Professor Cristiano Politowski

Correspondence language: English

Contact Information

The primary information is denoted by (*)

Address

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Professor Cristiano **Politowski**

Language Skills

Language	Read	Write	Speak	Understand	Peer Review
English	Yes	Yes	Yes	Yes	Yes
French	Yes	No	Yes	Yes	No
Portuguese	Yes	Yes	Yes	Yes	Yes
Spanish; Castilian	Yes	No	Yes	Yes	No

Degrees

- 2022/6   Doctorate, Software Engineering, Concordia University

Supervisors: Fabio Petrillo, 2018/5 - 2022/5; Yann-Gaël Guéhéneuc, 2018/5 - 2022/5

- 2017/1   Master's Thesis, Computer Science, Universidade Federal de Santa Maria

- 2014/1   Bachelor's, Computer Science, Universidade Regional do Estado do Rio Grande do Sul

Recognitions

2021/9 - 2022/8   Concordia Accelerator Award - 5,000
Concordia University
Prize / Award
Full-time doctoral students can apply for a Concordia Accelerator Award, valued at $5,000, between their 9th and 14th term. The award was created as an incentive for students to graduate faster.

User Profile

Research Specialization Keywords: software-engineering, software-testing, game-development, deep-reinforcement-learning, empirical-studies

Employment

2024/7   Professor
Computer Science, Science, Ontario Tech University
Full-time, Assistant Professor
Tenure Status: Tenure Track

2023/10 - 2024/6	Postdoctoral fellow Department of Computer Science and Operations Research (DIRO), Université de Montréal Full-time Tenure Status: Non Tenure Track Automated software testing and video game Easter eggs.
2022/6 - 2023/9	Postdoctoral Fellow Département de génie logiciel et des TI, École de technologie supérieure Full-time Tenure Status: Non Tenure Track Supporting requirements specification and testing of a certifiable RTOS product line
2022/1 - 2022/4	Teaching Assistant for SOFTWARE ENGINEERING TEAM DESIGN PROJECT Computer Science and Software Engineering, Concordia University Part-time, Term Tenure Status: Non Tenure Track
2021/1 - 2021/4	Teaching Assistant for SOFTWARE ENGINEERING TEAM DESIGN PROJECT Computer Science and Software Engineering, Concordia University Part-time, Term Tenure Status: Non Tenure Track
2020/9 - 2020/12	Teaching Assistant for SOFTWARE ARCHITECTURE & DESIGN I Computer Science and Software Engineering, Concordia University Part-time, Term Tenure Status: Non Tenure Track
2019/9 - 2019/12	Teaching Assistant for SOFTWARE ARCHITECTURE & DESIGN I Computer Science and Software Engineering, Concordia University Part-time, Term Tenure Status: Non Tenure Track
2019/1 - 2019/4	Teaching Assistant for SOFTWARE DESIGN METHODOLOGY Computer Science and Software Engineering, Concordia University Part-time, Term Tenure Status: Non Tenure Track
2014/1 - 2018/1	Software Engineer Livid (startup) Worked daily with open-source software (Linux/Git) and virtualization (Docker) to keep a cohesive development and production environment. Provided support to a legacy application (PHP), focusing on performance improvements, mainly related to Database (MySQL) management. Studied web performance and ways to enhance the users' experience by reducing the page load time. Extended the web-server (Nginx) to handle optimized versions of assets (images, CSS, and JS) using embedded scripts (LUA language).
2011/1 - 2013/1	Web Developer IC1 (startup) Wrote front-end code (HTML, CSS, and JS) during the inception of ``table-less'' movement, CSS3, and the extinction of Flash for web. Wrote back-end code (Java, Struts 2, and Hibernate) dealing with database structure (ER models and PostgreSQL) and deployment (TomCat).

