

Hannes Högni Vilhjálmsson
Center for Analysis and Design of Intelligent Agents
School of Computer Science
Reykjavik University
Menntavegur 1, Reykjavik IS-101, Iceland

hannes@ru.is
www.ru.is/~hannes
Work: +354 599-6323
Cell: +354 618-6323
Fax: +354 599 6301

Hannes Högni Vilhjálmsson

RESEARCH AREAS

- Interactive virtual environments, avatars and agents in networked environments, social simulation and games for education and training, embodied conversational agents, social and linguistic behavior modeling, natural human-computer interaction, real-time graphical visualization

EDUCATION

- 1997-2003
- PhD in Media Arts and Sciences. Massachusetts Institute of Technology, USA.
Dissertation: "Avatar Augmented Online Conversation". A theoretical and practical framework for automatically analyzing communicative function in real-time online text conversations and for enhancing those functions through an added visual modality using graphical avatars that simulate human nonverbal expression. Communicative functions included emphasis, visual reference, turn-taking, attention and feedback. A general system architecture, *Spark*, was developed and an implemented application for online collaboration provided empirical evidence for the strength of the approach for augmenting online conversation.
- 1995-1997
- MSc in Media Arts and Sciences. Massachusetts Institute of Technology, USA.
- 1991-1994
- BSc in Computer Science. University of Iceland.

WORK EXPERIENCE

- 2010-Present
- **Associate Professor, School of Computer Science, Reykjavík University**
- 2006-2010
- **Assistant Professor (*same*)**
 - Research in the field of socially intelligent agents and avatars.
 - Supervising student research at graduate and undergraduate level.
 - Teaching graduate and undergraduate level Computer Science courses.
- 2009-Present
- **Co-Founder and Technology Advisor, MindGames ehf., Reykjavík, Iceland**
 - Advising on and helping with development of innovative game technologies for training mental skills.
- 2006-Present
- **Technology Advisor and Board Member, Alelo Inc., Los Angeles, CA, USA**
- 2005-2006
- **Co-Founder and Chief Technology Officer (*same*)**
 - Spin-off from the "Tactical Language and Culture Training" project at USC.
 - Responsible for technology migration from academic research to a commercial platform.
- 2003-2006
- **Research Scientist, USC Information Sciences Institute, CA, USA.**
 - Member of the Center for Advanced Research in Technology for Education (CARTE).

WORK EXPERIENCE (continued)

- Technical Director on the DARPA “Tactical Language and Culture Training” project.
 - Project lead on the DARPA “BCBM: Believable Communicative Behavior Middleware” project.
 - Guiding graduate students with their research.
 - Interaction and collaboration with other research institutions, industry and the government.
- 1995-2003
- **Research Assistant, MIT Media Lab, MA, USA**
 - Member of the Gesture and Narrative Language research group led by Prof. Justine Cassell.
 - Project lead on group projects including “BEAT”, “REA” and “Pantomime”.
 - Interaction and collaboration with other research institutions and industry.
- 1994-1995
- **Senior Software Engineer, Raffind Electronics, Ltd., Reykjavík, Iceland**
 - Developing control and monitoring applications for networked sensors and terminals.
- 1994
- **Software Engineer, Hugmynd Multimedia, Reykjavík, Iceland**
 - Developing a kiosk system for visually browsing a multimedia database of real-estate property.
- 1992-1993
- **Software Engineer, Fjölneymar Inc., Reykjavík, Iceland**
 - Developing on- and off-line visualization and analysis tools for MEDISTOR, a versatile data logger.

GRANTS and AWARDS

Grants Received

- 2011
- **The Icelandic Student Innovation Fund**
 - *Title:* Web Environment for the Deployment and User Testing of Interactive Virtual Agents
 - *Role:* PI
 - *Total amount:* 510.000 ISK
- **The Icelandic Student Innovation Fund**
 - *Title:* Emergent Virtual Stories
 - *Role:* PI
 - *Total amount:* 510.000 ISK
- **The Icelandic Student Innovation Fund**
 - *Title:* A Mind-Controlled Videogame for PC and Mac to Help Children Improve Mental Focus
 - *Role:* Co-PI
 - *Total amount:* 510.000 ISK
- **The Icelandic Student Innovation Fund**
 - *Title:* Labeling the Line: Improving the Mind-Game Feedback Loop in Mind Training Games with Physics and Psychophysics
 - *Role:* Co-PI
 - *Total amount:* 510.000 ISK
- 2010
- **The Icelandic Student Innovation Fund**
 - *Title:* Autonomous Seat Selection for Virtual Agents
 - *Role:* PI
 - *Total amount:* 700.000 ISK
- **The Icelandic Student Innovation Fund**
 - *Title:* Icelandic Speech Recognition
 - *Role:* Co-PI
 - *Total amount:* 840.000 ISK

GRANTS and AWARDS (continued)

