Alain Juárez Pérez

Contact Information

Email: ajuarez-perez@ucmerced.edu
Cell Phone: +1 (209) 600 8374
http://graphics.ucmerced.edu/~ajuarez/

Education

PhD in Electrical Engineering and Computer Science,
Computer Graphics Group
University of California, Merced
Thesis topic: ***"Full-body mocap-based motion planning for autonomous characters"***
Supervisor: Prof. Marcelo Kallmann
Expected graduation: December 2017

Bachelor in Computer Science,
Universidad de Guanajuato, Guanajuato, Gto, MX 36240
Thesis work: *"Implementation of a machine learning scheme for humanoid motion generation"*

Interests

Computer Animation, Data-Driven Algorithms, Motion Capture, Computational Geometry, Machine Learning, Computer Graphics, Motion Planning.

Honors and Awards

- **UC MEXUS-CONACYT Doctoral Fellowships for Mexican Students**
- **CIMAT**'s full-scholarship for living expenses 2007-2012
- **Academic Highlighted Student UG** award received for 4 years(2008, 2009, 2010, 2012)
- 9th Place in **ACM International Collegiate Programming** regional phase 2009
- 2nd Place in **Mexican Mathematics Olympiad** 2006

Experience

- **USC Institute for Creative Technologies**
  Visiting Research Assistant, Summer 2014
  Duties: developed and integrated a locomotion engine for SmartBody characters, performed research on the topic, which generated a poster paper published at MIG.
- **University of California, Merced**
  Teaching Assistant
  - Computer Graphics; Fall 2013, Fall 2015, Spring 2017
- **Universidad de Guanajuato**
  Teaching Assistant
  - Computer Graphics; Spring 2010, Spring 2012.
  - Algorithms and Programming; Fall 2010, Fall 2011
  - Algorithms and Computation; Spring 2011
- **University of Texas at Dallas**
  Fellow Assistant at the UTD-Mexico Scientific Summer Program 2010
  Duties: Collaborated as a programmer in a Calculus educational videogame.
- **Universidad Autónoma de San Luis Potosí**
  Fellow Assistant at the Regional Summer of Research, Summer 2009

Project: Computer Vision applied for the takeoff and landing of a remote controlled helicopter.

- **Centro de Investigación en Matemáticas, A.C.**
  Advisor and teacher of the Informatics Olympiad in Guanajuato, Mexico, 2009-2012
- **Universidad Autónoma del Estado de Morelos**
  Advisor and teacher of the Mathematics Olympiad in Morelos, Mexico, 2007-2009

Papers in Preparation for submission

2017 *Synthesizing Coordinated Full-Body Interactions*, to be soon submitted to Transactions on Graphics (TOG).

Peer-Reviewed Publications

2016 *Full-Body Behavioral Path Planning in Cluttered Environments*, Alain Juarez-Perez and Marcelo Kallmann, Motion in Games (MIG), 2016

2016 *Modeling Data-Based Mobility Controllers with Known Coverage and Quality Properties*, Alain Juarez-Perez and Marcelo Kallmann, Digital Human Modeling, 2016

2014 *Deformation, Parameterization and Analysis of a Single Locomotion Cycle*, Alain Juarez-Perez, Andrew Feng, Ari Shapiro and Marcelo Kallmann, Motion in Games (MIG), poster paper, 2014

Skills

- **Computing:** 9+ years of experience in C/C++, OpenGL, GLSL, OpenCV, Qt. Advanced user of Operative Systems (Windows, Mac OSX, Linux) and intermediate user for the server versions. Experience in subversion, Motion Capture data, Motion Builder and in Maya Embedded Language.
- **Scientific software:** Matlab, R project, Wolfram Mathematica, LaTeX,
- A bachelor's degree equivalent to a double major in Mathematics and Computer Science. A very complete knowledge in Vector Calculus, Real and Complex Analysis, Differential Equations, Linear Algebra, Modern Algebra, Probability and Statistics.
- **Bilingual:** Spanish as native language. Fluent at English.
- **Other:** Teamwork, Problem-solving and leadership.

Paper reviewer

- The Visual Computer
- Eurographics
- International Conference on Robotics and Automation (ICRA)
- Symposium on Computer Animation (SCA)
- Motion in Games (MIG)
- Computer Animation and Virtual Worlds
- Conference on Computer Animation and Social Agents (CASA)
- Symposium on Interactive 3D Graphics and Games (I3D)
- Intelligent Virtual Agents (IVA)
- Workshop on the Algorithmic Foundations of Robotics (WAFR)