Salam Daher

• 2950 Grandeville Cir # 1-218, Oviedo, FL 32765 *[Before 7August 2019]*
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ACADEMIC POSITIONS

NEW JERSEY INSTITUTE OF TECHNOLOGY — Newark, NJ
Assistant Professor in the Ying Wu College of Computing. — August 2019
Primary appointment in the department of Informatics.
Secondary appointment in the department of Computer Science.

UNIVERSITY OF CENTRAL FLORIDA — Orlando, FL
Postdoctoral Researcher with Professor Gregory Welch — Jan 2019-present
Modeling and Simulation

EDUCATION

UNIVERSITY OF CENTRAL FLORIDA, College of Engineering
PhD in Modeling & Simulation (Dec 2018) — Orlando, FL
August 2013-
December 2018

- Graduate Research Assistant at the SREAL lab working on mixed reality simulators for healthcare training. Areas of interest include but not limited to: Synthetic environments, 3D characters (agents /avatars), facial expressions (FACS), body language, simulation & training, medical simulation, augmented, virtual and mixed reality.
- Nominated by the School of Modeling and Simulation and selected by the College of Graduate Studies for the Outstanding Dissertation Award (each college selects one PhD graduate. UCF had 13 colleges).
- Nominated by the School of Modeling and Simulation for the Order of Pegasus 2019 Award.
- NCWIT 2018 collegiate scholarship award winner (4 winners out of 147 graduate and undergraduate students in the STEM fields who applied from 91 two to four year colleges in the USA).
- Recipient of the 2017 RADM Fred Lewis Postgraduate I/ITSEC Scholarship at the Doctoral Level (given to 3 PhD students in STEM)
- Recipient of IEEE VR 2017 Doctoral Consortium Fellowship (1 in 12 around the world) to present my research.
- Recipient of the Link Fellowship for Modeling and simulation (academic year 2016-2017). This merit-based fellowship is awarded to 4 people in the USA.
- Recipient of the Modeling & Simulation assistantship for 3 years in a row
- GPA 4.0/4.0

UNIVERSITY OF CENTRAL FLORIDA, College of Engineering — Orlando, FL
MS in Modeling and Simulation (Dec 2015) — Dec 2015
GPA 4.0/4.0

UNIVERSITY OF FLORIDA, College of Engineering — Gainesville, FL
MS in Digital Arts & Science — December 2006

- Concentration in computer graphics, 3D modeling and simulation, virtual environments, aesthetic computing, artificial intelligence & video games.
- GPA 3.80/4.0 (High Distinction)

LEBANESE AMERICAN UNIVERSITY — Byblos, Lebanon
BS in Computer Science with minor in Mathematics — July 2004

- Recipient of the Rhoda Orme Award presented to an individual to honor her outstanding spirit of devotion, objectiveness, tolerance and services regardless of recognition.
- Recipient of Merit Based scholarship for 9 consecutive semesters
- Awarded membership to the student honor society
- GPA 3.82/4.0 (High Distinction)

WORK EXPERIENCE

VCOM3D, INC. — Orlando, FL
Digital Media Developer (full time for over 5 years. Currently consultant) — Jan 2007-2012

- Lead developer for "Vcommunicator Mobile", an iPod-based translation device used by the US Army in Iraq. http://www.vcom3d.com/language/instant-translation/
- Develop gesture libraries, 3D animation, language and cultural content including translations, writing scripts to optimize the work process, testing products, reviewing 3D avatars and quality assurance. (funded by DARPA)
- Develop language & culture real-time training scenarios with 3D avatars.
- Lead the development for creating a FACS coded Facial Expressions Video Reference (funded by NSF)
- As a multilingual digital media developer, liaison for art, linguistics and programming departments and all language subject matter experts. http://salamdaher.net/portfolio/index.php?id=demos

UNIVERSITY OF FLORIDA – DIGITAL WORLDS INSTITUTE — Gainesville, FL
Software Developer & 3D Modeler (fall/ spring part time. summer full time) — 2005
University of Florida Campus Model: Developed, modeled & optimized a real-time virtual 3D campus model using C++, Presagis Vega Prime & 3D studio MAX. The aerospace department uses the model to simulate flying micro air vehicles on campus.

