

CURRICULUM VITAE

Thaís Bardini Idalino

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Vancouver, BC, Canada

CURRENT POSITION

Simon Fraser University, Canada

November 2019 - October 2020

Alan Mekler Postdoctoral Fellow

Supervisor: Jonathan Jedwab

Simon Fraser University, Canada

January-December 2020

Part-time lecturer

- Teaches Foundations of Analytical and Quantitative Reasoning at the Mathematics Department.
- Uses a problem solving approach to teach mathematical thinking.
- Experience with remote teaching.

EDUCATION

University of Ottawa, Canada

September 2015 - September 2019

Ph.D. in Computer Science

Overall GPA: A+

Thesis: Fault tolerance in cryptographic applications using cover-free families.

Supervisor: Lucia Moura

Federal University of Santa Catarina, Brazil

March 2013 - June 2015

Master's in Computer Science

Overall GPA: 3.9/4

Thesis: Using combinatorial group testing to solve integrity issues.

Supervisor: Ricardo Felipe Custodio, Lucia Moura

Federal University of Santa Catarina, Brazil

March 2009 - December 2012

Bachelor's in Computer Science

Overall GPA: 8.61/10

RESEARCH INTERESTS

Combinatorial designs and applications.

Cryptography, digital signatures, privacy.

PROFESSIONAL EXPERIENCE

Teaching Assistant

University of Ottawa, ON, Canada

Data Structures

Fall 2018 and Fall 2017

- Prepared and taught programming labs in Java.
- Prepared and presented tutorial classes.
- Marked assignments and exams.

Discrete Structures

Winter 2017

- Prepared and taught weekly tutorial classes.
- Marked quizzes and assignments.

PKI software developer / project manager

Aug 2010 - Aug 2015

Computer Security Laboratory

Federal University of Santa Catarina, Florianópolis, Brazil.

- Software development experience, with proficiency in PHP, Zend Framework, PostgreSQL, Apache subversion, Test-driven development, Scrum, and software integration with Hudson.
- Participated in the development of three Public Key Infrastructure (PKI) software package, encouraging the use of digital certification in Brazilian universities.
 - *AC Correio*: a challenge-response system that issues digital certificates for signing e-mails.
 - *SGCi*: a system to manage the entire lifecycle of digital certificates, as well as to create and manage all the components and authorities of a public key infrastructure.
 - *SAEC*: a system that automatically issues certificates using data from federations, in which I was also project manager from 2014 to 2015.
- Proposed and developed a system that issues digital certificates more efficiently and with reduced costs, by using data directly from ICAO 9303 documents (such as passports).

PKI operator

2013 - 2015

Computer Security Laboratory

Federal University of Santa Catarina, Florianópolis, Brazil.

- PKI *operator* at the Educational Public Key Infrastructure ceremonies.
- Performed monthly activities such as issuance of certificates, revocation lists, and others.

Software developer for medical systems

2012 - 2013

Computer Security Laboratory

Federal University of Santa Catarina, Florianópolis, Brazil.

- Participated in the development of an authentication service with multi-factor authentication for medical systems.
- Implemented the database communication for the service.
- Developed an Android application for generating one-time passwords as part of the authentication of the service.

AWARDS

1. *Best female poster presentation*. Engineering and computer science graduate poster competition, University of Ottawa, 2019.
2. *Best graduate presentation award*. Grad student lightning talks, at the Canadian Celebration of Women in Computing, 2018.
3. *Ontario Graduate Scholarship*. One of the 8 international recipients at the University of Ottawa, from September 2018 to August 2019.
4. *Best poster award in computer science*. Engineering and computer science graduate poster competition, University of Ottawa, 2016.
5. *Ph.D. scholarship*. Science without borders/CNPq (National Council for Scientific and Technological Development), Brazil, from September 2015 to August 2019.
6. *Ph.D. scholarship*. CAPES (Coordination of Superior Level Staff Improvement), Brazil 2015. Declined in favour of Award 5.
7. *Undergraduate best paper award*. Brazilian Symposium on Information and Computing Systems Security, 2015. (#8 on List of Publications)

8. *Master's Scholarship*. CAPES (Coordination of Superior Level Staff Improvement), Brazil, from 2013 to 2015.
9. *Best student award*. Highest GPA of all computer science students graduating in the second semester of 2012, at the Federal University of Santa Catarina, Brazil.
10. *Undergraduate best paper award*. Brazilian Symposium on Information and Computing Systems Security, 2012. (# 10 on List of Publications)

