
LAVIOLA EXHIBIT A

JOSEPH J. LAVIOLA JR.
Curriculum Vitae

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RESEARCH INTERESTS

User interfaces, interactive 2D and 3D graphics, human robot interaction, pattern recognition

EDUCATION

- 2005:** **Ph.D.**, Computer Science, Brown University
Dissertation: “Mathematical Sketching: A New Approach to Creating and Exploring Dynamic Illustrations”
Advisor: Andries van Dam
- 2001:** **Sc.M.**, Applied Mathematics, Brown University
- 2000:** **Sc.M.**, Computer Science, Brown University
Thesis: “Whole-Hand and Speech Input in Virtual Environments”
- 1996:** **B.S.**, Computer Science, Florida Atlantic University

PROFESSIONAL EXPERIENCE

- 2015-Present:** Director of the Modeling and Simulation Graduate Program, University of Central Florida, Orlando, FL
- 2015-Present:** Charles N. Millican Faculty Fellow and Associate Professor of Computer Science, University of Central Florida, Orlando, FL
- 2014-Present:** Director of the Interactive Computing Experiences Research Cluster of Excellence, University of Central Florida, Orlando, FL
- 2008-Present:** Affiliated Research Faculty, Institute for Simulation and Training, University of Central Florida, Orlando, FL
- 2013-Present:** Adjunct Associate Professor of Computer Science, Brown University, Providence, RI
- 2005-Present:** Co-founder and VP of Business Strategy, Fluidity Software, Inc., Somerville, MA

2000-Present: Consultant, JJI Interface Consultants, Inc., Oviedo, FL

Consulting services for user interface design and patent litigation. My consultancies include Nextron Medical Technologies, Physion, Inc., Bellissima Cosmetics, Rosebud LMS, Inc., McKinsey and Co., Microsoft Research, Sixense Entertainment, Inc. (Advisory Board Member), SNR Denton, Williams & Connolly LLP, Activision, InGenius Prep, Meta, Raytheon

2012-2015: CAE Link Professor and Associate Professor with Tenure in EECS, University of Central Florida, Orlando, FL

2006-2013: Adjunct Assistant Professor of Computer Science (Research), Brown University, Providence, RI

2010-2012: SAIC Faculty Fellow and Assistant Professor in EECS, University of Central Florida, Orlando, FL

2007-2010: Assistant Professor, University of Central Florida, Orlando, FL

2006-2009: Research Faculty, Microsoft Center for Research on Pen-Centric Computing, Providence, RI

2005-2006: Postdoctoral Research Associate, Brown University, Providence, RI

Continuing work in mathematical sketching as well as exploring how different orientation tracking algorithms work in augmented reality environments.

1998-2005: Research Assistant, Brown University Computer Graphics Lab, Providence, RI

Developed mathematical sketching, an approach to making dynamic illustrations through the combination of handwritten mathematics and free-form drawings and created a mathematical expression recognition system. Studied how different factors such as motion style, sampling rate, prediction time, and noise variance affected various prediction algorithms for human motion tracking in virtual environments. Explored how multimodal interfaces could be used in virtual environments as well as the general topic of improving 3D interfaces in virtual environments. Assisted in the startup and development of the Brown University Technology Center for Advanced Scientific Computing and Visualization.

1999: Teaching Assistant, Brown University, CS-295-5, Interdisciplinary Scientific Visualization

Maintained course web page, prepared class notes, graded homework.

1997: Research Scientist, Fraunhofer Center for Research in Computer Graphics, Providence, RI

Developed demonstration applications for a table-based virtual environment display system utilizing 2D and 3D gesture-based interface techniques.

1996: Software Technician, UCS, Inc., Fort Lauderdale, FL

Performed software test automation and software quality assurance.

1995: Student Intern, IBM, Boca Raton FL

Maintained SQL database query system and performed website development tasks.