- 2009-2015
- **Centre of Excellence**
 - *Title:* Icelandic Institute for Intelligent Machines)
 - *Role:* Co-PI
 - *Total amount:* 55.000.000 ISK
-
- **The Icelandic Student Innovation Fund**
 - *Title:* The Automated Virtual Reading Tutor
 - *Role:* Co-PI
 - *Total amount:* 280.000 ISK
- 2008-2010
- **The Icelandic Research Fund**
 - *Title:* Humanoid agents in social game environments (Grant of Excellence)
 - *Role:* PI
 - *Total amount:* 40.150.000 ISK
- 2007
- **The Icelandic Research Fund.**
 - *Title:* Humanoid agents in social game environments (Project Grant)
 - *Role:* PI
 - *Total amount:* 4.850.000 ISK
- 2004-2006
- **The Defense Advanced Research Projects Agency (DARPA)**
 - *Title:* BCBM: Believable Communicative Behavior Middleware
 - *Role:* Co-PI on application, but actual project leader
 - *Total amount:* 700.000 USD
- 2004-2005
- **The National Science Foundation (NSF)**
 - *Title:* Promoting Competence in Mathematics Through Collaboration, Reflection, and Role Models
 - *Role:* Co-PI
 - *Total amount:* 500.000 USD
-
- Awards and Nominations*
- 2011
- **Nomination for President of Iceland Innovation Award** for "Mind training games" Student Innovation Fund project by Arason, Pourvatan, Voludottir and Nikulasson (under my co-supervision)
- 2011
- **Project of Excellence** for "Autonomous Seat Selection for Virtual Agents" Student Innovation Fund project by Carstensdottir and Gudmundsdottir (under my supervision)
- 2010
- **Nomination for President of Iceland Innovation Award** for "The Automated Virtual Reading Tutor" Student Innovation Fund project by Valgardsson (under my supervision)
- 2009
- **Top 10, Class of Excellence** with "MindGames" in the Innovit Business Plan Competition 2009
- 2008
- **GALA Jury Award and GALA Public Award** for the "BML Realizer" student project by Bjarni Þór Árnason and Ægir Þorsteinsson (under my supervision) at the 8th International Conference on Intelligent Virtual Agents, Tokyo, Japan
- 2006
- **Best Paper Nominee** at the 6th International Conference on Intelligent Virtual Agents
- 2005
- **DARPA Significant Technical Achievement Award** for the Tactical Language and Culture Training Project (served as Technical Director on the project)
- 2005
- **DARPA/DARWARS Transition Award** for the Tactical Language and Culture Training Project (for transitioning research into practical use)
- 2005
- **Best Paper Nominee** at the 38th Hawaii International Conference on System Sciences
- 2004
- **Best Paper in Category Award and Best Paper Nominee** at the Interservice/Industry Training, Simulation and Education Conference
- 1998
- **Best Paper Award** at the 2nd International Conference on Autonomous Agents
- 1996
- **Presentation Award** at the 3rd Conference on Lifelike Computer Characters
- 1995
- **Thor Thors Fellowship** from the American-Scandinavian Foundation

