Angelos Barmpoutis, Ph.D.
Professor of Digital Arts and Sciences

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Short bio

Angelos Barmpoutis is a Professor of Digital Arts and Sciences and the coordinator of research and technology in the Digital Worlds Institute at the University of Florida. He is also an affiliate faculty of the Computer and Information Science and Engineering Department and the Biomedical Engineering Department, University of Florida. His current research projects focus on automated analysis of human motion, 3D reconstruction and dissemination of digital cultural heritage, applications of virtual and augmented reality, and medical image analysis. For his contribution to the aforementioned areas, he received in 2014 the Merit Award from the IEEE International Conference on Connected Vehicles, in 2016 he was finalist for the Rome Prize for Historic Preservation and Conservation, and was named UF Research Foundation Professor for 2020-2023. Dr. Barmpoutis has authored numerous highly cited publications in the aforementioned topics, and his work has led to patented and copyrighted inventions registered in the US, and been funded by several awards and grants from various funding agencies including the National Institutes of Health, the National Science Foundation, the National Endowment for the Humanities, the US Department of Transportation, the Andrew W. Mellon Foundation, and the Robert Wood Johnson Foundation. In the international community he is also known for the Digital Epigraphy and Archaeology project that he is directing since 2011 and the highly cited Java-For-Kinect open-source library, which has been continuously used since 2013 in more than 50 countries around the world.

Fields of Interest

Current primary focus: 3D Computer Vision and Applications, Human Movement Analysis, Virtual and Augmented Reality

Secondary: Biomedical Image Processing, Data Visualization, Digital Humanities

Education

PhD in Computer Engineering, *University of Florida*, May 2009.

MSc in Electronics and Electrical Engineering, *University of Glasgow*, Dec 2004.

BSc with *summa cum laude (απαγγελία όρκου)* in Computer Science, *Aristotle University* of *Thessaloniki*, Jun 2003.

Professional Experience

2023-present Professor, Digital Worlds Institute, University of Florida

2014-2023: *Associate Professor*, Digital Worlds Institute and On-Line Learning Institute, University of Florida

2014: *Visiting Research Faculty,* Institut für Informatik, Universität Leipzig

2013-present: *Affiliate Professor* of Biomedical Engineering*,* University of Florida

2011-present: *Affiliate Professor* of Computer & Information Sciences and Engineering UF

2010-2014: *Assistant Professor*, Digital Worlds Institute, University of Florida

2009-2010: *Post-doctoral Research Associate*, University of Florida, Computer and Information Science and Engineering.

Memberships

IEEE, Institute of Electrical and Electronic Engineers (www.ieee.org)

ACM, Association for Computing Machinery, Lifetime member (www.acm.org)

MICCAI, Medical Imaging Computing and Computer Assisted Intervention (www.miccai.org)

ISMRM, International Society for Magnetic Resonance in Medicine (www.ismrm.org)

Grants

My research projects have been sponsored by various foundations and federal funding agencies after peer-review process as well as corporate grants:

- July 2023-June 2024. ATUNDA: An AI Deep Tech Solution to Economic Health & Mobility. Award: Robert Wood Johnson Foundation 79829. Role: **Project co-Director**, $439,336.
- June 15, 2023 – May 31, 2024. Assessment of Deep Learning Classification Methods for Parkinsonism. Award: NIH NINDS – 1R41NS132614-01. Role: **Principal Investigator**, $272,736.
- May 2023-April 2026. Collaborative Research: Dentofacial Development in Primates. Award: NSF 2235578, Role: **Senior Faculty**, $392,605/$21,736.
- April 2021-March 2026. Web-based Automated Imaging Differentiation of Parkinsonism. Award: NIH - U01 NS119562-01. Role: **Multi-Principal investigator**, $4,777,251/$340,553.
- January 2021-December 2021. *AI-driven Movement Classification and Analysis across Clinical and Cultural Application Areas.* UF Artificial Intelligence Catalyst Fund. Award: AGR DTD 12-02-20, Role: **Principal Investigator**, $50,000.
- August 2019-August 2020. *Consumer Video Product for the Monster Jam Ride Truck*.

Sponsored by FELD Entertainment. Award: IPPD-AWD06763, Role: **Principal Investigator**, $16,500.

- August 2019-August 2020. Virtual Reality: *A Next-Generation Tool to Improve Waste and Materials Management.* Sponsored by PTP Strategies, LLC. Award: IPPD-AWD06763, Role: **Principal Investigator**, $16,500.

- August 2018-August 2021. *Intersections on Technology, Space, and Time.* Andrew W. Mellon Foundation. Role: **co-Investigator**, $400,000/$30,000.

- August 2018-August 2019. *CDD-SORT: A Machine-Learning System to Detect Recyclable and Problematic Materials in Discarded Construction Debris.* Sponsored by PTP Strategies, LLC with the support from an SBIR grant from EPA. Award: IPPD-AWD05094, Role: **Faculty coach/consultant**, $16,500.

- August 2017-August 2018. *Central Office Visually Enhanced Asset Tracking and Management System.* Sponsored by Verizon, Inc. Award: IPPD-AWD01197, Role: **Principal Investigator**, $16,500.

- June 2017-May 2019. *3D Digitization of the Squeeze Collection from University of Venice using the Digital Epigraphy Toolbox.* Ca' Foscari University of Venice grant program. Role: **Consultant**, €70,000.

- December 2015-May 2016. *Development of interactive 3D multimedia visualization.* Intel, Inc. Corporate gift. $20,000 MSRP hardware.

- September 2015-August 2018. *Dysmetria & Motor Function in SCA: Mechanisms and Rehabilitation.* National Institutes of Health. Award: NIH-NINDS, R21 NS094946, Role: **Investigator**, $421,788/$69,411.

- January 2015-June 2016. *E-STAMPAGES.* French Ministry of Higher Education grant program BSN5 2014, Role: **Consultant**, €53,500.

- September 2014-September 2015. *A novel framework for physical tele-therapy using infrared depth sensors and haptic feedback.* UF Informatics Institute Seed Fund, Role: **Principal Investigator**, $48,943.

- September 2013-June 2015. *Investigating the effect of drivers' body motion on traffic safety*, US Department of Transportation / STRIDE, Award: 2013-051S / DTRT12-G-UTC04, Role: **Principal Investigator**, $132,972.

- May 2012-May 2013, *K3D: An Augmented-Reality Distance Education Classroom*, University of Florida Office of CIO, Role: **Principal Investigator**, $87,000.

- June 2011 – Dec. 2012, *Digital Epigraphy Toolbox*, National Endowment for the Humanities, Office of Digital Humanities, Award: HD-51214-11, Role: **Project Director**,

$50,000.

- March 2011 – March 2012, *Game technology to enhance sensory input and promote walking recovery*, UF Clinical and Translational Science Institute / NIH, Role: **co-Investigator**, $7,500.

Patents and Copyrights

"Systems and Methods for Identifying Dementia Types Using Imaging Biomarker", International Application, UF Ref. T18940US001, A&B Ref. 049648/602821, Publication Date: September 25, 2023.

"Real-time Reconstruction of the Human Body and Automated Avatar Synthesis using low-cost infrared sensors", U.S. Patent 10,121,273 B2. Awarded: Nov. 6, 2018. Pub. No.: WO/2015/021381 A1, International Application No.: PCT/US2014/050341, Publication Date: February 12, 2015.