HONORS AND AWARDS

2017: UCF Research Incentive Award (RIA)

2017: ACM CHI 2017 Honorable Mention Paper (top 5% of all paper submissions)

2016: Best Paper Award, Ninth IEEE International Conference on the Internet of Things 2016

2016: ACM CHI 2016 Honorable Mention Paper (top 4% of all paper submissions)

2015: Michael A. J. Sweeny Best Student HCI Paper Award – Graphics Interface 2015

2014: ACM CHI 2014 Honorable Mention Paper (top 5% of all paper submissions)

2014: UCF Reach for the Stars Award

2013: UCF Teaching Incentive Program Award (TIP)

2013: UCF Scholarship of Teaching and Learning Award (SOTL)

2013: UCF College of Engineering and Computer Science Deans Research Professorship Award

2013: UCF College of Engineering and Computer Science Excellence in Graduate Teaching Award

2012: Appointed the CAE Link Professor in Electrical Engineering and Computer Science at UCF

2012: UCF Research Incentive Award (RIA)

2012: Named IEEE Senior Member

2011: Best Paper Award, 8th International Conference on Advances in Computer Entertainment Technology

2011: Named ACM Senior Member

2011: Best Poster Award, Eurographics/ACM Symposium on Sketch-Based Interfaces and Modeling

2011: Named to the Eurographics Sketch-Based Interfaces and Modeling steering committee

2010: Appointed the SAIC Faculty Fellow in Electrical Engineering and Computer Science at UCF

2010: ACM CHI 2010 Honorable Mention Paper (top 5% of all paper submissions)

2010: UCF College of Engineering and Computer Science Distinguished Researcher Award

2009: Best Paper Award, Eurographics/ACM Symposium on Sketch-Based Interfaces and Modeling

2009: National Science Foundation CAREER Award

2008: Best Paper Award, 9th International Symposium on Smart Graphics

2007: UCF Presidential Major Equipment Award

2006: Best Paper Award, Eurographics Workshop on Sketch-Based Interfaces and Modeling

2004: Best Paper Presentation (Applied Estimation Session), 2004 American Control Conference

2000-2002, 2004: The van Dam Fellowship

1998: IBM Cooperative Fellowship

1996: FAU's Aaron Finerman Award

1996: FAU's Faculty Award for Outstanding Undergraduate Achievement

1995: Microsoft Senior Achievement Award

Also elected to Sigma Xi (1998), Phi Kappa Phi (1995), and Phi Eta Sigma (1993)

RESEARCH CONTACTS AND GRANTS

Total Funding: \$4,672,885

Total as PI: \$3,880,885

Total as Co-PI: \$792,000

My Share at UCF: \$3,876,798

Active Grants and Contracts

“NRI: Collaborative Research: Sketching Geometry and Physics Informed Inference for Mobile Robot Manipulation in Cluttered Scenes”, NSF Award IIS-1638060, \$286,434, Sole PI (100% credit), Sept. 2016 – August 2019.

“RF: Improving Augmented Reality Technologies for Training and Education”, Lockheed Martin Corporation, \$200,000, PI (80% credit equals \$160,000), Aug. 2016 – Aug. 2018.

“FHTCC: Improving Augmented Reality Technologies for Training and Education”, UCF/I-4 Match, \$66,666 PI (80% credit equals \$52,800), Aug. 2016 – Aug. 2018.

“Interactive Visualization in Support of Decision Making under Uncertainty”, Office of Naval Research Award ONRBAA15001, \$660,000, Co-PI, (54.5% credit equals \$360,000), Sept. 2015 – Oct. 2018.

“Augmented Reality-Based Intelligent Tutoring in the Wild”, US Army RDECOM –STC Award W911QX13C0052, \$489,376, Sole PI (100% credit), Dec. 2014 – April 2018.

Past Grants and Contracts

“Exploring the Benefits of Spatial IDEs”, Coda Enterprises, LLC, \$47,500, Sole PI (100% credit), Jan. 2016 – May 2017.

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