REFEREED PUBLICATIONS

Number of Citations by Peers

- **Harzing's Publish or Perish** Citations: 2598; Hirsch's h-index: 19; Egghe's g-index: 50
- Carstensdottir, E., Gudmundsdottir, K., Valgardsson, G. and Vilhjalmsón, H. (2011), "Where to Sit? The Study and Implementation of Seat Selection in Public Places", H. Vilhjalmsón (Eds.): Proceedings of the 11th International Conference on Intelligent Virtual Agents, September 15-17, Reykjavik, Iceland, *Lecture Notes in Computer Science*, **6895**:473-474, Springer-Verlag, Berlin Heidelberg
- Thrainsson, P. R., Petursson, A. L. and Vilhjalmsón, H. (2011) "Dynamic Planning for Agents in Games Using Social Norms and Emotions", H. Vilhjalmsón (Eds.): Proceedings of the 11th International Conference on Intelligent Virtual Agents, September 15-17, Reykjavik, Iceland, *Lecture Notes in Computer Science*, **6895**:473-474, Springer-Verlag, Berlin Heidelberg (Poster)
- Koutsombogera, M., Ammendrup, S. M., Vilhjalmsón, H. and Papageorgiou, H. (2011), "Nonverbal Expression of Turn Management in TV Interviews: A Cross-Cultural Study between Greek and Icelandic" in A. Esposito et al. (Eds.): COST 2102 Int. Training School 2010, *Lecture Notes in Computer Science* 6456:207-213, Springer-Verlag Berlin Heidelberg 2010
- Pedica, C. and Vilhjalmsón, H. (2010) "Spontaneous Avatar Behavior for Human Territoriality" in *Journal of Applied Artificial Intelligence*, Volume 24 Issue 6, July 2010, 575-593 Taylor and Francis, Inc. Bristol, PA, USA
- Pedica, C., Vilhjalmsón, H. and Larusdottir, M. (2010) "Avatars in Conversation: The Importance of Simulating Territorial Behavior" in Albeck et al. (Eds.): Proceedings of the 10th International Conference on Intelligent Virtual Agents, September 20-22, Philadelphia, PA. *Lecture Notes in Computer Science*, 2010, **6356**: 336-342, Springer-Verlag, Berlin Heidelberg
- Pedica, C. and Vilhjalmsón, H. (2009) "Spontaneous Avatar Behavior for Human Territoriality", Zs. Ruttkay et al. (Eds.): Proceedings of the 9th International Conference on Intelligent Virtual Agents, September 14-16, Amsterdam, The Netherlands, *Lecture Notes in Artificial Intelligence*, **5773**: 344-357, Springer-Verlag, Berlin Heidelberg
- Cafaro, A., Gaito, R. and Vilhjalmsón, H. (2009) "Animating Idle Gaze in Public Places", Zs. Ruttkay et al. (Eds.): Proceedings of the 9th International Conference on Intelligent Virtual Agents, September 14-16, Amsterdam, The Netherlands, *Lecture Notes in Artificial Intelligence*, **5773**: 250-256, Springer-Verlag, Berlin Heidelberg
- Pedica, C. and Vilhjalmsón, H. (2008) "Social Perception and Steering for Online Avatars", H. Prendinger et al. (Eds.): Proceedings of the 8th International Conference on Intelligent Virtual Agents, September 1-3, Tokyo, Japan, *Lecture Notes in Artificial Intelligence*, **5208**: 104-116, Springer-Verlag, Berlin Heidelberg
- Heylen, D., Kopp, S., Marsella, S., Pelachaud, C., Vilhjalmsón, H. (2008) "The Next Step Towards a Functional Markup Language", H. Prendinger et al. (Eds.): Proceedings of the 8th International Conference on Intelligent Virtual Agents, September 1-3, Tokyo, Japan, *Lecture Notes in Artificial Intelligence*, **5208**: 270-280, Springer-Verlag, Berlin Heidelberg
- Vilhjalmsón, H., Cantelmo, N., Cassell, J., Chafai, N., Kipp, M., Kopp, S., Mancini, M., Marsella, S., Marshall A., Pelachaud, C., Ruttkay Z., Thorisson, K., van Welbergen, H. and van der Werf, R. (2007) "The Behavior Markup Language: Recent Developments and Challenges", C. Pelachaud et al. (Eds.): Proceedings of The 7th International Conference on Intelligent Virtual Agents, September 17-19, Paris, France, *Lecture Notes in Artificial Intelligence*, **4722**: 99-111, Springer-Verlag, Berlin Heidelberg
- Vilhjalmsón, H., Merchant, C., Samtani, P. (2007) "Social Puppets: Towards Modular Social Animation for Agents and Avatars", D. Schuler (Ed.): Proceedings of The 2nd International Conference on Online Communities and Social Computing, July 22-27, Beijing, China, *Lecture Notes in Computer Science*, **4564**:192-201, Springer-Verlag, Berlin Heidelberg *Invited Paper*
- Kopp, S., Krenn, B., Marsella, S., Marshall, A. N., Pelachaud, C., Pirker, H., Thorisson, K. and Vilhjalmsón, H. (2006) "Towards a Common Framework for Multimodal Generation in ECAs: The Behavior Markup Language", J. Gratch et al. (Eds.): Proceedings of The 6th International Conference on Intelligent Virtual Agents, August 21-23, Marina del Rey, CA, USA, *Lecture Notes in Computer Science*, **4133**: 205-217, Springer-Verlag, Berlin Heidelberg
- Thorisson, K., Vilhjalmsón, H., Pelachaud, C., Kopp, S., Badler, N., Johnson, W. L., Marsella, S. and Krenn, B. (2006) "Representations for Multimodal Generation: A Workshop Report", *AI Magazine*, **27**(1), AAAI Press
- Valente, A., Johnson, W. L. and Vilhjalmsón, H. (2006) "The Tactical Language and Culture Training System: A Demonstration", *21st National Conference on Artificial Intelligence*, July 16-20, Boston, MA, AAAI

REFEREED PUBLICATIONS (continued)

