CURRICULUM VITAE

A) NAME:

Ali Arya

B) EDUCATION:

a. <u>Degrees</u>

- 2003, **Ph. D.**, Computer Engineering, *University of British Columbia*, Vancouver, BC, Canada

  - Thesis: Personalized Face Animation Framework for Interactive Multimedia Systems

- 1989, **Bachelor of Science**, Electrical Engineering, *Tehran polytechnic*, Tehran, Iran

b. <u>Awards</u>

- Carleton University, Provost Fellowship in Teaching Award, 2020

- Carleton University, Scholarship of Teaching and Learning, 2020

- Carleton University, Faculty Graduate Mentorship Award, 2019

- Faculty of Engineering and Design, Teaching Excellence Award, 2019

- University of British Columbia, Teaching Assistant Award, 2002

C) EMPLOYMENT EXPERIENCE:

- August 2006 - Present: Carleton University, School of Information Technology,

  Associate Professor

- July 2021 – July 2022: Carleton University, Faculty of Graduate and Post-doctoral Affairs,

  Associate Dean (Student Affairs)

- February 2018 – July 2021: Carleton University, Faculty of Graduate and Post-doctoral Affairs

  Associate Dean (Planning and Awards)

- September 2003 - February 2005: School of Interactive Arts and Technology, Simon Fraser University, Vancouver, BC

  Post-doctoral Fellow and Sessional Instructor

D) TEACHING

a. <u>Courses Taught</u>

- IMD-3006, Software Design for Multimedia Applications

- o Fall 2021 and Fall 2020 (online)
- o Winter 2019 (newly designed, offered for the first time)
- ITEC-5000, Analytical Methods for Information Technology
  - o Fall 2018 (newly designed, offered for the first time)
- ITEC-6200, Interdisciplinary Research in Digital Media
  - o Winter 2021 and 2022 (online)
  - o Fall 2019
  - o Fall 2017 (newly designed, offered for the first time)
- IMD-4900/4902, Design Studio 4
  - o Fall 2006-11, 2013-14
- IMD-2004/BIT-2400, Intermediate Programming
  - o Summer 2017 (online)
  - o Fall 2007-17 (except 2012)
- IMD-1003/BIT-1400, Computer Programming
  - o Summer 2017, Winter 2018
  - o Winter 2009, 2011, 2015, 2016
- SYSC-5807/5409, Interactive Media and Digital Art
  - o Winter 2008, 2010, 2012, 2014, 2016

b. Graduate Supervision
  - Ph.D. Students
    - In Progress: 2 (one of them with co-supervisor)
    - Completed: 9 (four of them with co-supervisors)
  - Masters Students
    - In Progress: 1
    - Completed: 13 (3 of them with co-supervisors)

c. Undergraduate Research
  - Assistants in Research Projects: 38

  - Directed Study Students: 32

E) RESEARCH FUNDING (since 2015)

Duration	Applicants	Agency	Title	Amount
2021-2022	Ali Arya (PI) and 5 others	Carleton University	Inclusive VR	30,000
2020-2022	Ali Arya	Ontario Centres of Innovation (OCI)	VR in STEM Education	150,000
2016-2017	Ali Arya	eCampus Ontario	Design and Development of Online Programming Courses	100,000
2015	Ali Arya	NSERC (ENGAGE)	Using Interactive Storytelling and Gamification for Children Education	24,400
2015	Ali Arya	NSERC (ENAGE)	Gamification of Health and Fitness using Wearable Sensing Systems	24,800

F) SELECTED PUBLICATIONS (since 2015)

Journals

1. Amirsam Khataei, Mike Hine, Ali Arya, "The Design, Development and Validation of a Persuasive Content Generator," *Journal of International Technology and Information Management*, 2020

2. Zhao Zhao, Ali Arya, Rita Orji, Gerry Chan, "The Effects of a Personalized Fitness Recommender System using Gamification and a Continuous Player Modeling: A Long-term Study," *JMIR-Serious Games*, 2020

3. Anthony Scavarelli, Ali Arya, and Robert Teather, "Virtual Reality and Augmented Reality in Social Learning Spaces: A Literature Review," *Virtual Reality*, 2020

4. Gerry Chan, Ali Arya, Rita Orji, Zhao Zhao, "Motivational Strategies and Approaches for Single and Multi-Player Exergames," *PeerJ Computer Science*, 2019

5. Andrés.A. Navarro-Newball, Isidro. Moreno, Ali Arya, Edmond C. Prakash, Efetobore. Mike-Ifeta, Juan D. Mejia, "An Interactive Modelling Architecture for Education and Entertainment at Museums", *DYNA Journal of Engineering and Industry*, 2016

6. Seyed Ali Etemad, Ali Arya, "Expert-driven Perceptual Features for Modeling Style and Affection in Human Motion", *IEEE Transactions on Human-Machine Systems*, 2016

7. Amirsam Khataei and Ali Arya, "Personalized Presentation Builder for Persuasive Communication," *ACM SIGDOC's Communication Design Quarterly*, 2015.