PRESENTATIONS

Conference presentations

- a) *Title to be arranged*. **Invited presentation** at the Designs and Codes Session, at the Canadian Mathematical Society summer meeting, Ottawa, ON, Canada, June 2020. (conference postponed)
- b) *Fault tolerance in cryptography using cover-free families*. Coast Combinatorics Conference, University of Victoria, Victoria, BC, Canada, March 7 and 8, 2020.
- c) *Modification tolerant signature schemes: location and correction*. 20th International Conference on Cryptology in India, December 2019.
- d) *Embedding cover-free families and cryptographical applications*. **Invited presentation** at the Ottawa Mathematics Conference, University of Ottawa, Ottawa, ON, Canada, June 2019.
- e) *Embedding cover-free families and cryptographical applications*. **Invited presentation** at the 7th biennial Canadian Discrete and Algorithmic Mathematics Conference, Vancouver, BC, Canada, May 2019.
- f) *Efficient unbounded fault-tolerant aggregate signatures using nested cover-free families*. **Invited presentation** at the Discrete Mathematics in Communications and Computation session, at the Canadian Mathematical Society winter meeting, Vancouver, BC, Canada, December 2018.
- g) *Efficient unbounded fault-tolerant aggregate signatures using nested cover-free families*. Grad Student Lightning Talks, Canadian Celebration of Women in Computing, Halifax, NS, Canada, November 2018. Winner of award #2.
- h) *Efficient unbounded fault-tolerant aggregate signatures using nested cover-free families*. International Workshop on Combinatorial Algorithms (IWOCA) Singapore, July 2018.
- i) *When private and professional lives meet: The impact of digital footprints on employees and political candidates*. Joint talk with Reham Ebada Mohamed at the 8th International Conference on Social Media & Society, Toronto, ON, Canada, August 2017.
- j) *Locating modifications in signed data for partial data integrity*. Student Session, Latincrypt, Florianópolis, SC, Brazil, 2014.
- k) *Uma Avaliação do Uso de Documentos Aderentes ao Padrão ICAO 9303 no âmbito Acadêmico (An evaluation of the use of documents adhering to ICAO 9303 standard in the academic environment)*. XIII Brazilian Symposium on Information and Computing Systems Security (SBSeg), Manaus, Brazil, 2013.
- l) *Senhas descartáveis em dispositivos móveis para ambientes de Telemedicina (One-time passwords on mobile devices in telemedicine systems)*. XII Brazilian Symposium on Information and Computing Systems Security (SBSeg), 2012, Curitiba, Parana, Brazil, 2012. Winner of award #10.

Posters

- a) *Embedding cover-free families and cryptographical applications*. Engineering and Computer Science graduate poster competition, University of Ottawa, Ottawa, ON, Canada, March 2019. Winner of award #1.

- b) *Efficient unbounded fault-tolerant aggregate signatures using nested cover-free families*. Engineering and Computer Science graduate poster competition, University of Ottawa, Ottawa, ON, Canada, March 2018.
- c) *Using cover-free families in aggregate signature schemes*. Canadian Celebration of Women in Computing (CAN-CWiC) Montreal, QC, Canada, November 2017.
- d) *Locating modifications in signed data for partial data integrity*. Engineering and Computer Science graduate poster competition, University of Ottawa, Ottawa, ON, Canada, March 2016. Winner of award #4.
- e) *Locating modifications in signed data for partial data integrity*. Canadian Celebration of Women in Computing (CAN-CWiC), Ottawa, ON, Canada, February 2016.

Other presentations

- a) *Fault tolerance in cryptographic applications using cover-free families*. Discrete Math Seminar, Simon Fraser University, Burnaby, BC, Canada, November 2019.
- b) *Embedding cover-free families and cryptographical applications*. Carleton Finite Fields Workshop 2019, Carleton University, Ottawa, ON, Canada, May 2019.
- c) *Combinatorial cryptography*. Joint presentation with Lucia Moura at the Research@EECS event for undergraduate students at the University of Ottawa, Ottawa, ON, Canada, 2018.
- d) *Efficient unbounded fault-tolerant aggregate signatures using nested cover-free families*. Ottawa-Carleton Combinatorics and Optimization Seminar, University of Ottawa, Ottawa, ON, Canada, 2018.
- e) *Using combinatorial group testing to solve integrity issues*. Ottawa-Carleton Discrete Math Days, Carleton University, Ottawa, ON, Canada, 2016.