- Johnson, W. L., Vilhjalmsson, H. and Marsella, S. (2005) "Serious Games for Language Learning: How Much Game, How Much AI?", in *Proceedings of The 12th International Conference on Artificial Intelligence in Education*, July 18-22, Amsterdam, The Netherlands, IOS Press
- Vilhjalmsson, H. and Samtani, P. (2005) "MissionEngine: Multi-system integration using Python in the Tactical Language Project", *PyCon*, March 23-25, Washington, D.C., Python Software Foundation
- Vilhjalmsson, H. (2005) "Augmenting Online Conversation through Automatic Discourse Tagging", in *Proceedings of The 6th Annual Minitrack on Persistent Conversation at HICSS*, January 3-6, 2005, Big Island, Hawaii, IEEE
- Warwick, W. and Vilhjalmsson, H. (2005) "Engendering Believable Communicative Behaviors in Synthetic Entities for Tactical Language Training: An Interim Report", in *Proceedings of Behavior Representation in Modeling and Simulation*, May 16-19, Universal City, CA, SISO
- Johnson, W. L., Beal, C., Fowles-Winkler, A., Lauper, U., Marsella, S., Narayanan, S. and Vilhjalmsson, H. (2004) "Tactical Language Training System: An Interim Report", in *Proceedings of The International Conference on Intelligent Tutoring Systems*, August 30 - September 3, Maceio, Brasil, Springer-Verlag
- Beal, C., Shaw, E., Chui, Y., Lee, H., Vilhjalmsson, H. and Qu, L. (2005) "Enhancing ITS instruction with integrated assessments of learner mood, motivation and gender", *12 International Conference on Artificial Intelligence in Education*, July 18-22, IOS Press
- Johnson, W. L., Vilhjalmsson, H. and Samtani, P. (2005) "The Tactical Language Training System: Demonstration", *Artificial Intelligence and Interactive Digital Entertainment*, June 1-3, Marina del Rey, CA
- Johnson, W. L., Choi, S., Marsella, S., Mote, N., Narayanan, S. and Vilhjalmsson, H. (2004) "Tactical Language Training System: Supporting the Rapid Acquisition of Foreign Language and Cultural Skills", in *Proceedings of NLP and Speech Technologies in Advanced Language Learning Systems*, June 17-19, Venice, Italy, inSTIL
- Johnson, W. L., Marsella, S. and Vilhjalmsson, H. (2004) "The DARWARS Tactical Language Training System", in *Proceedings of The Interservice/Industry Training, Simulation and Education Conference*, November 26-29, Orlando, FL, USA, SSA
- Vilhjalmsson, H. (2004) "Animating Conversation in Online Games", Rauterberg, M. (Ed.), *Proceedings of The 3rd International Conference on Entertainment Computing, Lecture Notes in Computer Science*, **3166**: 139-150, Springer-Verlag, Berlin Heidelberg
- O'Sullivan, C., Cassell, J., Vilhjalmsson, H., Dingliana, J., Dobbyn, S., McNamee, B., Peters, C. and Giang, T. (2002) "Levels of Detail for Crowds and Groups", *Computer Graphics Forum*, **21**(4), EG
- Cassell, J., Stocky, T., Bickmore, T., Gao, Y., Nakano, Y., Ryokai, K., Tversky, D., Vaucelle, C. and Vilhjalmsson, H. (2002) "MACK: Medialab Autonomous Conversational Kiosk", in *Proceedings of IMAGINA*, February 12-14, Monte Carlo, Monaco
- Cassell, J., Bickmore, T., Campbell, L., Vilhjalmsson, H. and Yan, H. (2001) "More than just a pretty face: conversational protocols and the affordances of embodiment", *Knowledge-Based Systems*, **14**, Elsevier
- Cassell, J., Vilhjalmsson, H. and Bickmore, T. (2001) "BEAT: the Behavior Expression Animation Toolkit", *ACM SIGGRAPH*, August 12-17, Los Angeles, CA, ACM Press, 477-486
- Cassell, J., Ananny, M., Basu, A., Bickmore, T., Chong, P., Mellis, D., Ryokai, K., Smith, J., Vilhjalmsson, H. and Yan, H. (2000) "Shared Reality: Physical Collaboration with a Virtual Peer", *ACM CHI*, April 1-6, The Hague, The Netherlands, ACM Press
- Cassell, J., Bickmore, T., Vilhjalmsson, H. and Yan, H. (2000) "More Than Just a Pretty Face: Affordances of Embodiment", *International Conference on Intelligent User Interfaces*, January 9-12, New Orleans, LA, ACM Press, 4-9
- Cassell, J. and Vilhjalmsson, H. (1999) "Fully Embodied Conversational Avatars: Making Communicative Behaviors Autonomous", *Autonomous Agents and Multi-Agent Systems*, **2**(1), ACM Press
- Cassell, J., Vilhjalmsson, H., Chang, K., Bickmore, T., Campbell, L. and Yan, H. (1999) "Requirements for an Architecture for Embodied Conversational Characters", *Computer Animation and Simulation*, Magnenat-Thalmann, N. and Thalmann, D. (Eds.), Springer Verlag, Vienna, Austria
- Cassell, J., Bickmore, T., Billinghurst, M., Campbell, L., Chang, K., Vilhjalmsson, H. and Yan, H. (1999) "Embodiment in Conversational Interfaces: Rea", *CHI*, Pittsburgh, PA, ACM Press, 520-527
- Vilhjalmsson, H. and Cassell, J. (1998) "BodyChat: Autonomous Communicative Behaviors in Avatars", *Autonomous Agents*, Autonomous Agents, Minneapolis, MN, ACM Press, 269-276

REFEREED PUBLICATIONS (continued)

Workshop Papers

- Thórisson, K.R. and Vilhjálmsón, H. (2009) "Functional Description of Multimodal Acts: A Proposal" in the proceedings of the 2nd Function Markup Language Workshop "Towards a Standard markup Language for Embodied Dialogue Acts" at AAMAS, Budapest, Hungary, 2009
- Vilhjálmsón, H. and Thórisson, K.R. (2008) "A Brief History of Function Representation from Gandalf to SAIBA" in the proceedings of the 1st Function Markup Language Workshop at AAMAS, Portugal, June 12-16, 2008
- Vilhjálmsón, H. and Stacy, M. (2005) "Social Performance Framework", *Workshop on Modular Construction of Human-Like Intelligence at the 20th National AAAI Conference on Artificial Intelligence*, July 9th, Pittsburgh, PA, AAAI
- Johnson, W. L., Marsella, S., Mote, N., Si, M., Vilhjálmsón, H. and Wu, S. (2004) "Balanced Perception and Action in the Tactical Language Training System", *Workshop on Balanced Perception and Action in ECAs in conjunction with AAMAS*, July 19-20, New York, NY
- O'Sullivan, C., Cassell, J., Vilhjálmsón, H., Dobbyn, S., Peters, C., Leeson, W., Giang, T. and Dingliana, J. (2002) "Crowd and Group Simulation with Levels of Detail for Geometry, Motion and Conversational Behavior", *Eurographics-Irish Chapter Workshop on Computer Graphics*, March 25-26, Dublin, Ireland, EG
- Vilhjálmsón, H. (1999) "Identity, Avatars and Embodiment", *Workshop on Research Issues in the Design of Online Communities at ACM CHI*, May 16-17, Pittsburgh, PA
- Cassell, J., Bickmore, T., Billinghamurst, M., Campbell, L., Chang, K., Vilhjálmsón, H. and Yan, H. (1998) "An Architecture for Embodied Conversational Characters", *First Workshop on Embodied Conversational Characters*, October 12-15, Tahoe City, CA
- Vilhjálmsón, H. (1996) "Autonomous Communicative Behaviors in Avatars", *Lifelike Computer Characters*, October 8-11, Snowbird, UT