UNIVERSITY OF FLORIDA – COLLEGE OF ARCHITECURE — Gainesville, FL
Software Developer (part time) — Summer 2006
College of Architecture Urban City: Developed generic software that helps the college of architecture students and professors load any 3D model and use interaction to navigate, manipulate and simulate buildings over time. Technology used: C++ & Presagis Vega Prime.

INDEPENDENT PROJECT: ACCIDENT RECONSTRUCTION — Gainesville, FL
Accident reconstruction: Accurately modeled, reconstructed and simulated an accident and the environment in 3D given the facts from the police report and physics data (speed, acceleration, time of day, lighting, type of truck, camera position…etc.). The simulation includes 3D character, car and the same environment of the accident. Lawyers used simulation during the mediation. — December 2005 (worked remotely from Lebanon)

LEBANESE AMERICAN UNIVERSITY — Byblos, Lebanon
3D Modeler and Designer (fall and spring part time. summer full time) — 2001
Modeled a 3D virtual campus tour and a 3D character using 3D studio MAX and Flash script. The CD was commissioned by the admissions office for

new student orientation.

Graphic designer 2002-2004
Designed the university year books, calendars and various posters.

Audio Video Assistant 2000
Helped students to learn video editing and multimedia software (Adobe Premiere, Adobe Photoshop, 3D studio max) and hardware equipment

RESEARCH EXPERIENCE

UNIVERSITY OF CENTRAL FLORIDA Orlando, FL

Postdoctoral Scholar at the SREAL lab 2019-present

Graduate Research Assistant, SREAL lab 2014-2018
Exploring the effects of manipulating sensory cues on perceptions and performance during an interaction with a human surrogate in mixed reality environment. The work involves designing a study, getting IRB approval, software and hardware development of apparatus, running participants, collecting and analyzing data, writing papers and presentations.

Graduate Research Assistant, METIL lab 2013-2014
Developed interactive 3D web applications for iBooks.
Researched and implemented a method to simultaneously trigger 18 cameras using CHDK for photogrammetry.

Independent research 2013-2014
Researching development of anatomical muscles modeling. Developed a realistic 3D virtual head for myself with anatomically correct facial muscles using FACS for training. (development time more than 700 hours)

UNIVERSITY OF FLORIDA Gainesville, FL

Virtual Environment Project 2005-2006
Space Mission Ride: Designed and developed a virtual 3D space mission ride using C++, Presagis (Multigen Paradigm) Vega Prime and 3D studio MAX. The Digital Worlds Institute at UF acquired the project for demos and research. The project was on the main webpage of CISE department for over a year. For more information please check
http://plaza.ufl.edu/sallouma/spacemission/

PRESENTATIONS

UNIVERSITY OF CENTRAL FLORIDA

Panel at INACSL 2019 (coming) Jun 2019
Scheduled to present a panel titled "Vera Real: Stroke assessment using a Physical Virtual Patient (PVP)"

Workshop at INACSL 2019 (coming) Jun 2019
Scheduled to present a workshop titled: "Virtual/augmented reality for health professions education symposium"

Poster at IEEE VR 2019 March 2019
Presented poster titled "Matching vs. Non-Matching Visuals and Shape for Embodied Virtual Healthcare Agents" at IEEE VR 2019 in Osaka, Japan

Otronicon 2019 at the Orlando Science Center Jan 2019
Presented a Tech Talk about healthcare simulation titled "Patient Simulators: the Past, Present, and Future"

ACM Intelligent Vurtual Agent Nov 2018
Presented 2 papers during the conference "A Systematic Survey of 15 Years of User Studies Published in the Intelligent Virtual Agents Conference" and "Physical-Virtual Agents for Healthcare Simulation"

IEEE VR 2017 Doctoral Consortium Presentation Spring 2017
Presented my research "Optical see-through vs. spatial augmented reality simulators for medical applications" at IEEE VR 2017 in Los Angeles CA to experts in the field of virtual/augmented reality.

Video Editing Workshop Instructor Summer 2014
Prepared and taught a video editing workshop using Adobe Premiere for the PhD students in the SREAL lab to help making supporting videos for the papers submitted to IEEE VR2015.

Guest Lecturer for EIN6645 Spring 2015
Guest lecturer for EIN 6645 (realtime simulation agents) for 3 lectures using Maya and Unity3D (total of 9 hours). This course is taught by Dr. Michael Proctor, as part of the class guest lecturers demonstrate softwares needed in the pipeline of 3D character modeling for simulation. This opportunity is only offered to top PhD students.