8. Andrés Adolfo Navarro Newball, Isidro Moreno, Edmond Prakash, Ali Arya, Victoria E. Contreras, Víctor Hernan Arcila, "Gesture based human motion and game principles to aid understanding of science and cultural practices" *Multimedia Tools and Applications*, January 2015

Selected Older journal publications

9. Seyed Ali Etemad, Ali Arya, Avi Parush, Steve DiPaola, "Perceptual Validity in Animation of Human Motion: An Inclusive Paradigm", *Computer Animation and Virtual Worlds*, 2014.

10. Seyed Ali Etemad, Ali Arya, "Correlation Optimized Time Warping for Motion", *The Visual Computer*, 2014.

11. Ali Arya, Peggy Hartwick, Shawn Graham, Nuket Nowlan, "Collaborating through Space and Time in Educational Virtual Environments: 3 Case Studies," Journal of Interactive Technology and Pedagogy, October 2012

Refereed Conferences

1. Eric Chan, Gerry Chan, Assem Kroma, Ali Arya. "Holistic Multimodal Interaction and Design. International Conference on Human-Computer Interaction (HCII), 2022

2. Dan Hawes and Ali Arya. "Comparing Student-Based Context Priming in Immersive and Desktop Virtual Reality Environments to Increase Academic Performance." 2022 8th International Conference of the Immersive Learning Research Network (iLRN). IEEE, 2022.

3. Hossain Samar Qorbani, Ali Arya, Nuket Nowlan, Maryam Abdinejad, "Simulation and Assessment of Safety Procedure in an Immersive Virtual Reality Laboratory," IEEE VR (Poster Session), 2021

4. Hossain Samar Qorbani, Ali Arya, Nuket Nowlan and Maryam Abdinejad, "ScienceVR: A Virtual Reality Framework for STEM Education, Simulation and Assessment," *International Conference on Artificial Intelligence and Virtual Reality (AIVR), special session Emerging technologies of visualization and education in VR/MR*. 2021

5. Gerry Chan, Ali Arya, Rita Orji, Zhao Zhao. "Personalizing Gameful Elements in Social Exergames: An Exploratory Study," *International Conference on the Foundations of Digital Games (FDG), Short Papers*, 2021

6. Dan Hawes and Ali Arya. "VR-based Student Priming to Reduce Anxiety and Increase Cognitive Bandwidth." *IEEE Virtual Reality and 3D User Interfaces (VR) Conference*, 2021

7. Dan Hawes, Ali Arya, "Assessing the Effectiveness of Virtual Reality Gaming to Reduce Anxiety and Increase Cognitive Bandwidth," *IEEE International Conference on Artificial Intelligence and Virtual Reality (AIVR), Poster Session.* 2020

8. Allan Fowler, Johanna Pirker, and Ali Arya. "Jamming across borders: An exploratory study." *International Conference on Game Jams, Hackathons and Game Creation Events* 2020, pp. 16-21. 2020.

9. Zhao Zhao, Ali Arya, Rita Orji, Gerry Chan, "Physical Activity Recommendation for Exergame Player Modeling using Machine Learning Approach," *IEEE SeGAH Conference*, 2020

10. Gerry Chan, Ali Arya, Rita Orji, Zhao Zhao, Milica Stojmenovic, Anthony Whitehead, "Player Matching for Social Exergame Retention: A Group Personality Composition Approach," *ACM CHI Play Conference, Short Papers*, 2020

11. Darrin O'Neil, Mahmut Erdemli, Stephen Field, Ali Arya. "Improving the Visual Perception and Spatial Awareness of Downhill Winter Athletes with Augmented Reality," International Conference on Human-Computer Interaction (HCII), 2020

12. Md Riyadh, Ali Arya, Gerry Chan, M Imran, "Enhancing Social Ties Through Manual Player Matchmaking in Online Multiplayer Games," *International Conference on Human-Computer Interaction*, 2020