Book Chapters and Other Publications

- Vilhjálmsón, H. (2009) "Representing Communicative Function and Behavior in Multimodal Communication" in A. Esposito et al. (Eds.): *Multimodal Signals: Cognitive and Algorithmic Issues. Lecture Notes in Artificial Intelligence*, **5398**: 47-59, Springer-Verlag, Berlin Heidelberg
- Vilhjálmsón, H. (2008) "Tölvuleikir teknir alvarlega vestanhafs", *Tölvumál: The Journal of the Society for Information Processing*, **33**(1), Skýrslutæknifélag Íslands
- Cassell, J., Vilhjálmsón, H. and Bickmore, T. (2004) "BEAT: The Behavior Expression Animation Toolkit", *Life-Like Characters: Tools, Affective Functions, and Applications*, Prendinger, H. and Ishizuka, M. (Eds.), Springer-Verlag, Berlin, 163-185
- Cassell, J., Bickmore, T., Campbell, L., Vilhjálmsón, H., Yan, H. (1999) "Conversation as a System Framework: Designing Embodied Conversational Agents", *Embodied Conversational Agents*, Cassell, J. et al. (Eds.), MIT Press, Cambridge, MA, 29-63
- Vilhjálmsón, H. (1993) "Sýndarveruleiki", *Tölvumál: The Journal of the Society for Information Processing*, **18**(3), Skýrslutæknifélag Íslands

DEMOS

- 09/2011 • **CADIA Projects**
 - *Vísindavaka 2011*, The Icelandic Centre for Research, Reykjavík, Iceland
- 03/2011 • **CADIA Populus – Demo**
 - *UT Messan*, The Association for Information Processing, Reykjavík, Iceland
- 09/2010 • **CADIA Projects**
 - *Vísindavaka 2010*, The Icelandic Centre for Research, Reykjavík, Iceland
- 09/2010 • **The Autonomous Virtual Reading Teacher**
 - *Gathering of Animated Lifelike Agents (GALA)*, at IVA 2010, Philadelphia, PA
- 06/2010 • **CADIA Populus – Demo**
 - *The Game AI Conference*, Paris, France
- 09/2009 • **CADIA Populus Video**
 - *Gathering of Animated Lifelike Agents (GALA)*, at IVA 2009, Amsterdam, The Netherlands

DEMOS (continued)

- 09/2009 • **CADIA Populus – Demo.**
 - *Vísindavaka 2009*, The Icelandic Centre for Research, Reykjavík, Iceland
- 11/2008 • **CADIA Projects – Demo.**
 - *ICT 2008*, The European Commission, Lyon, France
- 11/2008 • **CADIA Projects – Demos.**
 - *AI Festival 2008*, School of Computer Science, Reykjavik University
- 9/2008 • **BML Realizer Video**
 - *Gathering of Animated Lifelike Agents (GALA)*, at IVA 2008, Tokyo, Japan
- 09/2008 • **CADIA Populus – Demo.**
 - *Vísindavaka 2008*, The Icelandic Centre for Research, Reykjavík, Iceland
- 09/2007 • **Humanoid Agents in Social Game Environments – Demo.**
 - *Vísindavaka 2007*, The Icelandic Centre for Research, Reykjavík, Iceland
- 3/2007 • **Interactive Virtual Environments**
 - *Tækni og Vit 2007*, The Industry Association with the Ministry of Industry and Commerce
- 09/2006 • **Leikur að læra pastúnsku! – Demo.**
 - *Vísindavaka 2006*, The Icelandic Centre for Research, Reykjavík, Iceland

STUDENTS

PhD Supervision

- Angelo Cafaro (2013)

PhD Examination/Evaluation

- Kirsten Bergmann (at University of Bielefeld) (2011)
- Cathy Ennis (at Trinity College Dublin) (2010)

MS Thesis Supervision

- Lorenzo Scagnetti (2012)
- Francesco DiMarco (2012)
- Alfredo Conte (2012)
- Andrea Monacchi (2012)
- Francesco Lilli (2012)
- David Sorrentino (2012)
- Sigrún María Ammendrup (2011)
- Carmine Oliva (2011)
- Páll Rúnar Þráinsson (2011)
- Raffaele Gaito (at University of Salerno, Italy) (2010)
- Claudio Pedica (2009)
- Angelo Cafaro (at University of Salerno, Italy) (2009)

MS Thesis Examination

- Hlynur Sigurþórsson (2011)
- Grímur Tómasson (2011)
- Martha Dís Brandt (2010)
- Ida Kramarczyk (2009)
- Jónas Tryggvi Jóhannsson (2007)
- María Arinbjarnar (2007)

STUDENTS (continued)

BS Theses Supervision

- Giuseppe Esposito (2010)
- Hildur Sif Thorarensen (2010)
- Elvar Örn Umnþórsson (2009)
- Eiríkur Ari Pétursson (2009)
- Guðleifur Kristjánsson (2009)
- Árni Hermann Reynisson (2009)
- Bjarni Þór Árnason (2008)
- Ægir Þorsteinsson (2008)
- Óskar Vatnsdal Guðjónsson (2008)