Guest Speaker for SimTalk at College of Nursing Fall 2015
Presented the talk "Healthcare Simulation through History" at the College of Nursing.
http://salamdaher.net/UCF/dissertation/healthcareSimulators/timeline.html

TEACHING EXPERIENCE

UNIVERSITY OF FLORIDA – CISE DEPARTMENT Gainesville, FL
Lecturer 2005-2006
Prepared lectures, taught, administered & corrected exams for "CAP3020: Theory & Practice of Multimedia Production" and "CGS2032: Math, Art & Computing".

LEBANESE AMERICAN UNIVERSITY Byblos, Lebanon
Teaching Assistant: Artificial Intelligence & Database Systems 2004
Corrected, prepared projects, helped students understand the material & administered exams. Supervisor: Dr. Munjid Mussalem

Physics Lab instructor for Electricity & Magnetism and for Mechanics lab 2001-2003
Prepared experiments and material for students, taught the lab, corrected lab reports, prepared administered and corrected exams & quizzes. Supervisors: Dr. Mars Semman & Dr. Michel Khury

LEBANESE AMERICAN LANGUAGE CENTER Byblos, Lebanon
Instructor for technical computer courses 2001-2004
Prepared & explained lectures, prepared & corrected exercises and projects for the following course subjects: Adobe Photoshop, Adobe premiere Corel Draw, Quark X press, Auto CAD, 3D studio MAX & Macromedia Flash

HONORS & AWARDS

UNIVERSITY OF CENTRAL FLORIDA

- Nominated by the School of Modeling and Simulation and selected by the College of Graduate Studies for the Outstanding Dissertation Award (each college selects one PhD graduate. UCF had 13 colleges). 2019
- Nominated by the School of Modeling and Simulation for the UCF Order of Pegasus 2019 Award 2018
- Recipient of the NCWIT collegiate scholarship 2018 (1 of 4 national winners. 147 students applied from 91 colleges in the USA). 2018
- Recipient of the 2017 RADM Fred Lewis Postgraduate I/ITSEC Scholarship at the Doctoral Level (1 or 3 winners at the PhD Level). 2017
- Recipient of IEEE VR 2017 Doctoral Consortium Fellowship (1 in 12 around the world) to present my research. 2017
- Recipient of the Link Fellowship for Modeling and simulation (academic year 2016-2017). This merit-based fellowship is awarded to 4 people in the USA. 2016-2017
- Recipient of the Modeling & Simulation Assistantship for 3 consecutive years at University of Central Florida. 2013-2016

LEBANESE AMERICAN UNIVERSITY Byblos, Lebanon

- Recipient of the Rhoda Orme Award presented to an individual to honor her outstanding spirit of devotion, objectiveness, tolerance and services regardless of recognition.
- Recipient of Merit Based scholarship for 9 consecutive semesters

HIGH SCHOOL and EARLIER

Awarded 1st prize in designing a stamp for Byblos municipality that represents the cultural and historical heritage of the city. Byblos, Lebanon 2000

Awarded 1st place in a nationwide drawing competition for all students in Lebanon Lebanon 1997

Awarded 2nd place in Byblos Bank drawing competition among all schools in Byblos Byblos, Lebanon 1994

Awarded the 1st prize in a drawing competition for a Lebanese local charity organization for kids "Auxilia". Byblos, Lebanon 1993

Awarded 10th place in the Fabriano nationwide drawing competition. Thousands of students in Lebanon participate in this yearly event Lebanon 1991

PUBLICATIONS

Journal Paper (under review)

Title: Neurological Assessment Using a Physical-Virtual Patient. Journal of Nursing Education — Expected in 2019
Authors: Laura Gonzalez, Salam Daher, Gregory Welch
Submitted to: Journal of Nursing Education
Type: Journal paper

Poster Abstract (Published)

Title: Matching vs. Non-Matching Visuals and Shape for Embodied Virtual Healthcare Agents — March 2019
Authors: Salam Daher, Jason Hochreiter, Ryan Schubert, Gerd Bruder, Laura Gonzalez, Juan Cendan, Mindi Anderson, Desiree A. Diaz, Gregory F Welch
Submitted to: IEEE VR 2019
Type: Conference Poster