"Brain Activating Replacement Method for Teaching Computer Programming", U.S. Copyright Application Case No: 1-5726003131. U.S. Copyright Registration No: TXu 2-056-343. Registration Date: August 18, 2017.

"Face relighting from a single image." Pub. No.: WO/2009/143163, International Application No.: PCT/US2009/044533, Publication Date: November 26, 2009, International Filing Date: May 19, 2009.

"Positive semi-definite high-order tensor estimation with applications to DW-MRI." Pub. No.: WO/2009/117641, International Application No.: PCT/US2009/037774, Publication Date: Sept. 24, 2009, International Filing Date: March 20, 2009.

Seminars and invited talks

I have been invited to present my work in several universities and institutes around the world. In this section I would like to acknowledge the institutes that have hosted me.

- "From the chisel to the Metaverse: The Digital Epigraphy and Archaeology Project", Ghent University, Belgium, March 21, 2023 (invited by Prof. Klaas Bentein).
- "The Digital Epigraphy Toolbox 2.0: 3D visualizations, cloud services, machine learning, and artificial intelligence in epigraphic studies", Digital Classics Seminar Series, Berlin-Brandenburg Academy of Sciences and Humanities, February 15, 2022 (invited after peer review).
- "Research Applications of Infrared Depth Sensors", Suleyman Demirel University, Turkey, March 30, 2018 (invited by Dr. Muhammet Demirbilek).
- "Working with Virtual Reality: International Perspectives", HumLab, University of Umea, Sweden, June 21, 2017 (invited by Dr. Anna Foka).
- "Digital Preservation, Reconstruction, and Analysis of Fragmentary Archaeological

Findings", American Academy in Rome, New York, February 25, 2016 (invited by the Program Director Shawn Miller).

- "Human Body and Gesture analysis for on-line tele-health applications", *Center for Advanced Engineering Environments, Old Dominion University*, April 28, 2015 (invited by Prof. Ahmed Noor).

- "Classical Studies Revisited: Creating the Digital Cast of the Ancient World", *Mary Moser Memorial Lecture, Dickinson College*, March 2, 2015 (invited by Prof. Christofilis Maggidis).

- "Representing written objects in 3D", *Open Philology Seminar*, *Institute of Informatics, University of Leipzig*, July 16, 2014 (invited by Prof. Gregory Crane).

- "The Digital Epigraphy Project", *Maison de l'Orient et de la Méditerranée, University of Lyon*, June 11, 2014 (invited by Prof. Michèle Brunet).

- "The First On-line 3D Epigraphic Library", Center for Digital Humanities, *University of Leipzig*, Germany, December 19, 2012 (invited by Dr. Marco Büchler).

- "Tensor Field Analysis for Image Processing Applications", *Center of Imaging Science, Johns Hopkins University*, March 8, 2011 (invited by Prof. Rene Vidal).

- "Methods for Efficient and Robust High-Order Diffusion Tensor Imaging", *Department of Radiology, University of North Carolina*, Chapel Hill, May 17th, 2010 (invited by Prof. Dinggang Shen).

- "Multi-linear Forms and their Application to Image Analysis", *General Electric Research Campus*, Albany New York, March 18, 2010.

- "Searching inside the human brain: The next-generation medical imaging techniques", *University of South Carolina*, Beaufort, February 23, 2010 (invited by Prof. Yiming Ji).
- "Robust High-Order Diffusion Tensor Imaging Techniques", *Stanford Research Institute International*, February 12, 2010 (invited by Dr. Torsten Rohlfing).

- "Multi-linear Forms and their Applications to Image Analysis", *Computer Science department, Rutgers University*, May 7, 2009 (invited by Prof. Dimitris Metaxas).

- "Estimating asymmetric spherical function fields from displacement probabilities", *Institute for Pure and Applied Mathematics, University of California Los Angeles*, July 17, 2008.

Selected Awards and Honors

I have received several awards, fellowships, and other distinctions from major international private and public organizations after peer-reviewing processes:

- UF Research Foundation Professor, 2020-2023.
- Best Paper Award – 2023 IEEE ISEC – 2nd place
- Awarded Sabbatical Leave for the year 2021 (Spring and Fall semesters).
- Anderson Scholar Faculty Honoree, 2019.
- Undergraduate Teacher of the Year Award, College of the Arts, University of Florida, 2017.
- Fellow of the American Academy in Rome Finalist, Rome Prize - Historic Preservation and Conservation, *American Academy in Rome*, New York, 2016.
- Merit Award recipient, and Best Paper Award Finalist in ICCVE conference 2014.
- e-Humanities award, 2nd place, *University of Leipzig*, Germany, 2012.
- Outstanding Academic Achievement Award, Engineering College, *University of Florida*, 2008.
- MICCAI Young Scientist Award finalist, Medical Image Computing and Computer-Assisted Intervention Society, 2008.
- I am the first author of the most cited article in Information Processing in Medical Imaging, 2007. (Source: Scopus).
- Bursary, International Epigraphic Conference, *University of Oxford*, 2007.
- Alumni Fellowship, *University of Florida*, 2004-2008.
- Graduate studies grant from Gerondelis Foundation Inc., 2008.
- Educational Stipend, *ISMRM*, 2007.
- International Student Outstanding Achievement Award, *University of Florida*, 2005, 2006.
- Bodosakis Foundation scholarship, 2003, 2004.
- Graduation Distinction *summa cum laude* (Highest GPA), *Aristotle University*, 2003.
- Ranked #1 in Panhellenic University Exams, Scholarship, *Rotary International*, 1999.

Public Profiles

ORCID: https://orcid.org/0000-0003-3271-7965
Scopus: https://www.scopus.com/authid/detail.uri?authorId=15520955600
Google Scholar: http://scholar.google.com/citations?user=XHdA6fIAAAAJ
IEEE Profile: https://ieeexplore.ieee.org/author/37294293100
DBLP: https://dblp.uni-trier.de/pid/56/3006.html
ACM Profile: https://dl.acm.org/profile/81317490738
Microsoft Academic: *https://academic.microsoft.com/profile/72776397-00h0-48h9-e90h-j8i3h11i29e7/AngelosBarmpoutis/*

Publications

Book chapters *(in reverse chronological order)*

[1] **A. Barmpoutis**. "Assessing the effects of passive haptics on the user experience in the metaverse", In *Metaverse Platform Implementation: AI, Security, and Applications*, Fei Hu (ed.), CRC Press, Taylor & Francis, December 2024.