COURSES TAUGHT

- | | |
|-------------|--|
| 2011 Fall | • Independent Study: "Interactive Narrative and Emergence" |
| 2011 Summer | • Virtual Environments (at University of Camerino) |
| 2011 Spring | • Introduction to Artificial Intelligence |
| | • Independent Study: "The Modeling and Interactive Rendering of The Reykjavik University Building" |
| | • Independent Study: "Game Engine Development" |
| 2010 Fall | • Natural Language Processing |
| | • Virtual Environments |
| | • Independent Study: "Procedural Animation for Human Behavior" |
| 2010 Spring | • Independent Study: "Design and Implementation of a Navigation Mesh Based Path Finding System" |
| 2009 Fall | • Computer Graphics |
| | • Natural Language Processing |
| | • Independent Study: "Open Source Technology for Massively-Multiplayer Games" |
| 2009 Spring | • Virtual Environments |
| | • Introduction to Artificial Intelligence |
| | • Independent Study: "Simulating Group Behavior in Avatar-based Virtual Environments" |
| | • Independent Study: "Behavior Modelling in Virtual Creatures" |
| 2008 Fall | • Natural Language Processing |
| 2008 Spring | • Virtual Environments |
| | • Introduction to Artificial Intelligence |
| | • Independent Study: "Building and Performance Tuning a Real-time Nature Rendering Framework with Shaders" |
| 2007 Fall | • Natural Language Processing |
| | • Operating Systems |
| | • Independent Study: "Procedural Content Creation" |
| 2007 Spring | • Virtual Environments |
| | • Introduction to Artificial Intelligence |
| | • Independent Study: "Leitaraðferðir á leiðum í tölvuleikjum" |
| | • Independent Study: "Coupling Autonomy and User Control in Avatar Based Online Interaction" |

SERVICES

Coordination Work

- Chair *11th International Conference on Intelligent Virtual Agents*, Reykjavik, Iceland, September 2011

SERVICES (continued)

- Co-chair for *6th Nordic Conference on Human-Computer Interaction*, Reykjavik, Iceland, October 2010
- Senior PC Member for *10th International Conference on Intelligent Virtual Agents*, Philadelphia, USA, September 2010
- Senior PC Member for *9th International Conference on Autonomous Agents and Multiagent Systems*, Toronto, Canada, May 10-14, 2010
- Co-chair for *The 9th International Conference on Intelligent Virtual Agents*, Amsterdam, The Netherlands, September 2009
- Co-organizer *The 4th International Workshop on the Behavior Markup Language*, Amsterdam, The Netherlands, September 2009
- Co-organizer of the *Annual Conference on Software Development*, The Icelandic Society for Information Processing (Ský), Reykjavik, November 2008
- Producer for the *Icelandic AI Festival*, Reykjavik University, Reykjavik, November 2008
- Co-organizer of *The 3rd International Workshop on the Behavior Markup Language*, MITRE Corporation, Boston, MA, June 2-3, 2008
- Co-organizer of *The 1st Functional Markup Language Workshop* at AAMAS 2008, Estoril, Portugal, May 12-13, 2008
- Interactive Demonstrations Chair for *the 13th International Conference on Artificial Intelligence in Education*, Marina del Rey, CA, July 2007
- Co-organizer of *The 2nd International Workshop on the Behavior Markup Language*, Paris, France, June 7-8, 2007
- Co-organizer of an *International Workshop on Multimodal Behavior Description*, Vienna, Austria, November 6-8, 2006
- Co-organizer of a *AAAI Workshop on Modular Construction of Human-Like Intelligence*, Pittsburgh, Pennsylvania, July 10, 2005.
- Co-organizer of an *International Workshop on Representations for Multimodal Generation*, Reykjavík, Iceland, April 23-25, 2005.
- Co-organizer of a *Workshop on Embodied conversational agents* at ACM AAMAS, 2002

Most Recent Referee Work

- **2011** MIT Press (*manuscript reviewer*), *Journal of Presence: Teleoperators and Virtual Environments Journal of Entertainment Computing, IJCAI, Socially Intelligent Surveillance and Monitoring, Artificial Intelligence in Interactive Digital Entertainment, IEEE SocialCom*
- **2010** *Journal of Cognitive Computation, Journal on Multimodal User Interfaces, Autonomous Agents and Multi-Agent Systems (Senior PC), Intelligent Virtual Agents (Senior PC), Artificial Intelligence in Interactive Digital Entertainment, AAAI SIGGRAPH, CHI, Intelligent User Interfaces, IceTAL, Socially Intelligent Surveillance and Monitoring*
- **2009** *Autonomous Agents and Multi-Agent Systems, SIGGRAPH, CHI, International Gesture Workshop, Intelligent User Interfaces*
- **2008** *Multimodal Signals: Cognitive and Algorithmic Issues (LNAI), Computer Animation and Virtual Worlds, Autonomous Agents and Multi-Agent Systems*
- **2007** *Virtual Reality, Speech Communication, Persistent Conversation (HICSS), Intelligent Virtual Agents, Pragmatics of Computer-Mediated Communication, Artificial Intelligence Journal, SIGGRAPH, NODALIDA*
- **2006** *Human Computer Interface International, Computer Supported Cooperative Work, Persistent Conversation (HICSS), Intelligent Virtual Agents, AAAI, International Journal of Human-Computer Studies, Autonomous Agents and Multi-Agent Systems, CHI*

Other Recent Service Work

- On the Board of Directors of MindGames, Reykjavik, Iceland
- On the Board of Directors of Alelo Inc., Los Angeles, CA
- On the Board of Advisors of Icelandic Institute for Intelligent Machines, Reykjavik, Iceland
- On the Board of Hugsýn, the Icelandic Cognitive Science Society
- On the Board of Advisors of CLARA, Reykjavík, Iceland
- External Referee, European Research Council, 2011
- Organizer, producer and designer of the "Eitt mál fyrir allan heiminn" museum exhibit, on the 100th anniversary of the first Icelandic textbook for esperanto, The National Library of Iceland, 2009