Journal Paper (Accepted pending modifications)	Title: Physical-Virtual Patient: A new patient simulator Authors: Salam Daher, Jason Hochreiter, Ryan Schubert, Laura Gonzalez, Juan Cendan, Mindi Anderson, Desiree A. Diaz, Gregory F Welch Submitted to: Society of Simulation in Healthcare Journal Type: Journal Paper (Accepted pending modifications)	Expected in 2019
Conference Paper (Published)	Title: A Systematic Survey of 15 Years of User Studies Published in the Intelligent Virtual Agents Conference Authors: Nahal Norouzi, Kangsoo Kim, Jason Hochreiter, Myungho Lee, Salam Daher, Gerd Bruder and Gregory Welch Submitted to: IVA 2018 Type: Conference Paper	May 2018
Conference Paper (Published)	Title: Touch-Aware Intelligent Physical-Virtual Agents for Healthcare Simulation Authors: Salam Daher, Laura Gonzalez, Jason Hochreiter, Nahal Norouzi, Gerd Bruder, Greg Welch Submitted to: IVA 2018 Type: Conference Paper	May 2018
Conference Paper (Published)	Title: Cognitive and Touch Performance Effects of Mismatched 3D Physical and Visual Perceptions Authors: Jason Hochreiter, Salam Daher, Gerd Bruder, Gregory Welch Submitted to: IEEE VR 2018 Type: Conference Paper	Mar 2018
Conference Paper (Published)	Title: Effects of Social Priming on Social Presence with Intelligent Virtual Agents Authors: Salam Daher, Kangsoo Kim, Myungho Lee, Ryan Schubert, Gerd Bruder, Jeremy Bailenson, Gregory Welch. Submitted to: IVA 2017 Type: Conference Paper	April 2017
Short Article (Published)	Title: Physical-Virtual Patient Head Author: Salam Daher, Laura Gonzalez, Gregory Welch Submitted to: Florida Nurses Association. September 2017 issue. Type: Short Article	September 2017
Doctoral Consortium Presentation and Poster Abstract (Published)	Title: Optical See-Through vs. Spatial Augmented Reality Simulators for Medical Applications Author: Salam Daher Submitted to: IEEE VR 2017 Type: Conference Presentation and Poster	Los Angeles, CA Mar 2017
Poster Abstract (Published)	Title: Can Social Presence be Contagious? Effects of Social Presence Priming on Interaction with Virtual Humans. Authors: Salam Daher, Kangsoo Kim, Myungho Lee, Gerd Bruder, Ryan	Los Angeles, CA Mar 2017

	Schubert, Jeremy Bailenson, Greg Welch Submitted to: 3DUI 2017, Los Angeles – CA Type: Conference Poster	
Journal Paper (Published)	Title: HuSIS: A Dedicated Space for Studying Human Interactions Authors: R. Schubert and G. Welch and S. Daher and A. Raij Submitted to: IEEE Computer Graphics and Applications Type: Journal Paper	Nov 2016
Conference Paper (Published)	Title: Touch sensing on non-parametric rear-projection surfaces: A physical-virtual head for hands-on healthcare training. Authors: Jason Hochreiter, Salam Daher, Arjun Nagendran, Laura Gonzalez, Greg Welch. Submitted to: IEEE Virtual Reality 2015 Type: Conference Paper	Arles, France Mar 2015
Electronic Poster (Presented)	Title: Preliminary Assessment of Neurologic Symptomatology Using an Interactive Physical-Virtual Head with Touch. Authors: Salam Daher, Laura Gonzalez, Greg Welch Submitted to: IMSH 2016 Type: Electronic Poster	San Diego, CA Jan 2016
Poster Abstract (Published)	Title: "Exploring Social Presence Transfer in Real-Virtual Human Interaction" Authors: Salam Daher, Kangsoo Kim, Myungho Lee, Andrew Raij, Ryan Schubert, Jeremy Bailenson, Greg Welch Submitted to: IEEE VR 2016, Greenville, NC Type: Poster Abstract	Greenville, SC Mar 2016
Conference Paper (Published)	Title: "The Wobbly Table: The Effects of Mediated Touch on Real-Virtual Human Interaction". Authors: Myungho Lee, Kangsoo Kim, Salam Daher, Andrew Raij, Jeremy Bailenson, Greg Welch. Submitted to: IEEE VR 2016, Greenville, NC Type: Conference Paper	Greenville, SC Mar 2016
Journal Paper (Published)	Title: "Optical Touch Sensing on Non-Parametric Rear-Projection Surfaces for Interactive Physical-Virtual Experiences" Authors: Jason Hochreiter, Salam Daher, Arjun Nagendran, Laura Gonzalez, Greg Welch Submitted to: Presence Journal Type: Journal Paper	2016
Mini-presentation (Presented)	Title: Humanikins: Humanity Transfer to Physical Manikins Authors: Salam Daher, Greg Welch Submitted to: NextMed / MMVR Type: mini-presentation	Los Angeles April 2016
Mini-presentation (Presented)	Title: Physical-Virtual Patient Simulators Authors: Greg Welch, Salam Daher, Jason Hochreiter, Laura Gaonzalez Submitted to: NextMed / MMVR	Los Angeles April 2016