Research Funding History

Awarded [n=1]

2021/6 - 2022/6 Collaborator	Verifying and Deploying 5G Cloud Infrastructure for Improved Logistic and Communication in Healthcare Facilities Dealing with COVID-19 Patients, Scholarship

Funding Sources:
Mathematics of Information Technology and Complex Systems (MITACS)
Accelerate with Humanitas Solutions
Total Funding - 120,000
Portion of Funding Received - 20,000
Funding Competitive?: Yes

Event Administration

2024/7 - 2024/7	Chair, Foundations of Applied Software Engineering for Games (FaSE4Games'24), Workshop, 2024/7 - 2024/7
2021/11 - 2022/11	Chair, The First International Workshop on Automated Software Engineering for Computer Games -- ASE4Games 2021, Workshop, 2022/11 - 2022/11
2022/10 - 2022/10	Chair, Second International Workshop on Automated Software Engineering for Computer Games -- ASE4Games 2022, Workshop, 2022/10 - 2022/10

Text Interviews

2021/04/07	The video game industry's problems are mostly due to people, not technology, Concordia researchers argue, Concordia University News

Publications

Journal Articles

1. Montandon, J E; Silva, L L; Politowski, C; Prates, D; Bonifácio, A B; El Boussaidi, G. (2024). Unboxing Default Argument Breaking Changes in 1 + 2 Data Science Libraries in Python. Journal of Systems and Software.
Submitted
Refereed?: Yes

2. Ullmann, G C; Guéhéneuc, Y-G; Petrillo, F; Anquetil, N; Politowski, C. (2024). SyDRA: An approach to understand game engine architecture. Entertainment Computing. 52
Published
Refereed?: Yes

3. Montandon, J E; Politowski, C; Silva, L L; Valente, M T; Petrillo, F; Guéhéneuc, Y-G. (2021). What skills do IT companies look for in new developers? A study with Stack Overflow jobs. Information & Software Technology.
Published
Refereed?: Yes, Open Access?: No

4. Politowski, C; Petrillo, F; Ullmann, G C; Guéhéneuc, Y-G. (2021). Game industry problems: An extensive analysis of the gray literature. Information & Software Technology. 134
Published
Refereed?: Yes, Open Access?: No

5. Politowski, C; Petrillo, F; Montandon, J E; Valente, M T; Guéhéneuc, Y-G. (2021). Are game engines software frameworks? A three-perspective study. Journal of Systems and Software.
Published
Refereed?: Yes, Open Access?: No

6. Politowski, C; Khomh, F; Romano, S; Scanniello, G; Petrillo, F; Guéhéneuc, Y-G; Maiga, A. (2020). A large scale empirical study of the impact of Spaghetti Code and Blob anti-patterns on program comprehension. Information & Software Technology.
Published
Refereed?: Yes, Open Access?: No

7. Politowski, C; Fontoura, L M; Petrillo, F; Guéhéneuc, Y-G. (2018). Learning from the past: A process recommendation system for video game projects using postmortems experiences. Information & Software Technology.
Published
Refereed?: Yes, Open Access?: No

Conference Publications

1. D'Angelo, A; Di Sipio, C; Politowski, C; Rubei, R. (2024). PlayMyData: a curated dataset of multi-platform video games. 21st IEEE/ACM International Conference on Mining Software Repositories,
Paper
Published
Refereed?: Yes, Invited?: No

2. Darif, I; Politowski, C; El Boussaidi, G; Benzarti, I; Kpodjedo, S. (2023). A model-driven and template-based approach for requirements specification. 2023 ACM/IEEE 26th International Conference on Model Driven Engineering Languages and Systems (MODELS),
Paper
Published
Refereed?: Yes, Invited?: No

3. Politowski, C; Petrillo, F; El-Boussaidi, G; Ullmann, G C; Guéhéneuc, Y-G. (2023). Assessing Video Game Balance using Autonomous Agents. 7th IEEE/ACM International Workshop on Games and Software Engineering,
Paper
Accepted
Refereed?: Yes, Invited?: No

4. Ullmann, G C; Guéhéneuc, Y-G; Petrillo, F; Anquetil, N; Politowski, C. (2023). An Exploratory Approach for Game Engine Architecture Recovery. 7th IEEE/ACM International Workshop on Games and Software Engineering,
Paper
Published
Refereed?: Yes, Invited?: No