[2] **A. Barmpoutis** and E. Bozia, "Reinscribing the 3rd dimension in epigraphic studies and transcending disciplinary boundaries." In *Numérique et lecture de textes épigraphiques altérés,* H. Gonzalez Bordas and F. Comte (eds.). Pessac, Ausonius éditions, collection PrimaLun@ 27, December 2023, pp. 79-94. ISBN 978-2-35613-548-3. https://ressources.una-editions.fr/s/WRjmQn8Sd2Ddp8k

[3] M. Amin, **A. Barmpoutis**, M. Berti, E. Bozia, J. Hensel, and F. Naether. "The Digital Rosetta Stone Project." In Ancient Egypt, New Technology: The Present and Future of Computer Visualization, Virtual Reality and other Digital Humanities in Egyptology, R. Lucarelli, J. Roberson, and S. Vinson (ed.), Harvard Egyptological Studies 17, Brill, March 2023, pp. 58-84. ISBN 978-90-04-50128-7. https://doi.org/10.1163/9789004501294

[4] **A. Barmpoutis**, B. DeVane, and J. C. Oliverio. "Applications of Virtual Environments in Experiential, STEM, and Health Science Education." Chapter 41 in *Handbook of Virtual Environments*, K. Hale and K. Stanney (ed.), CRC Press, Taylor & Francis, July 2014, pp. 1055-1071. ISBN 9781466511842. https://doi.org/10.1201/b17360

[5] A. Kondyli, V. Sisiopiku, L. Zhao, and **A. Barmpoutis**. "Comparative Analysis of Driving Maneuvers Using 3D Body Posture Data", Chapter 2.15 of Advances in Human Aspects of Transportation: Part II (ed. N. Stanton, S. Landry, G. Di Bucchianico, A. Vallicelli), July 2014, pp. 194-203. ISBN: 9781495120985

[6] **A. Barmpoutis**. "Neural Network Fundamentals", Chapter 7 in *Business Analytics: An Introduction*, J. Liebowitz (ed.), Auerbach publishers, Taylor & Francis group, January 2014, pp. 179-202. ISBN 9781466596092. https://doi.org/10.1201/b16246

[7] **A. Barmpoutis** and B. C. Vemuri. "Information Theoretic methods for Diffusion-Weighted MRI analysis." In *Emerging Trends in Visual Computing*, F. Nielsen (ed.), Springer-Verlag, Heidelberg, Germany, 2009, pp. 327-346. ISBN 9783642008252. https://doi.org/10.1007/978-3-642-00826-9

[8] **A. Barmpoutis** and G. X. Ritter. "Orthonormal Basis Lattice Neural Networks". In *Computational Intelligence based on Lattice Theory*, V. Kaburlasos and G. X. Ritter (ed.) Springer-Verlag, Heidelberg, Germany, 2007, pp. 43-56. ISBN 9783540726869. https://doi.org/10.1007/978-3-540-72687-6

Refereed journals *(in reverse chronological order)*

[9] Derek B Archer, Justin T Bricker, Winston T Chu, Roxana G Burciu, Johanna L McCracken, Song Lai, Stephen A Coombes, Ruogu Fang, **Angelos Barmpoutis**, Daniel M Corcos, Ajay S Kurani, Trina Mitchell, Mieniecia L Black, Ellen Herschel, Tanya Simuni, Todd B Parrish, Cynthia Comella, Tao Xie, Klaus Seppi, Nicolaas I Bohnen, Martijn LTM Müller, Roger L Albin, Florian Krismer, Guangwei Du, Mechelle M Lewis, Xuemei Huang, Hong Li, Ofer Pasternak, Nikolaus R McFarland, Michael S Okun, David E Vaillancourt,
"Development and validation of the automated imaging differentiation in parkinsonism (AID-P): a multicentre machine learning study", *The Lancet Digital Health*,1(5), 2019, pp. e222-e231. https://doi.org/10.1016/S2589-7500(19)30105-0

[10] A. Kondyli, **A. Barmpoutis**, V. P. Sisiopiku, L. Zhang, L. Zhao, M. M. Islam, S. S. Patil, and S. Rostami Hosuri. "A 3D body posture analysis framework during merging and lane-changing maneuvers", *Journal of Transportation Safety and Security* 10(5), 2018, pp. 411-428. https://doi.org/10.1080/19439962.2017.1294226

[11] **A. Barmpoutis**, J. Alzate, S. Beekhuizen, H. Delgado, P. Donaldson, A. Hall, C. Lago, K. Vidal, E. J. Fox. "Assessment of Haptic Interaction for Home-Based Physical Tele-Therapy using Wearable Devices and Depth Sensors", *Stud. Health Technol. Inform.* 220, 2016, pp. 33-38. https://doi.org/10.3233/978-1-61499-625-5-33

[12] A. Kondyli, V. Sisiopiku, L. Zhao, and **A. Barmpoutis**. "Computer assisted analysis of drivers' body activity using a range camera ", *IEEE Intelligent Transportation Systems magazine* 7(3), 2015, pp. 18-28. https://doi.org/10.1109/MITS.2015.2439179

[13] E. Bozia and **A. Barmpoutis**. "Life and afterlife of archaeological sources: Electronic preservation, dissemination, and study of Latin inscriptions", *Archeologia e Calcolatori* 26, 2015, pp. 30-32.

[14] R. Gallen, D. Eastop, E. Bozia, and **A. Barmpoutis**. "Digital imaging: the application of shape-from-shading to lace, seals and metal objects", *ICON Journal of Conservation* 38(1), 2015, pp. 41-53. https://doi.org/10.1080/19455224.2014.999004

[15] M. Lame, G. Sarullo, F. Boschetti, M. Dellepiane, E. Bozia, **A. Barmpoutis**, S. Rosmorduc. "Open-Access Epigraphy: The issues of partnering traditional with digital", LEXIS: Poetica, retorica e communicazione nella tradizione classica 33, 2015, Vol. 33, pp. 9-30.

[16] S. Ray, W. O'Dell, and **A. Barmpoutis**. "Perpendicular Fiber Tracking from Diffusion Weighted MRI for Fiber Bundle Analysis", *International Journal of Bioinformatics and Research Applications* 10(1), 2014, pp. 75-92. https://doi.org/10.1504/IJBRA.2014.058779

[17]**A. Barmpoutis**. "Tensor Body: Real-time Reconstruction of the Human Body and Avatar Synthesis from RGB-D", *IEEE Transactions on Cybernetics* 43(5), 2013, pp. 1347-1356. https://doi.org/10.1109/TCYB.2013.2276430

[18]**A. Barmpoutis**. "Automated Human Avatar Synthesis for Obesity Control using Low-Cost Depth Cameras", *Stud. Health Technol. Inform*. 184, 2013, pp. 36-42. https://doi.org/10.3233/978-1-61499-209-7-36

[19]**A. Barmpoutis** and Baba C. Vemuri. "Approximating Symmetric Positive Semidefinite Tensors of Even Order". *SIAM Journal on Imaging Sciences* 5(1), 2012, pp. 434-464. https://doi.org/10.1137/100801664

[20]Y. Weldeselassie, **A. Barmpoutis** and S. Atkins. "Symmetric positive-definite Cartesian tensor fiber orientation distributions (CT-FOD)", *Medical Image Analysis* 16(6), 2012, pp.1121-29. https://doi.org/10.1016/j.media.2012.07.002

[21]R. Kumar, **A. Barmpoutis**, A. Banerjee, B. C. Vemuri. "Non-Lambertian Reflectance Modeling and Shape Recovery for Faces using Anti-Symmetric Tensor Splines." *IEEE Transactions on Pattern Analysis and Machine Intelligence* 33(3), 2011, pp. 533-567. https://doi.org/10.1109/TPAMI.2010.67