13. Nuket Nowlan, Omair Shafiq, and Ali Arya. "Are You Paying Attention? Assessing Students Attention and Participation on LMS," *EDULEARN Conference*, 2019

14. Dan Hawes, Robert Teather, Ali Arya. "Assessing the Value of 3D Software Experience with Camera Layout in Virtual Reality." *IEEE International Conference on Artificial Intelligence and Virtual Reality (AIVR), Poster Session*, 2019

15. Anthony Scavarelli, Ali Arya, and Robert Teather, "Circles: Exploring Multi-platform Accessible Socially Scalable VR in the Classroom," *IEEE GEM Conference*, 2019

16. Anthony Scavarelli, Ali Arya, Rob Teather, "Towards a Framework on Accessible and Social VR in Education*," IEEE VR Poster Session*, 2019

17. Eric Spero, Milica Stojmenović, Ali Arya, and Robert Biddle, "Learning with Trees: A Non-Linear E-Textbook Format for Deep Learning," HCII, Orlando, USA, 2019

18. Ali Arya, Susan Gold, Matthew Farber, Kevin Miklasz, "GGJ-Next: The Global Game Jam for Youth," *International Conference on Game Jams,*

Hackathons, and Game Creation Events (ICGJ), San Francisco, USA, March 16-17, 2019

19. Eric Spero, M. Stojmenović, Ali Arya, Robert Biddle, "CREATING A NON-LINEAR TEXTBOOK FORMAT TO FACILITATE DEEP LEARNING," *International Technology, Education and Development Conference (INTED),* 2019

20. Ali Arya, Susan Gold, Matthew Farber, Kevin Miklasz, "EDUCATING THE NEXT GENERATION OF LEARNERS THROUGH A GLOBAL GAME JAM," *International Technology, Education and Development Conference (INTED),* 2019

21. Ali Arya, Lisa Meyer, and Shannon Noonan, "EMOTIONAL LEARNER: INVESTIGATING THE NEED FOR AN EMOTIONALLY SUPPORTIVE LEARNING ENVIRONMENT," ICERI Conference, 2019

22. Omar Bani-Taha, Malek El-Kouzi, Ali Arya, Fraser Taylor, "EDUCATIONAL COMPUTER GAMES FOR SOCIAL ADJUSTMENT OF NEWCOMER CHILDREN," ICERI Conference, 2019

23. Bethany Dunfield, Anthony Whitehead, Ali Arya, "Event-based Model of Narrative Structure for Games," IEEE GEM, 2018

24. Nuket Nowlan, Peggy Hartwick, Ali Arya, "Skill Assessment in Virtual Learning Environments," IEEE CIVEMSA, 2018

25. Gerry Chan, Ali Arya, and Anthony Whitehead, "Keeping Players Engaged: A Personality Matchmaking Approach," *ACM CHI, Poster Session*, 2018

26. Amirsam Khataei, Ali Arya, Mike Hine, "User Trust Graph: A Model to Measure Trustworthiness," *Persuasive Technologies Conference, Personalization workshop*, 2018

27. Reza GhasemAghaei, Ali Arya, and Robert Biddle, Affective Walkthroughs and Heuristics: Evaluating Minecraft Hour of Code, published at Lecture Notes in Computer Science (LNCS), *Proceedings of the 19th International Conference on Human-Computer Interaction International (HCII'17*), Vancouver, Canada, 2017

28. Zhao Zhao, Ali Arya, Anthony Whitehead, Ali Etemad, Gerry Chan, "KEEPING USERS ENGAGED THROUGH FEATURE UPDATES: A LONG-TERM STUDY OF USING WEARABLE-BASED EXERGAMES," ACM CHI 2017

29. Zhao Zhao, Ali Etemad, Anthony Whitehead, Ali Arya, "KEEPING USERS ENGAGED: A LONG-TERM STUDY OF WEARABLE-BASED GAMIFIED EXERCISE APPLICATIONS," *ACM CHIPlay Posters* , 2016

30. Arya, Ali, and Ryan Bottriell. "A Distributed Framework for Location-oriented Motion-based Interactive Public Installations and Games." *ACM Conference on Interactive Surfaces and Spaces, Poster Session*. 2016.

