

MATIAS VOLONTE

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Address: 201 Pickens St. 5, Clemson, South Carolina

Human Computer Interaction—Quantitative Research—Study Design specialist—Affective Computing
Virtual Humans—Virtual Reality—Eye tracking—Character Animation & modeling—Visual effects

EDUCATION

Ph.D. in Human Centered Computing

August 2020 (expected)

Clemson University

Title: “Empirical evaluation of emotion and attention in virtual human conversation.”

Dissertation: my dissertation focused on emotional crowd in virtual environments and the effect of emotional contagion in a macro context.

Overall GPA: 3.68

Master in Fine Arts - Digital Production Arts

August 2012

Clemson University

Title: “Methods for producing stereoscopic Imagery.”

Dissertation: for my MFA I investigated and developed methods for producing and post-producing stereoscopic imagery for film.

Overall GPA: 3.78

Bachelor in Audiovisual Communication

August 2009

Universidad Blas Pascal

Title: “Luces en el Uritorco.”

Dissertation: my bachelor’s thesis focused on a documentary on how a rural city grew upon a reported UFO sighting.

TEACHING EXPERIENCE

Graduate Teacher of Record

August, 2018 - December, 2018

School of Computing - CPSC 8070

I taught advanced character modeling and animation. In this course I developed a syllabus that contained intermediate to advanced methods for creating character animations.

Graduate Teaching Assistant

August, 2019 - December, 2019

Clemson University - CPSC 6110 Virtual Reality

Graduate Teaching Assistant

January, 2019 - May, 2019

Clemson University - CPSC 8040 Data Visualization

Graduate Teaching Assistant

August, 2018 - December, 2018

Clemson University - CPSC 6110 Virtual Reality

Graduate Teaching Assistant

May, 2018 - August, 2018

Clemson University - CPSC 1021 Computer Science

Graduate Teaching Assistant

August, 2017 - Current

Clemson University - CPSC 8050 Computer Science

Graduate Teacher of Record
Clemson University - DPA 307

August, 2011 - August, 2012

I taught 3D production methods using Blender. The lecture included basic modeling, animation and rendering.

INDUSTRY EXPERIENCE

CECAS Clemson University
PROMO Department

August, 2014 - August, 2017

I worked as part of the team that produces audiovisual products for the College of Engineering, Computing and Applied Sciences for Clemson University. My duties included a wide range of activities from producing videos, covering events and organizing interviews.

Mundoloco CGI/Metrovision (Disney Latin America)
VFX Technical Director - Tools developer

August, 2012 - August, 2014

I worked for multiple clients and studios around the world as a visual effects compositor artist and tools developer.

PEER REVIEWED PUBLICATIONS

Peer Reviewed Journals

Volante, M., Babu, S.V., Chaturvedi, H., Newsome, N., Ebrahimi, E., Roy, T., Daily, S.B. and Fasolino, T., 2016. Effects of virtual human appearance fidelity on emotion contagion in affective inter-personal simulations. *IEEE transactions on visualization and computer graphics*, 22(4), pp.1326-1335.(TVCG acceptance rate of 12.6%)

Liu, K.Y., Volonte, M., Hsu, Y.C., Babu, S.V. and Wong, S.K., 2019. Interaction with proactive and reactive agents in box manipulation tasks in virtual environments. *Computer Animation and Virtual Worlds*, 30(3-4), p.e1881.

Peer Reviewed Full papers & Posters

Volonte, M., Robb, A., Duchowski, A.T. and Babu, S.V., 2018. Empirical Evaluation of Virtual Human Conversational and Affective Animations on Visual Attention in Inter-Personal Simulations. *Proceedings of IEEE VR (3DUI)*.(Conference acceptance rate of 20.6%)

Volonte, M., Duchowski, A.T. and Babu, S.V., 2019, July. Effects of a Virtual Human Appearance Fidelity Continuum on Visual Attention in Virtual Reality. In *Proceedings of the 19th ACM International Conference on Intelligent Virtual Agents* (pp. 141-147). ACM. (acceptance rate of 20%)

Volonte, M., Anaraky, R.G., Knijnenburg, B., Duchowski, A.T. and Babu, S.V., 2019, September. Empirical Evaluation of the Interplay of Emotion and Visual Attention in Human-Virtual Human Interaction. In *ACM Symposium on Applied Perception 2019* (p. 1). ACM.

