

Juan R. Leon

Graduate Student
Department of Computer Science
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Research Interests

Computer Graphics, Character Animation, Video Bioinformatics, Numerical methods for physically based systems, Numerical Analysis, Scientific Computing

Education

University of California, Riverside
Ph.D., Computer Science – Expected 2016
Graduate Courses – Advanced Topics in Computer Animation, Algorithms, Computer Graphics, Introduction to Imaging Bioinstrumentation and Analysis, Introduction to Medical Imaging and Analysis, Synthesis of Digital Systems

University of California, Irvine
M.S. Computer Science – Transferred to UCR 2011
Graduate Courses: Algorithms for Molecular Biology, Mathematical-Computational Biology, Real Analysis, Abstract Algebra, Visual Computing, Geometry and Topology in Computer Graphics, Artificial Intelligence, Networking

California State University, Long Beach
M.S. Applied Mathematics - June 2007
Graduate Courses: Abstract Algebra, Numerical Analysis, Real Analysis, Numerical Solutions of Partial Differential Equations, Partial Differential Equations, Applied Analysis, Mathematical Modeling, Special Topics in Numerical Solutions of Partial Differential Equations, Special Topics in Partial Differential Equations

University of California, Los Angeles
M.Ed. Mathematics – June 2003

University of California, Los Angeles
B.S. Major: Applied Mathematics, Specialization: Computing - June 2002

Research and Work Experience

University of California, Riverside Riverside, CA
Graduate Research Assistant September 2012 to Present
Processing video data to perform 3d reconstruction and develop inverse dynamics models for analyzing agility and maneuverability in Anolis Lizards.

University of California, Riverside Riverside, CA
Graduate Research Assistant January 2011 to December 2012
Designed and analyzed experiments using a motion capture system to analyze athletic performance. Currently developing techniques using Matlab and OpenSim with the analyzed data to determine biologically significant parameters for optimal performance.

Cerritos College Norwalk, CA
Adjunct Professor of Mathematics August 2007 to Present
Taught various courses such as Basic Mathematics, Pre-Algebra, Beginning Algebra, Intermediate Algebra, Geometry, College Algebra, and Statistics.

U.S. Department of Treasury, Bureau of Engraving and Printing Washington, DC
Special Assistant Summer 2010
Worked with subject matter experts to document and implement sub-system requirements for each module in the Management Directorate regarding BEN development. Used Visual Basic for Applications (VBA) to consolidate all department employee duties spreadsheets for the security division of the Bureau.

University of California, Irvine
Graduate Research Assistant

Irvine, CA
April 2008 - October 2010

Implemented in C a reversible, variable step size integrator for N-body simulations to produce noisy orbits to be shadowed for long timesteps, and wrote shell scripts to run simulations and organize the data.

California State University, Long Beach
Graduate Research Assistant

Long Beach, CA
January 2006 - August 2006

Conducted numerical computations using MATLAB, based on the implementation of recent numerical methods for computing viscosity solutions for Hamilton-Jacobi Equations.

Teaching Experience

Instructor, Pre-Algebra, Cerritos College, Spring 2012

Instructor, Geometry, Cerritos College, Fall 2011

Instructor, Beginning Algebra, Cerritos College, Fall 2010

Instructor, Intermediate Algebra, Cerritos College, Spring 2010

Instructor, College Algebra, Cerritos College, Summer 2009

Instructor, Pre-Algebra, Cerritos College, Fall 2008

Instructor, Statistics, Cerritos College, Fall 2008

Tutor, Undergraduate Mathematics, Spring 2008

Teaching Assistant, Single Variable Calculus, University of California, Irvine, Winter 2008

Instructor, Basic Mathematics, Cerritos College, Fall 2007

Publications

W. Hayes and J. Leon, Shadowing as a test of the value of symmetry for variable time step schemes, Applied Numerical Mathematics, under Review

Honors and Awards

Video Bioinformatics IGERT Fellowship, University of California, Riverside, 2012

Dean's Distinguished Fellowship, University of California, Riverside, 2011-2013

Hispanic Association for Colleges and Universities (HACU) National Internship Program U.S. Department of Treasury, Bureau of Engraving and Printing Summer 2010

References

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