

## Bruno Baère Pedrazzi Lomba de Araujo

mail: [bruno.baere@gmail.com](mailto:bruno.baere@gmail.com) phone: (BR) +5521996826336 / (CAN) +14385261793

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### SUMMARY

I am motivated by challenging tasks and to teach others about what I have learned. My experience as both an academic researcher and as a systems analyst helps me to approach, to model, to understand problems, and to develop a solution. My analytical skills have been proven useful in detecting and preventing bugs and problems in systems modeling.

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### PROFESSIONAL EXPERIENCE

*Technical Lead* Feb 2022 - Present  
Instituto Tecgraf – PUC-Rio, Computational Geophysics Group  
Tech lead in v3o2 project. Responsible for software architecture decisions for one of the teams. Programming in C++ 17.

*Senior Systems Analyst* Feb 2020 - Feb 2022  
Instituto Tecgraf – PUC-Rio, Computational Geophysics Group  
C++ developer in v3o2 project. Programming in C++ 17 using Qt, GTK+, boost on Linux CentOS 7. Version control in git and CI/CD with gitlab. Worked in a remote (work from home) environment, using VPN and ssh, coordinating using Jira and Slack.

*Product Owner* Feb 2018 - Jan 2020  
Instituto Tecgraf – PUC-Rio, Computational Geophysics Group  
Product Owner in v3o2 project. Responsible for the product value of various parts of the software dealing with geology and geophysics. Responsibilities included: understand the client needs, propose a solution, create user stories for the development team, and manage client expectations. I also wrote and maintained the product manual for the parts I was responsible for, and helped restructuring the recruitment interview process.

*Senior Systems Analyst / Researcher* Aug 2011 - Feb 2018  
Instituto Tecgraf – PUC-Rio, Computational Geophysics Group  
C++ developer in v3o2 project, a seismic and well data visualizer for Petrobras running on RedHat/CentOS 5 using OpenGL, GTK+, boost, and Qt. For QA used GoogleTest framework, valgrind, and cppcheck. I organized and wrote the documentation of the development environment setup for home office, and worked on the upgrade to Red-Hat/CentOS 6. I also presented with colleagues a 2 day workshop on Scrum for team members.

*Researcher* Apr 2009 - Aug 2011  
ICAD/Visionlab – PUC-Rio  
Researcher in games, digital entertainment and simulations. C# programmer in a joint project with CENPES and USP. Developed a shade tree editor in C# and Windows GDI for building DirectX shaders for the proof tank visualizer project.

*Undergraduate teaching assistant* Mar 2009 - Dec 2009  
Department of Computer Science – PUC-Rio  
Worked as UTA for Introduction to Programming (C language) and Data Structures. Gave extra classes at Saturdays and post-class hours, resolving exercises and exams.

*Intern* Oct 2008 - Mar 2009  
ICA - Laboratório de Inteligência Computacional Aplicada – PUC-Rio

C# developer. Worked at FxANEEL project, developing part of the user interface with WindowsForms and XML. Developed a wrapper for GSLIB library in C# and created the model for library documentation used by the lab.

*Scientific Initiation*

Aug 2006 - Aug 2008

ICAD/Visionlab – PUC-Rio

Development of a simulation library for Torque Game Engine. Researched game engine use in fluid simulations, programmed in C++ using OGRE rendering engine. Granted 2 years of CNPQ scholarship.

**PUBLICATIONS**

Maria das G. de A. Chagas, **Bruno B. P. L. de Araujo**, Waldecir V. Faria, Cezar G. Loureiro, Maria I. M. M. Carmo, Nelson J. Donato, Tathiana S. T. Silva, Victoria D. Maidantchik, Yann L. M. de M. Marques. *Design de Jogos de RPG Digitais: Uma investigação sobre a experiência de jogo*. In: Proceedings of XIV Brazilian Symposium on Games and Digital Entertainment (SBGames 2015), Teresina, Piauí, Brazil, November 2015.

Paula C. Ribeiro, **Bruno B. P. L. de Araujo**, Alberto Raposo. *ComFiM: A Cooperative Serious Game to Encourage the Development of Communicative Skills between Children with Autism*. In: Proceedings of the XIII Brazilian Symposium on Computer Games and Digital Entertainment (SBGames 2014), Rio Grande do Sul, Brazil, November 2014. DOI: 10.1109/SBGAMES.2014.19

**Bruno B. P. L. de Araujo**, Bruno Feijó. *Evaluating dynamic difficulty adaptivity in shoot'em up games*. In: Proceedings of the XII Brazilian Symposium on Computer Games and Digital Entertainment (SBGames 2013), São Paulo, Brazil, October 2013.