Volonte, M., Hsu, Yu-Chun, Liu, Kuan-Yu, Mazer, Joe P., Wong, Sai-Keung, Babu, V. Sabarish, 2020. Effects of Interacting with a Crowd of Emotional Virtual Humans on Users' Affective and Non-Verbal Behaviors. Proceedings of IEEE VR (3DUI)(Publishing process).

Brickler, D., Bertrand, W.J., Volonte, M., and Babu, S.V., 2019. Effects of Stereoscopic Viewing and Haptic Feedback, Sensory-Motor Congruence and Calibration on Near-Field Fine Motor Perception-Action Coordination in Virtual Reality. Proceedings of IEEE VR (3DUI).

Venkatakrishnan, Rohith, Roshan, Venkatakrishnan, Bhargava, Ayush, Lucaites, Kathryn, Solini, Hannah, Volonte, Robb, Andrew, M., Lin, Lin, Wen-Chieh, Babu, V. Sabarish, 2020. A Structural Equation Modeling Approach to Understand the Relationship between Control, Cybersickness and Presence in Virtual Reality. Proceedings of IEEE VR (3DUI)(Publishing process).

Venkatakrishnan, Rohith, Roshan, Venkatakrishnan, Anaraky, R.G., Volonte, M., Knijnenburg, Bart, Babu, V. Sabarish, 2020. Comparative Evaluation of the Effects of Motion Control on Cybersickness in Immersive Virtual Environments. Proceedings of IEEE VR (3DUI)(Publishing process).

Venkatakrishnan, R., Volonte, M., Bhargava, A., Solini, H., Venkatakrishnan, R., Robb, A.C., Babu, S.V., Lucaites, K.M. and Pagano, C., 2019, March. Towards an Immersive Driving Simulator to Study Factors Related to Cybersickness. In 2019 IEEE Conference on Virtual Reality and 3D User Interfaces (VR) (pp. 1201-1202). IEEE.

Inks, Z.J., Volonte, M., Beadle, S., Horing, B., Robb, A.C. and Babu, S.V., 2018, March. Towards Standardization of Medical Trials Using Virtual Experimenters. In 2018 IEEE Conference on Virtual Reality and 3D User Interfaces (VR) (pp. 585-586). IEEE.

Canales, R., Volonte, M. and Duchowski, A., 2018. Gaze Patterns During Emotion Recognition in Animated Point-Light Facial Displays.

INTERNAL SERVICES

Clemson University School of Computing Student Ambassador August, 2018-Currently
I am the Clemson's School of Computing Ambassador. My duties involves creating methods for widespread the current research that happens in the school of computing and increment diversity in computing.

Demo organizer Human Centered Computing Lab August, 2019 - Current
I organize demos to show the research that is conducted in the Human Centered Computing lab to high school students, under-represented minorities and prospective individuals that are interested in research.

Clemson University outreach program: Emagine August, 2014- August 2017
This program exposed minorities and high school students to engineering and computer science exercises with the intention to attract them to this field. My role was to film the event, conduct interviews and edit clips to promote it.

Virtual Reality - CPSC 6110	September, 2019
Presented tutorial with introductory concepts on 3D modeling and game design.	
Eye tracking - CPSC 6012	August, 2019
Introduced the class objectives, materials and objectives. Also, taught basic research methods.	
Invited speaker: “Guest speaker CU Summer Scholars program”	July, 2019
Introduced students to visual effects, 3D animation and Modeling.	
Invited speaker: “Guest speaker CU Summer Scholars program”	July, 2018
Introduced students to basic research methods.	