[22]**A. Barmpoutis**, E. Bozia, and R. S. Wagman. "A novel framework for 3D reconstruction and analysis of ancient inscriptions." *Journal of Machine Vision and Applications*, 21(6), 2010, pp. 989-998. https://doi.org/10.1007/s00138-009-0198-7

[23]**A. Barmpoutis**, M. S. Hwang, D. Howland, J. R. Forder, B. C. Vemuri. "Regular Positive-Definite 4^{th}-order Tensor Field Estimation from DW-MRI". *NeuroImage*, 45 (1. Sup 1) 2009, pp. 153-162. https://dx.doi.org/10.1016/j.neuroimage.2008.10.056

[24]**A. Barmpoutis**, B. C. Vemuri, T. M. Shepherd, and J. R. Forder. "Tensor splines for interpolation and approximation of DT-MRI with applications to segmentation of isolated rat hippocampi." *IEEE Transactions on Medical Imaging* 26(11), 2007, pp. 1537-1546. https://doi.org/10.1109/TMI.2007.903195

[25]J. Barker and **A. Barmpoutis**. "Smart Dust: Monte Carlo Simulation of Self-Organized Transport." *Journal of Computational Electronics* 3(3-4), 2004, pp. 317-321. https://doi.org/10.1007/s10825-004-7068-3

Other publications *(in reverse chronological order)*

[26]M. Amin, **A. Barmpoutis**, M. Berti, E. Bozia, J. Hensel, and F. Naether. Depth map of the Rosetta Stone. *Humanities Commons*, 2018. http://dx.doi.org/10.17613/t1e2-0w02

[27]**A. Barmpoutis**, Digital Epigraphy Toolbox, NEH White Papers, Humanities Commons, 2013. http://dx.doi.org/10.17613/M64W9R

Referred book chapters in conference proceedings *(in reverse chronological order)*

[28] L. Kemper, J. Lam, M. Levine, A. W. Pifer, H. J. Seung, M. Santoso, **A. Barmpoutis**. 2024. "Assessing the Influence of Passive Haptics on User Perception of Physical Properties in Virtual Reality". In Proceedings of the 2024 HCI International Conference, June 29-July 4, LNCS, Springer, forthcoming.

[29] R. Garrett, J. Gast, S. Henry, K. Mellili, H. J. Seung, M. Santoso, **A. Barmpoutis**. 2024. "Investigating how interaction with physical objects within virtual environments affects knowledge acquisition and recall". In Proceedings of the 2024 HCI International Conference, June 29-July 4, LNCS, Springer, forthcoming.

[30] J. Delgado, R. West, J. J. Marin, D. DaSilva, **A. Barmpoutis**, S. H. Jang, E. Stanley, H. Kang. 2024. "Enhancing Museum Experience with CR by Situating 3D Collections in Context". In Proceedings of the 2024 ACM Interaction Design and Children Conference, ACM Conference Proceedings, forthcoming.

[31] **A. Barmpoutis**, W. Guo, and I. Said. 2023. "Developing Mini VR Game Engines as an Engaging Learning Method for Digital Arts & Sciences". In Proceedings of the *13th IEEE Integrated STEM Education Conference*, pp. 33-36. [Best Paper Award 2nd Place.] https://doi.org/10.1109/ISEC57711.2023.10402239

[32]W. Guo, W. Brisbane, R. Ashouri, B. Nguyen, and **A. Barmpoutis**. 2023. "Prostate Capsule Segmentation in Micro-Ultrasound Images Using Deep Neural Networks". In Proceedings of the 20th IEEE International Symposium on Biomedical Imaging, pp. 1-5. https://doi.org/10.1109/ISBI53787.2023.10230652

[33]W. Guo, O. Craig, T. Difato, J. Oliverio, M. Santoso, J. Sonke, and **A. Barmpoutis**. 2022. "AI-driven Human Motion Classification and Analysis using Laban Movement System". In Proceedings of the 2022 HCI International Conference, V.G. Duffy (Ed.), LNCS 13319, Springer, pp. 201–210. https://doi.org/10.1007/978-3-031-05890-5_16

[34]**A. Barmpoutis,** Randi Faris, Luis Garcia, Luis Gruber, Jingyao Li, Fray Peralta, Menghan Zhang "Assessing the Role of Virtual Reality with Passive Haptics in Music Conductor Education: A Pilot Study", In Proceedings of the 2020 HCI International Conference J. Y. C. Chen and G. Fragomeni (Eds.), LNCS 12190, Springer, 2020, pp. 275-285. https://doi.org/10.1007/978-3-030-49695-1_18

[35]**A. Barmpoutis,** Randi Faris, Samantha Garcia, Jingyao Li, Joshua Philoctete, Jason Puthusseril, Liam Wood, Menghan Zhang "Virtual Kayaking: A study on the effect of low-cost passive haptics on the level of immersion while exercising", In Proceedings of the 2020 HCI International Conference C. Stephanidis and M. Antona (Eds.), Communications in Computer and Information Science series (CCIS 1225), Springer, 2020, pp. 147-155. https://doi.org/10.1007/978-3-030-50729-9_20

[36]M. Suvajdzic, J. Oliverio, **A. Barmpoutis**, L.Wood, P. Burgermeister "Discover DaVinci – A Gamified Blockchain Learning App", In Proceedings of 2020 IEEE International Conference on Blockchain and Cryptocurrency (ICBC), May 3-6, 2020. https://doi.org/10.1109/ICBC48266.2020.9169470

[37]**A. Barmpoutis** and K. Huynhu "Name Tags and Pipes: Assessing the Role of Metaphors in Students' Early Exposure to Computer Programming Using Emoticoding", Advances in Intelligent Systems and Computing 785, 2019, pp. 194-202. https://doi.org/10.1007/978-3-319-93882-0_20

[38]**A. Barmpoutis** "Learning Programming Languages as Shortcuts to Natural Language Token Replacements"**,** In: Proceedings of the 18th Koli Calling International Conference on Computing Education Research, 2018, pp. 1-10. https://doi.org/10.1145/3279720.3279721

[39]**A. Barmpoutis** "Integrating algebra, geometry, music, 3D art, and technology using emoticoding". In: Proceedings of the 8th IEEE Integrated STEM Education Conference (ISEC), March 10, 2018, IEEE, pp. 30-33. https://doi.org/10.1109/ISECon.2018.8340500

[40]**A. Barmpoutis**. "Analytical Mapping of Linear Walk from Infinite Virtual Space to Finite Real Space", Proceeding of the 9th International Conference on Virtual, Augmented and Mixed Reality, Vancouver, Canada, July 9-14, 2017, *Lecture Notes in Computer Science* 10280, 2017, pp. 3-14. https://doi.org/10.1007/978-3-319-60011-6_7

[41]**A. Barmpoutis**, K. Huynh, P. Ariet, and N. Saunders. "Assessing the Effectiveness of Emoticon-Like Scripting in Computer Programming", *Proceedings of the AHFE 2017 International Conference on Human Factors, Software, and Systems Engineering*, T. Ahram and W. Karwowski (eds.), Advances in Human Factors, Software, and Systems Engineering, *Advances in Intelligent Systems and Computing* 598, 2017, pp. 63-75. ISBN 978-3-319-60011-6 https://doi.org/10.1007/978-3-319-60011-6_7

