

## Felipe Moura de Carvalho

Ph.D Computer Science

Phone: +55 86 99834 3225

E-mail: [felipe.celer@gmail.com](mailto:felipe.celer@gmail.com)

Homepage: [www.felipedecarvalho.com](http://www.felipedecarvalho.com)

### Overview

Seeking for a position where I can effectively apply my expertise in problem solving and research, as well as learn and collaborate with others to continue my growth and experience new technologies. I'm a highly independent abstract-problem solver, with experience in 3D Scientific Visualization and Interactive Graphics, and a knack for being able to understand existing complex system.

**Specialities:** *computer graphics, illustrative visualization, mesh processing, scientific visualization, GPU programming, HCI, image processing*

**Technologies:** *C/C++, Qt, OpenGL/GLSL, Python, CUDA, CMake, CGAL, git*

### Work Experience

#### Postdoctoral Research

06/2015 - 07/2019

**University of Calgary** - Calgary, AB, Canada

Researcher and developer in the Rapid Reservoir Modelling project. Created the sketch-based interface infrastructure, include a 3D mesh viewer. Integrated the reservoir simulator. Implemented the post processing 3D visualization and the graphical user interface.

**Industry/Academic** - [www.rapidreservoir.org](http://www.rapidreservoir.org)

### Projects

#### Graduate Research - Interactive Cutaways of Oil Reservoirs

03/2012 - 12/2014

**Federal University of Rio de Janeiro and University of Calgary** - Rio de Janeiro, RJ, Brazil and Calgary, AB, Canada

Implement an Illustrative Visualization technique called *Cutaway* to aid in the inspection of 3D Oil&Gas reservoir models. The research prototype was implemented relying heavily on the Graphical Processor Unit (GPU) aiming a solution with good visual quality without compromising the interactive.

**Academic** - <https://doi.org/10.1016/j.gmod.2016.02.001>

#### Graduate Research - Digital Bamberg Project

03/2010 - 11/2012

**Federal University of Rio de Janeiro and The Museum of Astronomy and Related Sciences (MAST)** - Rio de Janeiro, RJ, Brazil

Assisted development and design of software and image processing algorithms for 3D digitization of historic scientific instrument in order to aid in the restoration process.

**Academic** - [www.lcg.ufrj.br/bamberg](http://www.lcg.ufrj.br/bamberg)

#### Graduate Research - iMedia

10/2008 - 11/2008

**Federal University of Rio de Janeiro and Institute of Pure and Applied Mathematics (IMPA)** - Rio de Janeiro, RJ, Brazil

Implemented the software prototype ReactBar. A collaborative effort in conjunction with designer, as part of the workshop of Interactive Media and Natural Interfaces promoted by IMPA.

**Academic** - [www.visgraf.impa.br/imedia08/projects/reactbar.html](http://www.visgraf.impa.br/imedia08/projects/reactbar.html)

## Languages

Portugues (native), English

## Education

**Federal University of Rio de Janeiro - Coppe/PESC** - Rio de Janeiro,RJ - Brazil 2010 - 2014  
Ph.D in System Engineering and Computer Science  
**Thesis:** *Interactive Cutaways Rendering of Corner Point Models*

**Federal University of Rio de Janeiro - Coppe/PESC** - Rio de Janeiro,RJ - Brazil 2007 - 2010  
M.Sc in System Engineering and Computer Science  
**Dissertation:** *Renderização de Modelos Baseados em Pontos usando Multiresolução* (in portuguese)

**Federal University of Piaui** - Teresina,PI - Brazil 2003 - 2007  
B.Sc in Computer Science  
**Final Project:** *Inteligencia Artificial usando Linguagem Haskell* (in portuguese)

## Activity & Awards

Program Committee, Reviewer - IEEE Virtual Reality 2019.

**Invited Speaker:** CINCIT - Segundo Congreso Internacional de Computación e Innovación tecnológica. September 2019, Andahuaylas - Apurímac - Perú. Title: *Smart Visibility Applied to Oil&Gas Reservoir Models*

The National Council for Scientific and Technological Development (CNPq) - Brazil  
Scholarship granted by CNPQ Brazil to spend one year at the University of Calgary as visiting Ph.D Student (Grant no. 237044/2012-9)

Fundação de Amparo à Pesquisa do Estado do Rio de Janeiro - FAPERJ - March 2012  
Bolsa Nota 10: Scholarship granted by FAPERJ with the purpose of rewarding the best graduate students in the state of Rio de Janeiro, Brazil. (Grant no. E-26/100.393/2012)

The National Council for Scientific and Technological Development (CNPq) - Brazil  
Scholarship granted by CNPQ Brazil for pursuing a PHD at COPPE/UFRJ (Grant no. 141232/2010-2)

The National Council for Scientific and Technological Development (CNPq) - Brazil  
Scholarship granted by CNPQ Brazil for pursuing a Ms.c at COPPE/UFRJ (Grant no. 132345/2007-2)

## Social Media

Linkedin <https://www.linkedin.com/in/felipe-de-carvalho-1768173a>  
Github <https://github.com/felipeCeler>  
Orcid <https://orcid.org/0000-0002-3690-5480>  
Lattes <http://lattes.cnpq.br/0922142294203200>