

Paulo Gonçalves de Barros

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Objective

Full time job in Computer Science with an interest in research, design, test and development of innovative solutions for Games, Virtual Reality, Human-Computer Interaction, Multimedia and Computer Graphics.

Education

Philosophy Doctorate, Computer Science **GPA: 3.77 / 4.0** Fall, 2012

Concentration: Virtual Reality, Human-Computer Interaction and Robotics.
Worcester Polytechnic Institute, Worcester, MA.

Master of Science, Computer Science **GPA: 3.75 / 4.0** March, 2005

Concentration: Virtual Reality and 3D urban traffic simulation.
Federal University of Pernambuco (UFPE), Brazil.

Bachelor of Science, Computer Science **GPA: 8.01 / 10.0** March, 2003

UFPE, Brazil.

Professional Experience

Human-Computer Interaction Research Assistant September, 2006 - Present
HIVE Lab, Computer Science Department, Worcester Polytechnic Institute.

- Designing new interaction interfaces for robots and 3D applications
- Performing research on camera motion in 3D virtual environments
- Developing and testing software for integration of multiple input devices

Teaching Assistant in Computer Science and Interactive Media and Game Development September, 2006 – Present

Computer Science Department, Worcester Polytechnic Institute.

- Works with Game Development, AI, Algorithms and Computer Graphics
- Grades assignments, writes tutorials and supervises exams and lab sessions

Xerox Summer Intern Summer 2010

Document Production and Visualization Group, Xerox Research Center, Webster, NY.

- Created touchscreen 3D interfaces and ran a user study comparing them
- Resulted in patent and research paper submission for the company

Hydrabyte, Inc. Game Developing Summer Intern Summer 2009

61 Harvard Street, Worcester, MA.

- Implemented an iPhone game, including interface and most art assets
- Reviewed game design and wrote game technical design document

Hive Lab Summer Intern Summer 2008

Worcester Polytechnic Institute, Worcester, MA.

- Designed and implemented software for interacting with vibro-tactile interfaces
- Vibration intensity and temporal behavior was possible

Verizon Interactive TV Group Summer Intern Summer 2007

Verizon Labs, Waltham, MA.

- Designed and implemented Web and TV interfaces for interactive TV prototypes
- Resulted in a patent application for the company

Virtual Reality Research Assistant March, 2005 – July, 2006
Network and Telecommunication Research Group (**GPRT**), UFPE, Brazil.

- Implemented 3D drilling planner prototype for ultra-deep water well perforation
- Developed multi-player game to be used in network traffic studies

Business Partner October, 2002 – December, 2003
Vixia Studios Game Company, UFPE, Brazil.

- Managed company project and production of a game demo and business plan
- Organized the company finances and contacts

Virtual Reality Research Student March, 2000 – March, 2002
UFPE, Brazil.

- Constructed virtual worlds and maintained Virtual Reality group's website
- Evaluated VRML browsers and built a stereoscopic 3D transit simulator prototype

Skills

Programming and Development Languages

Intermediate: C, C++, OpenGL, HTML

Used in past: C#, Processing, Objective-C, Cocoa, XAML, Python, VRML, Java, Haskell, Basic Script, UML.

Multimedia, Analysis, Simulation and Development Tools

R, Unity 3D, C4, Ogre 3D, Microsoft Visual Studio, XCode, 3D Studio Max, Gimp, Microsoft Expression Blend, Corel Draw, Eclipse, Flash, UNIX C/C++ compiler, Microsoft Office Suite, Camtasia Studio, Windows Movie Maker.

Foreign Languages

Portuguese (native), Spanish, German.

Academic Projects

MSc Thesis – UFPE 2005

Title: ITranS – Simulador de Trânsito 3D

3D urban transit simulator using OpenGL, C++ and topological and traffic flow data.

Final Undergraduate Work – UFPE 2002

Title: Simulação de Tráfego em Realidade Virtual.

3D Urban traffic virtual environment with stereoscopic headsets and motion tracking.

Achievements, Honors & Awards

TA & RA Assistantships – 2006 to Present

Awarded to fund current PhD studies.

Outstanding TA of the Year - 2011

Elected the best TA of the year by the WPI Computer Science Department students.

First Place in Xerox Summer Intern Video Competition - 2010

Awarded best two-minute video reporting summer work experience at Xerox.

UPE: Upsilon Pi Epsilon Society – 2009

Inducted as a result of accomplishments as Computer Science graduate student.

Interactive 3D graphics and Games Best Poster Award – 2009

Received first place award during the conference poster competition.

Other achievements, honors & awards:

2006 – Vispetro oil drilling software

2003 - MSc Scholarship, GDCE Scholarship

2002 – OCCO and CHEIO game demos

Activities

Kalenian Award and Daedalus Innovation Competition Finalist – 2010

Game prototype was among finalists for both awards.

WPI UPE Treasurer and Member - 2009 to Present

Helps organize Computer Science related events and manages the chapter finances.

Electronic Games Developer – 2002 to Present

Develops and designs games with friends for classes, pleasure and competitions.

Local Chair and Student Volunteer for Virtual Reality Conference – 2010

Organized local demo presentations and provided general help during the event.

Local Chair at ACM SIGGRAPH Symp. on Interactive 3D Graphics – 2009

Helped with the organization of the proceedings and worked at the reception desk.

Other Activities:

2000 – 2001: Virtual Reality site webmaster

1993 – 2005: Lista Negra RPG group

2003 – 2006: Alona Hiking group

1993 – Present: Hobbyist musician