[42]**A. Barmpoutis** and E. Bozia "Augmenting the Workspace of Epigraphists. An interaction design study", *Proceedings of the EAGLE 2016 International Conference*, *Digital and Traditional Epigraphy in Context,* S. Orlandi, R. Santucci, F. Mambrini, P. M. Liuzzo (eds.), *Collana Convegni* 36, Sapienza Universita Editrice, 2017, pp. 209-220. ISBN 978-88-9377-021-7 https://doi.org/10.13133/978-88-9377-021-7

[43]**A. Barmpoutis**, Q. Ding, L. Anthony, W. Eugene, M. Suvajdzic "Exploration of Kinesthetic Gaming for Enhancing Elementary Math Education using Culturally Responsive Teaching Methodologies" In *Proceedings of VR16 Workshops: IEEE Virtual Reality 2016 Workshop on K-12 Embodied Learning through Virtual & Augmented Reality (KELVAR)*, March 19, 2016, pp. 1-4. https://doi.org/10.1109/KELVAR.2016.7563674

[44]A. Kondyli, **A. Barmpoutis**, V. Sisiopiku, L. Zhang, L. Zhao, M.M. Islam, S. S. Patil, and S.R. Hosuri. "Analyzing 3D Body Posture Activity during Merging and Lane Changing Maneuvers", *Proceeding of the 2015 Road Safety & Simulation International Conference*, Orlando, USA, October 6-8, 2015, pp. 1-12.

[45]**A. Barmpoutis**, E. Bozia, and D. Fortuna. "Interactive 3D Digitization, Retrieval, and Analysis of Ancient Sculptures, using Infrared Depth Sensors for Mobile Devices", *Proceedings of the 9th International Conference on Universal Access in Human-Computer Interaction. Access to the Human Environment and Culture*, Los Angeles, USA, August 2-7, 2015, *Lecture Notes in Computer Science* 9178, pp. 3-11. https://doi.org/10.1007/978-3-319-20687-5_1

[46]J. Oliverio, **A. Barmpoutis**, C. Juehring, and A. Yudin. "Enhancing Global Collaboration Through Network-empowered Live Performance", *Proceedings of the Conference on Electronic Visualization and the Arts*, London, U.K., July 7-9, 2015, pp. 32-39. https://doi.org/10.14236/ewic/eva2015.3

[47]**A. Barmpoutis**, I. Elsner, E. Fox, S. Flynn. "Augmented-reality environment for locomotor training in children with neurological injuries", Augmented Environments for Computer Assisted Interventions Workshop, *Proceedings of the Medical Imaging Computing and Computer Assisted Intervention conference,* Massachusetts Institute of Technology, USA, September 14, 2014, pp. 108-117. https://doi.org/10.1007/978-3-319-10437-9_12

[48]E. Bozia, R. Wagman, **A. Barmpoutis**. "Open-Access Epigraphy: Electronic Dissemination of 3D Digitized Epigraphic Material", Proceedings of the International Conference on Information Technologies for Epigraphy and Digital Cultural Heritage in the Ancient World (EAGLE 2014), Paris, France, September 29-30 and October 1, 2014. https://doi.org/10.13133/978-88-98533-42-8

[49]Kondyli, V. Sisiopiku, L. Zhao, and **A. Barmpoutis** "Comparative Analysis of Driving Maneuvers Using 3D Body Posture Data", *Proceedings of the 5th International Conference on Applied Human Factors and Ergonomics (AHFE)*, T. Ahram, W. Karwowski and T. Marek (ed.), Krakow, Poland, July 19-23, 2014, pp. 4416-4425.

[50]A. Kondyli, V. Sisiopiku, and **A. Barmpoutis** "A 3D experimental framework for exploring drivers' body activity using infrared depth sensors", Proceedings of the International Conference on Connected Vehicles, Las Vegas, California, USA, December 2-6, 2013, pp. 574-579. https://doi.org/10.1109/ICCVE.2013.6799857

[51]S. Ray, W. O'Dell, **A. Barmpoutis**. "Estimation of Fiber Bundle Sections for Interactive Fiber Analysis", 26th International Congress on Computer Assisted Radiology and Surgery, *Int. J. Computer Assister Radiology and Surgery* 7 (Suppl. 1), Pisa, Italy, June 27-30, 2012, pp. S31-S35.

[52]**A. Barmpoutis** and J. Zhuo. "Diffusion Kurtosis Imaging: Robust estimation from DW-MRI using homogeneous polynomials" *Proceedings of the IEEE International Symposium on Biomedical Imaging*, Chicago, Illinois, USA, March 30- April 2, 2011, pp. 262-265. https://doi.org/10.1109/ISBI.2011.5872402

[53]Y. Weldeselassie, **A. Barmpoutis** and S. Atkins. "Symmetric positive-definite Cartesian tensor orientation distribution functions (CT-ODF)", *Proceedings of the Medical Imaging Computing and Computer Assisted Intervention conference*, 2010, pp. 582-589.

https://doi.org/10.1007/978-3-642-15705-9_71

[54]**A. Barmpoutis** and B. C. Vemuri. "A unified framework for estimating Diffusion Tensors of any order with sym. positive-definite constraints" *Proceedings of the IEEE International Symposium on Biomedical Imaging*, 2010, pp. 1385-1388. https://dx.doi.org/10.1109/ISBI.2010.5490256

[55]**A. Barmpoutis** and B. C. Vemuri. "Groupwise registration and atlas construction of 4th-order tensor fields using the R+ Riemannian metric." *Proceedings of the Medical Imaging Computing and Computer Assisted Intervention conference*, 2009, pp. 640-647. https://doi.org/10.1007/978-3-642-04268-3_79

[56]**A. Barmpoutis**, B. Jian and B. C. Vemuri. "Adaptive kernels for multi-fiber reconstruction." *Proceedings of the Information Processing in Medical Imaging conference*, 2009, pp. 338-349. https://doi.org/10.1007/978-3-642-02498-6_28

[57]R. Kumar, **A. Barmpoutis**, B. C. Vemuri, P. Carney and T. Mareci. "A physical basis for multi-fiber reconstruction from DW-MRI data." *Proceedings of the IEEE International Symposium on Biomedical Imaging*, 2009, pp. 626-629. https://doi.org/10.1109/ISBI.2009.5193125

[58]**A. Barmpoutis**, B. C. Vemuri, D. Howland and J. R. Forder. "Extracting Tractosemas from a displacement probability field for tractography." *Proceedings of the Medical Imaging Computing and Computer Assisted Intervention conference,* 2008, pp. 9-16. https://doi.org/10.1007/978-3-540-85988-8_2

[59]**A. Barmpoutis**, R. Kumar, B. C. Vemuri and A. Banerjee. "Beyond the Lambertian Assumption: A generative model for Apparent BRDF fields of Faces using Anti-Symmetric Tensor Splines." *Proceedings of the IEEE Conference on Computer Vision and Pattern Recognition,* 2008, pp. 1-6. https://doi.org/10.1109/CVPR.2008.4587770

[60]R. Kumar, **A. Barmpoutis** and B. C. Vemuri, P. Carney and T. Mareci. "Multi-fiber reconstruction from DW-MRI using a continuous mixture of von Mises-Fisher distributions." *MMBIA,* 2008, pp. 1-8. https://doi.org/10.1109/CVPRW.2008.4562991