SERVICES (continued)

- Jury member on the Icelandic highschool innovation competition, NKG, 2009
- Contributor to the founding and running of the Icelandic Gaming Industry, 2009
- Co-organizer of the student game development competition at RU, 2009
- Co-hosted a meeting of the Ministry of Ideas grassroots innovation and social change organization, 2009
- In Björk's "Neisti"/"Nattura.info" organization team, responsible for a series of workshops, meetings and talks within the government and in the wider community regarding a "Green Future" for Iceland and alternatives to heavy industry, 2008
- Reviewer on the Icelandic highschool innovation competition, NKG, 2008
- Tutor in the Icelandic highschool innovation competition, NKG, 2007
- Member of a Ministry of Education / EU advisory group on *Improving IT use in education*, 2006
- Reviewer on grant proposals for *Rannís - The Icelandic Research Council*
- Founding member of *Mindmakers.org*, an online forum for open development of communicative humanoids and related AI middleware.

INVITED TALKS AND PANELS

- 6/2011 • **Gervigreindar vitverur (Artificially Intelligent Agents)** *Lecture Series of Lorna Lab: The Reykjavik Medialab*, Reykjavik
- 4/2011 • **Samskipti í sýndarrými (Communication in Cyberspace)** *The Humanities Anniversary Seminar Series*, University of Iceland
- 2/2011 • **Stafrænir holdgervingar og gervigreind (Avatars and AI)** *The Icelandic Theosophical Society*, Reykjavik
- 10/2010 • **Building a Social Engine: Automating Human Territoriality for Avatars and Agents** *Interactive Worlds Applied Research Group Lecture Series*, Coventry University, Coventry, UK
- 8/2010 • **Virtual Language and Culture Immersion** *Icelandic Online: Nordic Seminar on CALL and Corpora*, University of Iceland
- 12/2009 • **Framtíð gagnvirkar miðlunar** *Ný sköpun á skjánum*, jólaráðstefna 2009, Ský
- 4/2009 • **Automating Social Behavior**, Faculty of Science and Technology, University of Camerino, Camerino, Italy
- 1/2009 • **Interdisciplinary Innovation**, Pecha Kucha Night Reykjavik 1, The Ministry, Reykjavik
- 12/2008 • **Stafrænir holdgervingar í félagslegum sýndarheimi** *Fræðafundur*, Fræðafélagið Kvasir, Reykjavik
- 11/2008 • **Svona hagar fólk sér: Félagsleg hegðun fyrir leiki** *AI Festival*, School of Computer Science, Reykjavik University
- 9/2008 • **Notkun sýndarumhverfa í tungumálakennslu** *Evrópski tungumáladagurinn*, Stofnun Vigdísar Finnbogadóttur í erlendum málum og Samtök íslenskra tungumálakennara
- 4/2008 • **Representing Function and Behavior in Multimodal Communication** *International School on Multimodal Signals: Cognitive and Algorithmic Issues*, EU COST Action 2102
- 4/2008 • **Representing Function and Behavior in Multimodal Communication** *Árleg ráðstefna um tungutækni*, TungutækniSETUR
- 11/2007 • **Þróun og notkun alvarlegra leikja við kennslu** *IT in Education*, The IT and Education Society
- 7/2007 • **Fræðakvöld: Stafrænir holdgervingar í félagslegum sýndarheimi** *Res Extensa Lecture Series*, Res Extensa: The Mind, Health and Behavior Society
- 3/2007 • **Garage AI: The Panda 3D Engine** *Public Garage AI Series*, Reykjavik University
- 3/2007 • **Félagsleg tölvutækni sem kennir mál og sið** *Breakfast Lecture Series*, Association of Women in IT
- 3/2007 • **Gervigreind fyrir grafískar sögupersónur** *Tækni og Vit 2007*, The Industry Association with the Ministry of Industry and Commerce
- 11/2006 • **Lifandi mál og menning: Notkun tölvuleiks við tungumálakennslu.**
 - *Tungumál og atvinnulífið: Margmiðlun*, Stofnun Vigdísar Finnbogadóttur í erlendum málum
- 10/2006 • **Using games to scaffold learning**
 - *Trends in the use of learning objects*, NordFlex Virtual Conference
- 9/2006 • **Notkun félagslegra vitvera í tungumálakennslu**
 - *Tæknidagar 2006*, Verkfræðingafélag Íslands og Tæknifræðingafélag Íslands
- 2/2006 • **Role of gesture in game-based language and culture training**
 - *American Association for the Advancement of Science Annual Meeting*, St. Louis, MO

INVITED TALKS AND PANELS (continued)

