Caio Brito

Montreal - Canada

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Education

University of Montreal

PHD STUDENT IN COMPUTER SCIENCE

- Advisor: Pierre Poulin

Montreal,CA
Recife, Brazil
2019 - present

Center of Informatics of the Federal University of Pernambuco - CIn/UFPE

MASTER'S STUDENT IN COMPUTER SCIENCE

- Advisor: Veronica Teichrieb

Recife, Brazil
2016 - 2018

Swansea University

UNDERGRADUATE SANDWICH IN COMPUTER SCIENCE

- Advisor: Mark Jones

Wales, UK
2014 - 2015

Center of Informatics of the Federal University of Pernambuco - CIn/UFPE

BACHELOR'S DEGREE IN COMPUTER SCIENCE

- Advisor: Veronica Teichrieb

Recife, Brazil
2010 - 2016

Experience

LIGUM - UDEM

RESEARCHER

- Researching on voxel-based real-time rendering.
- Advisor: Pierre Poulin

Montreal, Canada
02/2019 - present

Voxar Labs - CIn/UFPE

RESEARCHER

- Researching real-time rendering and fluid simulation using Smoothed Particle Hydrodynamics (SPH). The results and publications can be found in my personal website.
- Developed a multiphase SPH and a viscoelastic SPH using the DualSPHysics open source code.
- Proposed a multiphase rendering solution for particle based method.
- Proposed a ray tracing rendering solution for particle based method.
- Programed in C++, OpenMP, CUDA, OpenGL, NVIDIA OptiX.
- Advisor: Veronica Teichrieb

Recife, Brazil
08/2012 - present

Disney Research

INTERN

- Researched and developed on the subject of face tracking.
- C++, Unity and OpenCV
- Coordinator: Kenny Mitchell

Los Angeles, US
07/2018 - 09/2018

Physics Department of the Federal University of Pernambuco

UNDERGRADUATE RESEARCHER

- Evaluated the influence of different signals in order to calibrate a new method to measure intracranial pressure.
- Programed in Java, MATLAB and C++
- Advisor: Rita Zorzenon

Recife, Brazil
08/2011 - 07/2012

Research and Development Project

Samsung / Voxar Labs
RESEARCHER

Recife, Brazil
07/2017 - 07/2018

- Researched and developed on the subject of camera manipulation and object tracking.
- Supervised a graduation student.
- C++ and OpenCV

SimplifiqueGP / Voxar Labs
DEVELOPER

Recife, Brazil
01/2017 - 06/2017

- Developed a multiplatform 3D rendering solution for engineering purpose.
- C++, OpenGL

HP / Voxar Labs
RESEARCHER

Recife, Brazil
09/2015 - 12/2016

- Researched on the 3D printing subject.

LG / Voxar Labs
RESEARCHER / DEVELOPER

Recife, Brazil
04/2015 - 08/2015

- Developed a mobile augmented reality application for Android.
- C++ and OpenCV

Brazilian Navy / Voxar Labs
RESEARCHER / DEVELOPER

Recife, Brazil
01/2015 - 03/2015

- Developed a parallel particle-based fluid simulation using SPH method and a fluid rendering solution using local illumination.
- C++, CUDA, OpenMP, OpenGL

Languages

Portugues
NATIVE

English
FLUENT

French
INTERMEDIATE

Programming skills

Languages
C/C++, JAVA, JAVASCRIPT

Libraries and tools
OPTIX, OPENGL, OPENCV, UNITY, CUDA, LATEX, GIT, VISUAL STUDIO

Teaching experience

Teaching Internship
VIRTUAL AND AUGMENTED REALITY

Informatics Center - UFPE
Mar. 2017 - Jun. 2017

Course monitor
GRAPHICAL PROCESSING

Informatics Center - UFPE
Jan. 2013 - Dec. 2013

Publications

[1] **Recycling a Landmark Dataset for Real-time Facial Capture and Animation with Low Cost HMD Integrated Cameras**. Brito, Caio; Mitchell, Kenny. *Iternational Conference on Virtual Reality Continuum and Its Applications in Industry (VRCAI)*. 2019.

[2] **Ray Tracer Based Rendering Solution for Large Scale Fluid Rendering**. Brito, Caio; e Silva, André L. Vieira; Teixeira, João Marcelo; Teichrieb, Veronica. *Computers & Graphics*. 2018.

[3] **Large Viscoelastic Fluid Simulation on GPU**. Brito, Caio; e Silva, André L. Vieira; William, Mozart; Teixeira, João Marcelo; Teichrieb, Veronica. *SBGames - Computing Track* . 2017.

[4] **Screen Space Rendering Solution for Multiphase SPH Simulation**. Brito, Caio; William, Mozart;e Silva, André L. Vieira; Teixeira, João Marcelo; Teichrieb, Veronica. *Symposium on Virtual and Augmented Reality (SVR)* . 2017.

[5] **Multimodal Augmentation of Surfaces Using Conductive 3D Printing**. Brito, Caio; Barros, Gutenberg; Correia, Walter; Teichrieb, Veronica; Teixeira, João Marcelo. *ACM SIG-GRAPH 2016 Posters*. ACM, 2016.

[6] **A Qualitative Analysis of Fluid Simulation Using a SPH Variation**. e Silva, André L. Vieira; Almeida, Mozart William; Brito, Caio; Teichrieb, Veronica; Barbosa, José Maria; Salhua, Cesar. *Congress on Numerical Methods*. 2015.

[7] **Towards Automatic Evaluation of Personality Tests**. Brito, Caio; Teixeira, João Marcelo; Teichrieb, Veronica. *Workshop de Realidade Virtual e Aumentada (WRVA)*. 2015.

[8] **Operações Paralelas sobre Bases Massivas de Strings**. Brito, Caio; Costa, Lucas; Teixeira, João Marcelo; Teichrieb, Veronica. *Simpósio em Sistemas Computacionais (WSCAD-SSC)*. 2013.