[61]**A. Barmpoutis**, B. C. Vemuri and J. R. Forder. "Fast displacement probability profile approximation from HARDI using 4th-order tensors." *Proceedings of the IEEE International Symposium on Biomedical Imaging,* 2008, pp. 911-914. https://doi.org/10.1109/ISBI.2008.4541145

[62]**A. Barmpoutis**, B. C. Vemuri and J. R. Forder. "Registration of HARD MRI Images using 4th Order Tensors." *Proceedings of the Medical Imaging Computing and Computer Assisted Intervention conference,* 2007, pp. 908-915. https://doi.org/10.1007/978-3-540-75757-3_110

[63]**A. Barmpoutis**, B. Jian, B. C. Vemuri and T. M. Shepherd. "Symmetric Positive 4th Order Tensors & their Estimation from DW-MRI." *Proceedings of the Information Processing in Medical Imaging conference,* 2007, pp. 308-319. https://doi.org/10.1007/978-3-540-

73273-0_26

[64]**A. Barmpoutis**, and B. C. Vemuri. "Exponential Tensors: A framework for efficient higher-order DT-MRI computations." *Proceedings of the IEEE International Symposium on Biomedical Imaging,* 2007, pp. 792-795. https://doi.org/10.1109/ISBI.2007.356971

[65]**A. Barmpoutis**, B. C. Vemuri, and J. Forder. "Robust Tensor Splines for Approximation of Diffusion Tensor MRI Data." *Mathematical Methods in Biomedical Image Analysis Workshop – Proceedings of the IEEE Conference on Computer Vision and Pattern Recognition,* 2006, pp. 86-72. https://doi.org/10.1109/CVPRW.2006.179

[66]**A. Barmpoutis**, and G. X. Ritter. "Orthonormal Basis Lattice Neural Networks." *In Proceedings of FUZZ06: International Conference on Fuzzy Systems*, July 16-21, 2006, pp. 331-336.

[67]**A. Barmpoutis**. "Morphological Neural Networks with Orthonormal Basis Dendrites." *In Proceedings of ACMSE06: ACM Southeast Conference*, March 10-12, 2006, pp. 244-248.

[68]**A. Barmpoutis**, N. Nikolaides, and I. Pittas. "Face 3D Pose Estimation Using a Generic 3D Face Model and Facial Feature Extraction." *Proceedings of the Panhellenic Conference on Informatics,* 2003, pp. 519-526.

Selected refereed conference abstracts and seminars *(in reverse chronological order)*

[69]R. Chen, W. Wang, M.S. Okun, A. Barmpoutis, D.E. Vaillancourt, A. Study Team. "Impact of Harmonization on Automated Imaging Differentiation of Parkinsonism", Neuroscience 2023, Washington D.C., November 11-15, 2023.

[70]E. Bozia, A. Barmpoutis. "Originals, copies, and digital reproductions: reembodying the written artifact." Studying Written Artefacts: Challenges and Perspectives, University of Hamburg. September 27-29, 2023.

[71]D. Vaillancourt and A. Barmpoutis "AIDP: Automated Imaging Differentiation of Parkinsonism", Parkinson's Disease Biomarkers Steering Committee Meeting, on-line, May 8, 2023.

[72]R. Chen, W. Wang, **A. Barpmpoutis**, D. E. Vaillancourt "Diffusion MRI and Machine Learning Distinguish Alzheimer's Disease and Dementia with Lewy Bodies", Neuroscience 2022, San Diego, California, November 12-16, 2022.

[73]E. Bozia, **A. Barmpoutis**, M. Berti, and F. Naether "Reinscribing the 3rd dimension in epigraphic studies and transcending disciplinary boundaries", 16th *International Congress of Greek and Latin Epigraphy,* Bordeaux, France, August 29-September 2, 2022.

[74]M. Schauder, **A. Barmpoutis**, D. Vaillancourt "AIDP - Web-based Automated Imaging Differentiation of Parkinsonism", Parkinson Study Group 32nd Annual Meeting & 34th Annual Symposium, Phoenix, Arizona, June 2-5, 2022.

[75]C. Conroy, G. Brunetti, P. Freeborn, **A. Barmpoutis**, E. Fox "Custom Virtual Reality System with Real-Time Therapist Interactions to Enhance Home Exercise Performance and Adherence", American Physical Therapy Association Combined Sections Meeting (APTA CSM), Denver, CO, February 12-15, 2020.

[76]**A. Barmpoutis**. "Motivating Humanities Students to Learn Coding", Florida Digital Humanities Consortium, Jacksonville, Florida, March 29, 2019.

[77]**A. Barmpoutis**. "Teaching computer programming to humanists using emoticon-like scripting", HASTAC 2017: The Possible Worlds of Digital Humanities, Orlando, USA, November 3-4, 2017.

[78]E. Bozia and **A. Barmpoutis**. "Augmented Reality for Epigraphy: How to bring holograms of inscriptions to your classrooms.", CIEGL17: 15th *International Congress of Greek and Latin Epigraphy*, Vienna, Austria, August 28-September 1, 2017.

[79]A. Kondyli, **A. Barmpoutis**, and V. Sisiopiku. "Safety-Related Analysis of the 3D Driver Body Posture Using Naturalistic Data", *95th Annual Meeting of the Transportation Research Board*, Washington D.C., USA, January 10-14, 2016.

[80]**A. Barmpoutis,** M. Suvajdzic, L. Anthony, and W. Eugene. "Kinesthetic Experiential Learning Environments for Enhancing Elementary Math Education", *NSEE2015 - 44th Annual Conference of the National Society for Experiential Education,* St. Petersburg, USA, October 5-7, 2015.

[81]E.Bozia and **A. Barmpoutis**. "The significance of 3D models of ektypa for automatic analysis of lettering techniques", *EAA2015 - 21st Annual Meeting of the European Association of Archaeologists*, Glasgow, U.K., September 2-5, 2015.

[82]E. Schaefer, **A. Barmpoutis**, E. Tripp, and S. L. Quincy. "Teaching Carolingian Chant with Interactive Software: Theory, Application & Assessment", *8th Annual Conference for the Scholarship of Teaching and Learning*, Savannah, USA, March 25-27, 2015.

[83]Mingran Li, Yingjie Chen, and **A. Barmpoutis**. "Collaborative Learning in Video Games to Enhance Learning Efficiency", *122nd Annual Conference of the American Society for Engineering Education,* Seattle, USA, June 14-17, 2015.

[84]A. Kondyli, **A. Barmpoutis**, and V. Sisiopiku "Investigation of the effect of drivers' body motion on traffic safety." *University Transportation Center(UTC) Conference for the Southeast Region*, March 24-25, 2014.

[85]E.J. Fox, S. Flynn, **A. Barmpoutis**, S. Trimble, D.R. Howland, A.L. Behrman, "Game technology to enhance locomotor training in children with neurological injuries." *American Physical Therapy Association*, Combined Sections Meeting, San Diego, CA, January, 21-24 2013.