31. Reza GhasemAghaei, Ali Arya, and Robert Biddle, "MADE RATIO: A ECTIVE MULTIMODAL SOFTWARE FOR MATHEMATICAL CONCEPTS," HCII 2016

32. Ali Arya, Jesse Gerroir, Efetobore Mike-Ifeta, Andres Adolfo Navarro-Newball, Edmund Prakash, "MESEUM: PERSONALIZED EXPERIENCE WITH NARRATIVE VISUALIZATION FOR MUSEUM VISITORS," *HCII*-2016

33. Reza GhasemAghaei, Robert Biddle, and Ali Arya. "A Dashboard for Affective E-learning: Data Visualization for Monitoring Online Learner Emotions," *AACE, EdMedia2016, World Conference on Educational Media and Technology*, Vancouver, British Columbia, Canada: June 28-30, 2016.

34. Reza GhasemAghaei, Robert Biddle, and Ali Arya. "Evaluating Software for Affective Education: A Case Study of Affective Heuristics," *AACE, EdMedia2016, World Conference on Educational Media and Technology*, Vancouver, British Columbia, Canada: June 28-30, 2016.

35. Zhao Zhao, S. Ali Etemad, and Ali Arya "Gamification of Exercise and Fitness using Wearable Activity Trackers" *International Symposium on Computer Science in Sport (ISCSS 2015)*, September 09-11, 2015, Loughborough, UK

36. Anthony Scavarelli and Ali Arya, "An Exploration of Shape in Crowd Computer Interactions" *HCII,* 2015

37. Xiao Du and Ali Arya, "Design and Evaluation of a Learning Assistant System with Optical Head Mounted Display" *HCII*, 2015

38. Amirsam Khataei and Ali Arya, "Persuasive Presentation Builder: The Individualization Factor," *HCII*, 2015

39. Amirsam Khataei and Ali Arya, Personalized Presentation Builder for Persuasive Communication," *ACM Symposium on Communicating Complex Information (SCCI)*, February 22-23, 2015.

G) ADMINISTRATIVE DUTIES

School Level

- Associate Director – Graduate Studies (2016-2018)

- Graduate Coordinator, 2013-2016

- IMD Program Coordinator, 2008-2011, 2014
  - Joint Academic Council and Curriculum Committee as the result

- IMD Senior Project Coordinator, 2006-2011 & 2013-2016

- CSIT Computing Committee, 2013-2015

- Senate Representative, fall 2007 to Spring 2010, and since fall 2016

- Appeal Committee Chair, fall 2006 to Fall 2009

- Website Committee, since Fall 2006

- Recruitment Committee and Recruitment Activities, since Fall 2006

- Portfolio Committee and Portfolio Reviews, since Fall 2006

- Tenure Committee, Fall 2008 and Fall 2010

- Global Game Jam Organizer, since Fall 2008 (Game development competition run in 48 hours on the same weekend globally. Hosted in Ottawa by CSIT)

- Advisor and curriculum consultant of a multimedia professional training program for aboriginal youth (Indigenous Culture and Media Innovations)

Faculty Level

- Virtual Ventures Committee, 2009-2011

- Promotion Committee, Winter 2009 and 2017

University Level

- Associate Dean (Planning and Awards, then Student Affairs), Faculty of Graduate and Postdoctoral Affairs, February 2018 to July 2022

- Aboriginal Affairs Taskforce, Academic/Research Committee, 2009-2011

- Senate Educational Equity Committee, 2008-2011

- Aboriginal Vision Committee, Fall 2008 to Fall 2009

- School of Journalism and Communication Hiring Committee, Winter 2009

H) PROFESSIONAL HONOURS AND EXTRA-UNIVERSITY ACTIVITIES

- Member of Program Committee, IEEE AIVR, 2022

- Program Chair, Foundations of Digital Games (FDG) conference, 2021

- Member of Program Committee, IEEE VR, 2017 to 2020

- Member of Program Committee, IEEE AIVR, 2018-2020

- Curriculum Committee Member, GlobalGameJam-Next (GGJ for children), 2017-2020

- Member of the Editorial Board, International Journal of Computer Games Technology, 2007-2020

- Member of Program Committee, IEEE GEM, 2017-2019

- Member of Program Committee, ACM GI 2019

- Member of Program Committee, ACM SUI, 2016-2017

- Member of Program Committee, EUROMEDIA, 2011-2016

- Member of Program Committee, VS-Games, 2013-2016

- Member of Program Committee, GET, 2013-2015

- Chair, Global Game Jam Research Committee, 2012-2013

- Member of the Management Board, Centre for Indigenous Research, Culture, Language and Education (CIRCLE), Carleton University, 2007-2013

I) MEMBERSHIP IN PROFESSIONAL SOCIETIES

- Senior Member, IEEE, since 2006 (Student Member and Member since 1993)

- Member, ACM, since 2007