EXTERNAL SERVICES - REVIEWER

2020 IEEE Conference on Virtual Reality and 3D User Interfaces
 2019 Conference on Tangible, Embedded and Embodied Interaction
 2019 ACM Symposium on Applied Perception
 2019 IEEE Conference on Virtual Reality and 3D User Interfaces
 2018 IEEE Conference on Virtual Reality and 3D User Interfaces
 2017 IEEE Conference on Virtual Reality and 3D User Interfaces
 2017 PLOS ONE
 2017 Editorial Manager - VIRE - Springer

ACADEMIC TALKS

IEEEVR Full tutorial	March, 2016
Andrew T. Duchowski, Jeff Bertrand, Matias Volonte . IEEEVR 2016: Eye Tracking in Desktop VR: Data Synchronization, Capture, Visualization, and Analysis.	
Invited speaker: Universidad de Costa Rica.	June, 2019
Class: “Global Health at an Age of Information and Technology”.	
Invited speaker: Universidad Blas Pascal.	October, 2019
Event: “NETWORKING UBP 2019”. In this event I introduced to the audience what virtual humans is and how we use them to do science in virtual reality.	

HONORS AND AWARDS

Human Factor Institute Travel Grant Recipient	August, 2019
ACM SIGAI Travel support (Granted but not accepted)	May, 2019
Human Factor Institute Travel Grant Recipient	August, 2018

STUDENTS MENTORING

EUREKA! Undergraduate Research Program

July, 2017- August, 2017

Mentored and introduced student Jacob Thompson to the research methods.

Mentored student

August, 2017 -2018

Introduced Blake Washburn to research methods, 3D modeling, animations and how to develop simulations in Unity.

MEMBERSHIPS

Institute of Electrical and Electronics Engineers, IEEE

2019

TECHNICAL STRENGTHS

Programming	Python, C#
Research	Statistics, Technical writing, Study design
3D Computer graphics	Maya, Blender, Substance Painter, Unity
Visual effects	Premiere, After Effects, Photoshop, Nuke

IN THE NEWS

Interview with Universidad Blas Pascal

2014

I was interviewed by my Alma Matter regarding my professional experiences in the film industry and in my PhD in Human Centered Computing (Spanish).

<https://www.ubp.edu.ar/novedades/matias-volonte-un-cordobes-dedicado-las-artes-visuales/>

Interview with news paper La Voz del Interior

2013

I was interviewed by the biggest news paper in Cordoba, Argentina regarding the movie I was working on at the time (Spanish).

<https://vos.lavoz.com.ar/cine/cordobesa-metegol/>

Interview with Universidad Catolica Argentina (UCA)

2013

I was interviewed by UCA internal media department after a presentation of the film we were currently working(Spanish).

<https://www.youtube.com/watch?v=XAYmn5C6mIs>

ACADEMIC REFERENCES

Dr. Sabarish V. Babu — Professor of Human-Centered Computing Clemson University.
Email: sbabu@clemson.edu, Phone: +1 (864) 656-5089.

Dr. Larry Hodges — Professor of Human-Centered Computing Clemson University.
Email: lfh@clemson.edu, Phone: +1 (864)656-7552

Dr. Andrew Duchowski — Professor, School of Visual Computing, Clemson University.
Email: aduchow@g.clemson.edu, Phone: +1 (864)656-7677.

Dr. Bart Knijnenburg — Professor of Human-Centered Computing Clemson University.
Email: bartk@clemson.edu, Phone: +1 (864)656-7898

Dr. Jerry Tessendorf — Professor, School of Visual Computing, Clemson University.
Email: jtessen@clemson.edu

INDUSTRY REFERENCES

Sebastián Raffaele— Layout Artist at MPC.

Email: smraffa@gmail.com.

Ron Grant— PROMO Director Clemson University.

Email: rong@clemson.edu, Phone: +1 864-656-5711.

Martin Beagley— Media, Publications Graphics, Clemson University.

Email: mbeagle@clemson.edu, Phone: +1 864-656-6228.