[86]**A. Barmpoutis**, "A novel Augmented-Reality Educational System for Classical Drama using RGB-D." 10th *Annual Meeting, International Digital Media and Arts Association*, November 8-10, 2012. http://idmaa.org/conferences/past-conferences/idmaa-2012-schedule/

[87]E.J. Fox, S. Flynn, **A. Barmpoutis**, D.R. Howland, A.L. Behrman "Exciting kids to walk: Game technology to enhance locomotor training in children with spinal cord injury." *Howard H. Steel Conference-Pediatric Spinal Cord Injuries and Dysfunction*. Lake Buena Vista, FL, November 29 - December 1, 2012.

[88]E. Bozia, A. **Barmpoutis**, and R. S. Wagman, "The First Online 3D Epigraphic Library." In Proceedings of CIEGL12: 14th *International Congress of Greek and Latin Epigraphy*, Humboldt University, Berlin, Aug 27-31, 2012.

[89]E.J. Fox, S. Flynn, **A. Barmpoutis**, D.R. Howland, A.L. Behrman "Exciting kids to walk: Enhancing walking recovery through game technology." 8th *Annual Games for Health Conferenc*e, Boston, MA, June 12-14, 2012.

[90]S. Ray, W. O'Dell, **A. Barmpoutis**. "Perpendicular Fiber Tracking for Fiber Bundle Analysis", *International Conference on Computational Biomedicine*, 2012.

[91]S. Chandra, **A. Barmpoutis**, N. Simpson, and J.R. Forder. "High Angular Resolution Diffusion Microscopy (HARDM) detects Retinal Disruption in mice with Diabetic Retinopathy", *International Symposium on Magnetic Resonance in Medicine*, 2011. https://cds.ismrm.org/protected/11MProceedings/PDFfiles/1950.pdf

[92]S. Chandra, **A. Barmpoutis**, and J. R. Forder. "Diffusion Tensor Imaging detects and characterizes Proliferative Diabetic Retinopathy in the Murine Retina". *ENC*, 2008.

[93]E. Bozia, **A. Barmpoutis**, R. S. Wagman. "Application of 3D technologies for the analysis of ancient inscriptions", 13th *International Congress of Greek and Latin Epigraphy*, University of Oxford, 2007.

[94]**A. Barmpoutis**, S Chandra, J. R. Forder, and B. C. Vemuri, "A novel DTI method for analyzing the diffusion of water in retina", *International Symposium on Magnetic Resonance in Medicine*, 2007. https://cds.ismrm.org/protected/07MProceedings/PDFfiles/01523.pdf

[95]S. Chandra, **A. Barmpoutis**, and J. R. Forder. " Diffusion Tensor Imaging Detects and Quantifies Changes in Permeability in the Murine Retina", *ISMRM*, 2007. https://cds.ismrm.org/protected/07MProceedings/PDFfiles/01524.pdf

[96]**A. Barmpoutis**, B. C. Vemuri, and T. M. Shepherd. " Exponential Diffusion Tensors for Efficient Higher-Order DT-MRI Computations", *ISMRM*, 2007. https://cds.ismrm.org/protected/07MProceedings/PDFfiles/01480.pdf

[97]M. Hwang, M. Clark, **A. Barmpoutis**, and J. R. Forder. "Contribution of myocardial vascular compartment of water diffusion", *International Symposium on Magnetic Resonance in Medicine*, 2007. https://cds.ismrm.org/protected/07MProceedings/PDFfiles/02553.pdf

[98]**A. Barmpoutis**, and J. R. Barker. "Autonomous smart dust clusters for remote planetary exploration." *In Proceedings of RAS National Astronomy Meeting*, April 16-20, 2007, pp. 105-106.

[99]**A. Barmpoutis**, B. C. Vemuri, T. M. Shepherd, and J. R. Forder. "Robust Interpolation of DT-MRI data using Tensor Splines", *International Symposium on Magnetic Resonance in Medicine*, 2006. https://archive.ismrm.org/2006/0350.html

[100] **A. Barmpoutis**, J. Barker. "Self-organized Transportation System of Smart Dust Distributed Sensors." *ICDSNS05: Innovations and Commercial Applications of Distributed Sensor Networks Symposia*, October 18-19, 2005.

[101] J. Barker, and **A. Barmpoutis**. "Smart dust: Monte Carlo simulation of self-organised transport." *In Proceedings of IWCE04: 10th IEEE International Workshop on Computational Electronics*, October 24-27, 2004, pp. 182-183. https://doi.org/10.1109/IWCE.2004.1407387

For a full list of refereed conference papers and abstracts please visit my web-site:
https://abarmpou.github.io/angelos/

Professional Service

I have served as a reviewer of book proposals for the following publisher:

- Elsevier

the following international journals:

- CAD (Computer-Aided Design)
- CAMWA (Journal of Computer and Mathematics with Applications)
- CBM (Computers in Biology and Medicine)
- CVIU (Computer Vision and Image Understanding)
- IEEE Transactions on Cybernetics
- IEEE Transactions on Image Processing
- IEEE Transactions on Intelligent Transportation Systems
- IEEE Transactions on Medical Imaging
- IEEE Transactions on Pattern Analysis and Machine Intelligence
- IJCARS (International Journal of Computer Assisted Radiology and Surgery)
- International Journal of Machine Learning and Cybernetics
- iScience
- JEMWA (Journal of Electromagnetic Waves and Applications)
- JMLC (Journal of Machine Learning and Cybernetics)
- JMIV (Journal of Mathematical Imaging and Vision)
- MEDIA (Journal on Medical Image Analysis)
- Molecular Imaging
- Nature Communications Medicine
- NeuroImage
- Pattern Recognition

- Proceedings of the National Academy of Sciences of the USA
- Sensors MDPI
- SIIMS (SIAM Journal on Imaging Sciences)
- Virtual Reality (Springer)

and the following conferences:

- CVPR (Computer Vision and Pattern Recognition)
- ECCV (European Conference in Computer Vision)
- HCII (Human Computer Interaction International Confrerence)
- ICCV (International Conference in Computer Vision)
- IPMI (Information Processing in Medical Imaging)
- MICCAI (Medical Image Computing and Computer Assisted Intervention)
- PMMIA (Probabilistic Models for Medical Image Analysis)

Program Board Member of the International Conference on Human Computer Interaction, Denmark, July 23-28, 2023.

External grant reviewer of the Czech Science Foundation, 2021.

Chair of the session “New Virtualities IV” in the International Conference of Human Computer Interaction, Copenhagen, Denmark, July 24, 2020.

Chair of the session “Human Factors, Software and Systems Engineering III” in the International Conference on Applied Human Factors and Ergonomics, Los Angeles, USA, July 19, 2017.

Chair of the session “Developing Novel Virtual Environments” in the International Conference of Human Computer Interaction, Vancouver, Canada, July 14, 2017.

Chair of the organizing committee of the Drivers' Motion Depth Database Track in the 3D Shape Retrieval Contest, 2015.

Program Committee member of the International Conference on Computer Vision Theory and Applications, 2015 and 2017.

Panel co-organizer in the International Conference of the Electronic Archive of Greek and Latin Epigraphy, Paris, September 29- October 1, 2014.

Program Committee member of the International Conference in Computer Vision 2011, 2012.

External grant reviewer of the Romanian National Council of Scientific Research, 2011.