Type: mini-presentation

Symposium (Presented)

Title: "BSN Assessment of Discrete Neurology Symptoms Using an Interactive Physical Virtual Head" — Grapevine, TX, June 2016
Authors: Laura Gonzalez, Greg Welch, Salam Daher
Submitted to: INACSL
Type: Panel Presentation

CERTIFICATIONS

TRAINING SIMULATION CERTIFICATE (Summer 2015) — Orlando FL, Aug 2015

FACS CERTIFIED — Miami, FL, February 2011
Trained and Certified in Facial Action Coding System

PRESAGIS , INC — 2006
Certificate of course completion for Vega Prime — Plano, TX
Certificate of course completion for Creator and Terrain Studio — Santa Clara, CA

PROFESSIONAL ACTIVITIES & AFFILIATIONS

Conferences Attended / Planning to Attend — 2007-2019
INACSL 2019
ACM IVA (Sydney Australia, 2018)
IEEE VR (Arles France 2015, Los Angeles 2017, Osaka Japan 2019)
IMSH (New Orleans 2015, San Diego 2016, Orlando 2017)
ACM MM (Orlando 2014)
IITSEC (Orlando 2007 – 2016)

COMPUTER SKILLS

- Java, Java 3D, Javascript, C++, OpenGL, C#, Matlab, Lisp, SQL, Postgres SQL, Objective C and iPhone app development, Xcode, HTML 5, CSS, Ruby on Rails, Git, Github, Microsoft Visual Studio, Eclipse, Processing, Arduino, CHDK, LaTeX, iBooks widgets.
- Autodesk 3D studio MAX & Max script, Maya (Mel & Python), Auto CAD 2D/3D, Unity3D & shaders, Cinema 4D, Blender 3D, Poser, Vcommunicator Studio & Gesture Builder, Presagis Vega Prime, Creator, Terrain studio, FlightSIM and STAGE, Boston Dynamics DIGuy, Simio, DIS/HLA.
- Adobe Photoshop, Illustrator, Flash & Director. Corel Draw& Painter Classic. Quark-X-Press.
- Video and Audio recording & Editing (Adobe Premiere, GoldWave, Audacity).

Windows PC, Macintosh & Linux user and developer.

LANGUAGES

Fluently reads, writes & speaks English, French & Arabic (Lebanese) and easily adaptable to different Arabic and French accents.
Learning American Sign Language, knows the ASL alphabet and few hundreds basic signs that enables me to communicate with deaf people.

ADDITIONAL EXPERIENCE

- Reviewer: IEEE VR 2019 and 2018
- Volunteer: Student Volunteer IEEE VR2016
- Volunteer: Web Chair for IEEE VR2016
- Volunteer: Technical director for graphics, audio and video for a local Orlando dance studio
- Videography and video editing for dance performance shows (Orlando, FL)
- Photographer for dance performance shows (Orlando, FL)
- Vice president of the Lebanese American Society at UF during which I organized the traditional "Lebanese soiree" for more than 500 people as well as other cultural events (2004).

Elected as the Most Active Member of the IEEE in the Lebanese American University (2001).

**** Academic Transcripts, recommendations and portfolio details available upon request.****
http://salamdaher.com/portfolio/
https://www.linkedin.com/in/salamdaher/
**** US Citizen****