PUBLICATIONS

Papers submitted to refereed journals

1. **IDALINO, T. B.**, MOURA, L., *Nested cover-free families for unbounded fault-tolerant aggregate signatures*. By invitation, submitted to Theoretical Computer Science, October 2018, as an expanded version of [5].

Papers in refereed journals

2. **IDALINO, T. B.**, MOURA, L., *Embedding cover-free families and cryptographical applications*, Advances in Mathematics of Communications, Volume 13, Issue 4, 2019, 629–643.
3. **IDALINO, T. B.**, MOURA, L., CUSTODIO, R.F., PANARIO, D., *Locating modifications in signed data for partial data integrity*, Information Processing Letters, Volume 115, Issue 10, 2015, 731–737.

Papers in refereed conferences

4. **IDALINO, T. B.**, MOURA, L., ADAMS, C., *Modification tolerant signature schemes: location and correction*. The 20th International Conference on Cryptology in India, INDOCRYPT 2019. Lecture Notes in Computer Science. (24.5% acceptance rate)
5. **IDALINO, T. B.**, MOURA, L., *Efficient unbounded fault-tolerant aggregate signatures using nested cover-free families*. In: International Workshop on Combinatorial Algorithms, IWOCOA 2018. Lecture Notes in Computer Science, vol 10979, 2018, 52–64. (44.9% acceptance rate)

6. **IDALINO, T. B.**, SPAGNUELO, D., MARTINA, J.E. *Private verification of access on medical data: an initial study*. In: Data Privacy Management, Cryptocurrencies and Blockchain Technology, ESORICS 2017, DPM 2017, CTB 2017. Lecture Notes in Computer Science, vol 10436, 2017, 86–103. (31.3% acceptance rate)
7. MOHAMED, R. E., **IDALINO, T. B.**, CHIASSON, S., *When private and professional lives meet: the impact of digital footprints on employees and political candidates*. In the proceedings of the 8th International Conference on Social Media & Society (SMSociety17), Article 48, 5 pages. (41% acceptance rate)
8. **IDALINO, T. B.**, COELHO, M. S., MARTINA, J. E. *Automated issuance of digital certificates through the use of federations*. Workshop on Future Access Control, Identity Management and Privacy Preserving Solutions in Internet Services (FASIES) - ARES Conference, 2016, 725–732.
9. COELHO, M. S., TOMASI, L., **IDALINO, T. B.**, MARTINA, J. E., *Identificando vulnerabilidades de segurança em uma aplicação web (Identifying security vulnerabilities in a web application)*. In the proceedings of the XV Brazilian Symposium on Information and Computing Systems Security (SBSeg), Workshop de Trabalhos de Iniciação Científica e de Graduação (WTICG), Florianópolis, SC, Brazil, 2015. (Best undergraduate paper award)
10. **IDALINO, T. B.**, MARTINA, J. E., *Uma avaliação do uso de documentos aderentes ao padrão ICAO 9303 no âmbito acadêmico (An evaluation of the use of documents adhering to ICAO 9303 standard in the academic environment)*. In the proceedings of the XIII Brazilian Symposium on Information and Computing Systems Security (SBSeg), Manaus, Brazil, 2013, 517–526.
11. **IDALINO, T. B.**, SPAGNUELO, D., *Senhas descartáveis em dispositivos móveis para ambientes de Telemedicina (One-time passwords on mobile devices in telemedicine systems)*. In the proceedings of the XII Brazilian Symposium on Information and Computing Systems Security (SBSeg), Workshop de Trabalhos de Iniciação Científica e de Graduação (WTICG), Curitiba, Paraná, Brazil, 2012, 442–451. (Best undergraduate paper award)

OUTREACH AND LEADERSHIP

Instructional Skills Workshop

February 19-21 2020

- Attended this internationally recognized forum with the objective of strengthening my teaching skills.

Pint of Science, Ottawa

November 2017 - May 2018

Event coordinator

- Helping with the organization of the 2018's Pint of Science in Ottawa, recruiting speakers for the technology venue, advertising, presenting, and other activities.

Computer Science Grad Student Association, University of Ottawa

Feb 2016 - May 2018

VP Social

- Organizing the association events, and updating social media.

Social inclusion

- I took some courses in Brazilian Sign Language both as a teenager and as an undergraduate student. I got interested in it because I wanted to better communicate with impaired hearing friends and colleagues, as well as to include them in group projects at school and in general social activities.

LANGUAGES

Portuguese (native speaker).

English (fluent).

Italian and Spanish (listening and reading).