- 10/2005 • **Using Games for Education and Training**
 - *The Summit on Educational Games*, Federation of American Scientists, Washington, DC
- 10/2004 • **Non Combat Military Game Efforts**
 - *Serious Games Summit D.C.*, CMP Media, Washington, DC
- 2003 • **Personal Conversational Agents: Communicative agency through automated graphical avatars**
 - Information Sciences Institute, U. of Southern California, Marina del Rey, CA
 - Computer and Information Science Colloquia, U. of Pennsylvania, Philadelphia, PA
 - College of Computing Colloquia, Georgia Institute of Technology, Atlanta, GA
 - IBM Watson Research Center, Cambridge, MA
- 2001 • **Interdisciplinary Innovation**
 - Annual Symposium of the Engineer Society and University of Iceland, Reykjavik, Iceland
- 2000 • **Using 3D Graphics in Online Communities: Opportunities and Challenges**
 - *MediaMOO Annual Symposia*, Georgia Institute of Technology, in Cyberspace
- 2000 • **I, Avatar**
 - *Internet Research 1.0 Conference*, Lawrence, KA
- 1998 • **Embodied Conversation**
 - *Avatars '98 Conference*, Contact Consortium, in Cyberspace
- 1997 • **Life-like Avatars**
 - *Avatars '97 Conference*, Contact Consortium, San Francisco, CA
- 1997 • **Avatars: State-of-the-art**
 - *User Interface '97*, Cambridge, MA
- 1993 • **Digital Magic: Virtual Reality**
 - The Living Arts Museum, Reykjavik, Iceland

PUBLIC APPEARANCES

- 3/2011 • *The Reykjavík Grapevine*: Telekinesis For Dummies (Mentioned in article about MindGames)
- 11/2010 • *RUV Radio Channel 1*: Interview on "2+2=5 og Eftirmyndir raunveruleikans" about Cyberspace
- 1/1010 • *RUV Radio Channel 2*: Interview on "Morgunvaktin" about RU moving day
- 1/2010 • *RUV Radio Channel 1*: Interview on "Samfélagið í nærmynd" about RU new campus
- 10/2009 • *Fréttablaðið*: Esperanto opnar dyr (Interview on exhibit opening at the National Library)
- 11/2008 • *HáVarp Opna Háskólans*: Interview called "Hvernig eru verur í sýndarumhverfi gerðar mannlegri?"
- 11/2008 • *Fréttablaðið*: "Hátækni á Íslandi: Sproti sem gæti orðið að styrkri stoð", niðurstöður hátæknihóps Neista
- 10/2008 • *RUV Radio Channel 1*: Björk's Neisti Workgroup Summary on "Í heyranda hljóði"
- 09/2008 • *RUV Radio Channel 1*: Interview on "Víðsjá"
- 09/2008 • *Fréttablaðið*: Verðlaunaðir fyrir sýndarmenni (regarding student project)
- 05/2007 • *Entrepreneur Magazine*: Take the Lead (As co-founder of Alelo Inc.)
- 05/2007 • *Fréttablaðið*: Tölvuleikir stuðla að framþróun vísinda (Interview/Profile)
- 03/2007 • *RUV Radio Channel 1*: Interview on "Samfélagið í nærmynd"
- 02/2007 • *Morgunblaðið*: Tilfinningatölvuverur (Interview)
- 09/2006 • *Morgunblaðið (front page)*: Lífandi mál og menning
- 08/2006 • *RUV Radio Channel 1*: Interview on "Víðsjá"
- 04/2006 • *Los Angeles Business Journal*: War of words: video game teaches combat troops to communicate
- 03/2006 • *DV*: Dr. Hannes Vilhjálmsson hjá háskóla Suður-Kaliforníu Kennir Könum að umgangast Íraka
- 02/2006 • *BBC News*: US troops taught Iraqi gestures
- 02/2006 • *National Geographic News*: Video Game Helps U.S. Soldiers Learn Arab Language, Culture
- 01/2006 • *Fréttablaðið*: Vopnin víkja fyrir vináttu (Interview)
- 04/2005 • *Vírus*: Vitrænar verur (Interview)
- 02/2005 • *Morgunblaðið (front page)*: Þróar tölvuleik fyrir herinn
- 02/2005 • *COX News Service*: Researchers tame violent video game to keep troops safe in Iraq (Appears in: Infowars, The Pulse Journal, Rocky Mount Telegram,...)
- 01/2005 • *Computer Gaming World*: Uncle Sam Gets Serious - Games are graduating and military simulations are just the start

PUBLIC APPEARANCES (continued)

- 12/2004 • *Giornale Tecnologico*: Videogiochi frontiera nel training (Italian)
- 12/2004 • *Training and Simulation Journal Online*: Deadly Serious
- 11/2004 • *Virgilio*: Videogame: non solo per divertirsi (Italian)
- 11/2004 • *Canalgame*: Videojuegos para entrenar a profesionales (Spanish)
- 11/2004 • *Reuters*: Video games teach more than hand-eye coordination (Appears in: The New Zealand Herald, Yahoo! News, USATODAY.COM, Video Game, Entertainment Software Association, LivingWithStyle.com, Entertainment Industry, AndySullivan.com...)
- 11/2004 • *GameDev.Net*: Serious Games Summit 2004 Report
- 09/2004 • *IEEE Intelligent Systems*: Gaming Technology Helps Troops Learn Language
- 08/2004 • *Dagblaðið Vísir*: Íslendingur í New York Times (Icelandic)
- 07/2004 • *Asharq Al-Awsat* (Arabic)
- 07/2004 • *The New York Times*: Virtual Camp Trains Soldiers in Arabic, and More (Reprinted in: The Language Feed, Free Republic)
- 06/2004 • *USC Engineer*: Mission to Arabic: It's Not Your Father's Language Lab (Also: USC Viterbi News Online)
- to 2004 • Various appearances, most notably television appearances on PBS Scientific American Frontiers, ABC News and Stöð 2

PERSONAL INFORMATION

- *Born*: September 3rd, 1972
- *Citizenship*: Icelandic