Staff member of the *IEEE International Conference on Image Processing* - ICIP 2001

Teaching & mentoring

I have fully developed several courses to be delivered synchronously and asynchronously on-line as well as on campus. The developed on-line course packages contain high-definition post-produced video lectures, interactive on-line assignments, and additional reading material.

I have proposed and developed 5 new undergraduate courses for the Digital Arts and Sciences BA and 1 new graduate course for the Digital Arts and Sciences MA curricula.

I have taught the following graduate and undergraduate courses at the University of Florida since 2010.

- Interaction Design - DIG6126C
- Interdisciplinary Research Seminar - DIG6840C
- Production of Immersive Environments – DIG4540C
- Entertainment Technology – DIG6050C
- Movement, Media, and Machines – DIG6744C
- Protocols for Multimedia Interfaces - DIG6751C
- Interactive Storytelling - DIG6027C and DIG3433
- Neural Networks - CAP6615
- Digital Arts and Science (DAS) Design and Production Studio / Intro to DAS - DIG2931C
- Wearables and Mobile App Development – DIG4634
- Independent Study - DIG6906
- Advanced Programming Fundamentals – COP3504
- Undergraduate Research in Digital Arts and Sciences – DIG4917

I have served in 60 graduate student committees since 2010.
Ph.D. (16), M.A. (44)

I have served as a mentor in the University Minority Mentor Program, 2015-2016.

I have served as a mentor in the University Scholars Program, 2016-2017, 2018-2019.

I have served as a mentor in the Integrated Product and Process Design Program, 2014-2015, 2017-2018, 2018-2019, 2019-2020.

Other service

I have served in various committees at the Digital Worlds Institute, the College of the Arts, and the University of Florida:

- Member of the UF Data Science Committee. Dates of service: February 21, 2022-February, 2023.
- Member of the COTA Arts in AI Working Group. Dates of service: January 1, 2022-present.
- Chair of the University Library Committee. Dates of service: August 16, 2020 – August 15, 2021.

- Member of the UF AI Research Working Group. Dates of service: August 16, 2020-August 15, 2021.

- Member of the UF AI Academic Working Group. Dates of service: August 16, 2020-August 15, 2021.

- Co-Chair of the University Library Committee. Dates of service: August 16, 2018 – August 15, 2020.

- Provocateur for Diversity, Equity, and Inclusion in two faculty search committees in the COTA. Dates of service: January 2018 – April 2018.

- Member of the COTA Research Committee. Dates of service: September 17, 2010 – August 15,2018.

- Member of the COTA Technology Committee. Dates of service: February 2, 2011 – August 15, 2018.

- Member of the search committee for the position of Assistant Professor in Digital Arts and Sciences. Dates of service: January-March 2014.

- Member of the Digital Worlds & Computer Engineering Digital Arts and Sciences committee. Dates of service: January 2013-August 2013.

- Chair of the search committee for the position of Interactive Media Programmer. Dates of service: January-February 2013.

- Chair of the search committee for the position of Interaction Designer. Dates of service: September-October 2012.

- Member of the graduate admissions committee at the UF Digital Worlds Institute. Dates of service: January 2011-present.

- Chair of the CFA Research Web-page Subcommittee. Dates of service: Jan-May, 2011.

- Coordinator of Research and Technology, Digital Worlds Institute. Dates of service: August 16, 2010 - present.

- Chair of the Faculty Search Committee for the position #0806696 (Assistant/Associate In, Digital Arts and Sciences).

Published Software

I have published the following software packages that have been extensively used (IP usage reports available) by researchers at *MIT*, *Cornell University, University of California Bekerley*, *Boston University*, *INRIA*, *University of North Carolina* at Chapel Hill, *University of Strasbourg*, *Stanford Research Institute*, *University of Wisconsin*, *University of Minnesota*, and other academic and research institutes.

- Android For Beginners (Released on: August 2023). This project contains a collection of Android Studio apps in Java. https://github.com/digitalworlds/AndroidForBeginners

- J4Q – Java for Oculus Quest (Released on: March 2023). This award-winning project is a framework for Android Studio that enables the development of apps for Meta Quest headsets using Java in Android Studio. https://github.com/digitalworlds/JavaForQuest

- AIDP – A web-based tool for automated imaging differentiation of parkinsonism, used by 21 participating universities and health institutes in North America. (First released in July 2021).

- 1 Florida ADRC Data Transfer Tool – A cloud-based secure medical image data transfer tool that facilitates data exchange between the members of the Alzheimer's Disease Research Consortium. (First released in July 2021).

- UFLI Educational Apps – A collection of educational apps (Blending Board, Games for UFLI Foundations, Beginner and Intermediate Word Work Mat) designed in collaboration with the UF Literacy Institute, with more than 1,000,000 K-2 users/day (First released in April 2020). The apps are part of the book: "UFLI Foundations – Manual and Resources", Ventris Learning, 2022, ISBN: 978-1-7320468-2-5. https://www.ventrislearning.com/uflifoundations/

- VisiNeat (VN API) - An Application Programming Interface for rapid prototyping and dissemination of cross-platform interactive 3D web-based applications. (Released in May 2016)

- DMDDB - Drivers' Motion Depth Database - An open-access database of 523 depth data sequences of drivers performing merging and lane changing maneuvers. (Released in November 2014)

- J4K – Java for Kinect library (Released on: October 10, 2013). This library has been used in several international projects such as ICY (icy.bioimageanalysis.org) developed at the Institute Pasteur, France, and MARINE (www.marineframework.org) developed at UFPE, Brazil, and has been featured in the website of the popular JOGL java library. https://research.dwi.ufl.edu/projects/ufdw/j4k/

- Digital Epigraphy Toolbox - An on-line tool for the study and analysis of ancient inscriptions. (First released in 2012). https://www.digitalepigraphy.org

- fanDTasia - Diffusion Tensor Imaging tool (Released on: March 2, 2010)

https://research.dwi.ufl.edu/projects/fanDTasia/tutorial.php

Other Skills and Certificates

I have received the following professional training and certificates:

- I-Corps@NCATS (National Center for Advancing Translational Sciences) training by the University of Miami, Clinical & Translational Science Institute. Dates attended: 10/15/2021-11/19/2021.
- NIH AAP (Applicant Assistance Program) training by Eva Garland Consulting, LLC. Dates attended: 10/21/2021-12/23/2021.
- Six Sigma White Belt Certification on change management within an organization and on organizing local problem-solving teams that support projects. Trained and certified by Florida Light and Power / NextEra Energy on August 24, 2019.
- Faculty Institute on Teaching and Technology Training Certificate, University of Florida, 2014 for developing on-line instructional material.
- Effort Fundamentals Training Certificate RSH220, 2014
- Cost Principles Training Certificate RSH260, 2014
- Faculty Search Committee Training Certificate PVO800, 2014, 2011
- Health Insurance Portability and Accountability Act (HIPAA) Certificate, 2009 for handling human health data.
- Attended Summer School: 'Mathematics in Brain Imaging', IPAM department, *UCLA*, 2008
- Attended Summer School: 'The Data Avalanche: Reducing Information Overload', *FOURTH*, 2002

Expert level on the following programming languages and frameworks: JavaScript, Java, OpenGL ES3, GLSL, C/C++, Matlab, PhP, SQL, HTML5, CSS, XSLT, SVG