**EDUCATION**

*M.Sc. in Computer Science*, Computer Graphics 2010 - 2012  
Pontifícia Universidade Católica do Rio de Janeiro – PUC-Rio  
Advisor: Bruno Feijó  
Dissertation title: A study on dynamic difficulty adaptivity for shoot'em up games  
Granted 2 years of CAPES scholarship  
GPA: 3.54 (4.0 scale)

*B.Sc. in Computer Engineering* 2005 - 2009  
Pontifícia Universidade Católica do Rio de Janeiro – PUC-Rio  
Minor: Advanced studies in Mathematics  
Final project title: A shade tree editor for OGRE materials  
Granted 2 years of CNPQ scholarship

*Language proficiency: Cambridge English FCE grade B2* 2003

**EXTRA-CURRICULAR COURSES**

*Programming with Google Go Specialization* 2021  
University of California, Irvine on Coursera, 24h.

*Data Science Math Skills* 2021  
Duke University on Coursera, 13h.

*Digital Product Management: Modern Fundamentals* 2020  
University of Virginia on Coursera, 16h.

	<i>Fundamentals of Project Planning and Management</i> University of Virginia on Coursera, 8h.	2018
	<i>O setor de games no Brasil: panorama, carreiras e oportunidades</i> Universidade Federal do Rio Grande do Sul, 30h.	2018
	<i>Introduction to User Experience Design</i> Georgia Institute of Technology on Coursera, 10h.	2017
	<i>Gamification</i> University of Pennsylvania on Coursera, 48h.	2016
	<i>A complexidade sensível: Um paralelo entre videogames e arte</i> Universidade Estadual de Campinas on Coursera, 14h.	2016
	<i>Oil &amp; Gas Industry Operations and Markets</i> Duke University on Coursera, 10h.	2016
	<i>Geologia do petróleo para não-geólogos</i> ABGP - Associação Brasileira de Geólogos do Petróleo, 20h.	2014
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<b>CERTIFICATIONS</b>	<i>Certified Scrum Product Owner</i> Certifier: Scrum Alliance License: 000304959	Valid: Mar 2014 - Mar 2024
	<i>Certified Scrum Master</i> Certifier: Scrum Alliance License: 000304959	Valid: Jan 2014 - Mar 2024
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<b>EXTRA-CURRICULAR ACTIVITIES</b>	<i>Co-organizer of PUC-Rio's Global Game Jam</i> Helped organize PUC-Rio's Global Game Jam.	Jan 2018, Jan 2020
	<i>Volunteer reviewer for Entertainment Computing</i> Volunteer reviewer for Entertainment Computing, an Elsevier journal. ISSN 1875-9521.	2016 - Present
	<i>Researcher at PUC-Rio's Game Design Research Group</i> Associate researcher in the Arts & Design Department research group under prof. Maria das Graças Chagas advisory. Themes include player-NPC relationship and artificial intelligence.	2013 - Present
	<i>SBGames 2011's Independent Games Festival contestant</i> Contestant with the game Lights Out. Awarded with the third place in people's choice in the Art Game category.	2011
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<b>GAMES</b>	<i>Lights Out</i> A puzzle-like art game for 2 players made in GameMaker 8.1. Presented at SBGames 2011, FILE Games 2012, Festival Games Brasil 2013. Role: programmer (GameMaker Scripting Language) and 2D artist.	2011
	<i>Seu Espião Safado!</i> A print-and-play dice game for 3 players where 2 agents are trying to uncover a spy's	2011

secret (Brazilian Portuguese only). Role: game designer.

*You Are Trash!*

2009

A Java 2D game mix of puzzle and platformer, made in the Gamera project. Role: programmer and game designer.

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## RPG

*Encontros Aleatórios: O Bando da Pena Vermelha*, In: Forbidden Magazine #12, Buró Brasil, 2021. Link

*Encontros Aleatórios: A Estalagem Lebre Confortável*, In: Forbidden Magazine #9, Buró Brasil, 2021. Link

*Ser Mago pra Quê?*, In: Forbidden Magazine #4, Buró Brasil, 2020. Link

*Zen e a Arte de Armadilhas*, In: Forbidden Magazine #2, Buró Brasil, 2020. Link

*Delírios de X'agyg: Episódio 1 - A Balada de Baleem Altrafer*, Editor: Rafael Beltrame, RedBox Editora, 2017. Link

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## OTHER INFORMATION

Personal homepage: <http://killerasus.github.io>

LinkedIn: <https://www.linkedin.com/in/brunobaere/>