Felipe Moura de Carvalho

Ph.D Computer Science

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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, OpenVolumeMesh*

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

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

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

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