and L. Z. Granville, "A Model for Quantifying Performance Degradation in Virtual Network Function Service Chains", In *2018 IFIP/IEEE Network Operations and Management Symposium (NOMS)*, pages 1-9, Taipei, Taiwan (2018).

- **A. S. Jacobs**, R. L. dos Santos, M. F. Franco, E. J. Scheid, R. J. Pfitscher and L. Z. Granville, "Affinity measurement for NFV-enabled networks: A criteria-based approach", In *2017 IFIP/IEEE Symposium on Integrated Network and Service Management (IM)*, pages 125-133, Lisbon, Portugal (2017).

Peer-reviewed Journal Articles

- R. J. Pfitscher, **A. S. Jacobs**, L. Zembruzki, R. L. dos Santos, E. J. Scheid, M. F. Franco, A. E. Schaeffer-Filho and L. Z. Granville, "Guiltiness: A Practical Approach for Quantifying Virtual Network Functions Performance", In *Computer Networks*, In Press, Accepted Manuscript (2019).

- **A. S. Jacobs**, R. J. Pfitscher, R. A. Ferreira and L. Z. Granville, "Refining Network Intents for Self-driving Networks", In *ACM SIGCOMM Computer Communication Review*, Volume 48 Issue 5, pages 55 - 63 (2018).

- O. M. C. Rendon, C. R. P. dos Santos, **A. S. Jacobs** and L. Z. Granville, "Monitoring Virtual Nodes using mashups", In *Computer Networks*, Volume 64, pages 55 - 70 (2014).

Posters, Workshops and Others

- **A. S. Jacobs**, R. J. Pfitscher, R. A. Ferreira, L. Z. Granville, "Refining Network Intents for Self-driving Networks", In *ACM SIGCOMM 2018 Workshop on Self-Driving Networks (SelfDN 2018)*, pages 15-21, Budapest, Hungary (2018).

- **A. S. Jacobs**, R. L. dos Santos, M. F. Franco, E. J. Scheid, R. J. Pfitscher, L. Z. Granville, "AMNESiA: Affinity measurement platform for NFV-enabled networks", In *2017 IFIP/IEEE Symposium on Integrated Network and Service Management (IM)*, pages 899-900, Lisbon, Portugal (2017).

References

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