5. Ullmann, Gabriel C; Guéhéneuc, Yann-Gaël; Petrillo, Fabio; Anquetil, Nicolas; Politowski, Cristiano. (2023). Visualising Game Engine Subsystem Coupling. Entertainment Computing 22nd IFIP TC 14 International Conference (ICEC 2023),
Paper
Published
Refereed?: Yes, Invited?: No

6. Ullmann, G C; Guéhéneuc, Y-G; Petrillo, F; Anquetil, N; Politowski, C. (2023). Visualising Game Engine Subsystem Coupling Patterns. International Conference on Entertainment Computing,
    Paper
    Published
    Refereed?: Yes, Invited?: No

7. Trabelsi, N; Politowski, C; El Boussaidi, G. (2023). Event driven architecture: An exploratory study on the gap between academia and industry. 2023 IEEE/ACM 5th International Workshop on Software Engineering Research and Practices for the IoT (SERP4IoT),
    Paper
    Published
    Refereed?: Yes, Invited?: No

8. Montandon, J E; Silva, L L; Politowski, C; El Boussaidi, G; Valente, M T. (2023). Unboxing default argument breaking changes in Scikit Learn. 2023 IEEE 23rd International Working Conference on Source Code Analysis and Manipulation (SCAM),
    Paper
    Published
    Refereed?: Yes, Invited?: No

9. Karami, P; Darif, I; Politowski, C; El Boussaidi, G; Kpodjedo, S; Benzarti, I. (2023). On the impact of development frameworks on mobile apps. 2023 30th Asia-Pacific Software Engineering Conference (APSEC),
    Conference Date: 2023/12
    Paper
    Published
    Refereed?: Yes, Invited?: No

10. Politowski, C; Guéhéneuc, Y-G; Petrillo, F. (2022). Towards Automated Video Game Testing: Still a Long Way to Go. 6th IEEE/ACM International Workshop on Games and Software Engineering,
    Paper
    Published
    Refereed?: Yes, Invited?: No

11. Darif, I; Politowski, C; El Boussaidi, G; Kpodjedo, S. (2022). A Domain Specific Language for the ARINC 653 Specification. IEEE International Conference on Software Reliability Engineering Workshops (ISSRE Wksp),
    Paper
    Published
    Refereed?: Yes, Invited?: No

12. Ullmann, G C; Politowski, C; Guéhéneuc, Y-G; Petrillo, F. (2022). Game engine comparative anatomy. International Conference on Entertainment Computing,
    Paper
    Published
    Refereed?: Yes, Invited?: No

13. Ullmann, G C; Politowski, C; Guéhéneuc, Y-G; Petrillo, F; Montandon, J E. (2022). Video Game Project Management Anti-patterns. GAS 2022 - 6th International ICSE Workshop on Games and Software Engineering,
    Conference Date: 2022/5
    Paper
    Published
    Refereed?: Yes, Invited?: No

14. Ullmann, G; Politowski, C; Guéhéneuc, Y-G; Petrillo, F. (2022). What Makes a Game High-rated? Towards Factors of Video Game Success. GAS 2022 - 6th International ICSE Workshop on Games and Software Engineering,
Conference Date: 2022/5
Paper
Published
Refereed?: Yes, Invited?: No

15. Politowski, C; Petrillo, F; Guéhéneuc, Y-G. (2021). A Survey of Video Game Testing. 2nd IEEE/ACM International Conference on Automation of Software Test, AST@ICSE 2021, Madrid, Spain
Conference Date: 2021/5
Paper
Published
Refereed?: Yes, Invited?: No

16. Politowski, C; Petrillo, F; Ullmann, G C; Werly, J de A; Guéhéneuc, Y-G. (2020). Dataset of Video Game Development Problems. MSR'2020: 17th International Conference on Mining Software Repositories, Seoul, Korea, South
Conference Date: 2020/6
Paper
Published
Refereed?: Yes, Invited?: No