

Stavros Vassos — Curriculum Vitae

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I am passionate about developing Artificial Intelligence (AI) modules that can be embedded in physical products or applications to add flexibility and autonomy. My current work focuses on a variety of scenarios in cognitive robotics, video games, and interactive smart spaces.

EDUCATION

- 2009 **Ph.D., University of Toronto, Computer Science, Canada.**
A Reasoning Module for Long-Lived Cognitive Agents (Advisor: Hector J. Levesque)
- 2004 **M.Sc., University of Toronto, Computer Science, Canada.**
A Feasible Approach to Disjunctive Knowledge in Situation Calculus (Advisor: Hector J. Levesque)
- 2002 **Diploma (B.Sc. & M.Sc.), National Technical University of Athens,**
Electrical and Computer Engineering, Greece.

PROFESSIONAL POSITIONS

- 2012-2015 **Temporary Assistant professor, Sapienza University of Rome, Italy.**
Department of Computer, Control, and Management Engineering.
- 2014-present **Chief Technology Officer, liateR – Retail reversed, Greece.**
Interactive experiences with natural user interfaces and augmented reality.
- 2010-2012 **Research associate, National Kapodistrian University of Athens, Greece.**
Department of Informatics and Telecommunications.
- 2002-2009 **Research assistant, University of Toronto, Canada.**
Department of Computer Science.
- 2000 **Summer Intern, Swiss National Supercomputing Center/ETH, Lugano, Switzerland.**

GRANTS & PROJECTS

- 2014-present **VOICE: A Virtual Open Incubation Ecosystem (European Commission CIP-ICT-PSP-2013-7).**
Principal investigator for the Sapienza University of Rome team.

AWARDS

- 2012 **Best Student Paper** award at the "7th Hellenic Conference on Artificial Intelligence (SETN)" for the paper "iThink: A Library for Classical Planning in Video-games" (authors: V. Anastassiou, P. Diamantopoulos, S. Vassos, M. Koubarakis).
- 2008 **AAAI Outstanding Paper Honourable Mention** award by the Association for the Advancement of Artificial Intelligence (AAAI) for the AAAI-08 paper "On the Progression of Situation Calculus Basic Action Theories: Resolving a 10-year-old Conjecture" (authors: S. Vassos, H. J. Levesque).

COMMUNITIES

- AAAI Member of the Association for the Advancement of Artificial Intelligence (AAAI).
- EETN Member of the Hellenic Artificial Intelligence Society (EETN).
- TEE Member of the Technical Chamber of Greece (TEE).
- HGDA Founding member of the Hellenic Game Developers Association (HGDA).

TEACHING

- 2015 Professor, Sapienza University of Rome, Planning, Design and Architectural and Environmental Technology, Italy. MSc Course in Design and Visual Communications: Interactive Multimedia Design.
- 2014 Professor, Sapienza University of Rome, Planning, Design and Architectural and Environmental Technology, Italy. MSc Course in Product Design: Novel Air Experiences, Product design for future scenarios in air treatment.
- 2013 Professor, Sapienza University of Rome, Planning, Design and Architectural and Environmental Technology, Italy. MSc Course in Product Design: Interactive Products and Behavior Through Modern Technologies.
- 2013 Professor, Sapienza University of Rome, Department of Computer, Control, and Management Engineering, Italy. PhD course in Artificial Intelligence: Interactive Objects in Gaming Applications: Basic Principles and Practical Scenarios in the Unity Platform.
- 2012 Visiting lecturer, Sapienza University of Rome, Department of Computer, Control, and Management Engineering, Italy. PhD course: Introduction to STRIPS Planning and Applications in Video-games.
- 2012 Guest lecturer, National and Kapodistrian University of Athens, Department of Informatics and Telecommunications. Undergraduate course: Topics in Information Systems and Applications of Computer Science: Artificial Intelligence II.
- 2011 Guest lecturer, National and Kapodistrian University of Athens, Department of Informatics and Telecommunications. Undergraduate course: Topics in Information Systems and Applications of Computer Science: Artificial Intelligence II.
- 2002-2007 Teaching assistant, University of Toronto, Computer Science Department.
Undergraduate courses SCI199S: Computers and thought", CSC236S: "Introduction to the theory of computation, CSC330F: Logical specifications, CSC108F: Introduction to Computer Programming, CSC236S: Introduction to the theory of computation, CSC228F: File structures and data management.

SUPERVISION OF STUDENTS

- 2013-present PhD, Davide Aversa, Advancing the Action-Based Cognitive Capabilities of Characters in Videogames.
- 2014-present PhD, Chris Ewin, Optimizing Reasoning Over Large Action Histories (University of Melbourne, Australia, External supervisor).
- 2014 BSc, Alessio Cecconi, A Study on Story Management Tools in Videogames.
- 2014 BSc, Francesco Sapio, An User-experience Study on Belief-Driven Pathfinding.
- 2013 MSc, Stefano Cianciulli, Non-Player Character Behavior Composition in Unity Game Engine.
- 2013 MSc, Manuela Renzi, A Gesture-based Game to Help Children Recognize Musical Notes.
- 2013 BSc, Daniele Riccardelli, Videogame Dialogue Systems through AI Behavior Composition
- 2013 MSc, Davide Aversa, An Action-Driven AI Architecture for Non-Player Characters in Video-Games.
- 2012 MSc, Francesco Ceconata, Eat 'n Fit: A Gamified Mobile Application for Healthier Eating.
- 2012 BSc, Martha Kochylaki, Transition System Heuristics for Mini-Tichu Card Game.
- 2012 BSc, Giannis Vlachopoulos, Smart Workers in Real-time Strategy Games.

SERVICE TO THE ACADEMIC COMMUNITY

- 2015 PC member: 24th International Joint Conference on Artificial Intelligence, IJCAI.
- 2015 PC member: 29th AAAI Conference on Artificial Intelligence, AAAI.
- 2014 Chair, organizer: 1st Knowledge Representation Rome Symposium, KRRR.
- 2014 PC member: 14th International Conf. on Principles of Knowledge Representation and Reasoning, KR.
- 2014 PC member: 9th International Conference on the Foundations of Digital Games, FDG.
- 2014 PC member: 10th International Conference on Autonomic and Autonomous Systems, ICAS.
- 2014 PC member: 1st ACM International Conf. on Mobile Software Engineering and Systems, MobileSoft.
- 2014 PC member: 8th Hellenic Conference on Artificial Intelligence, SETN.
- 2014 Special session co-organizer at SETN: Game Artificial Intelligence.
- 2014 Special session co-organizer at SETN: Action Languages.
- 2013 Co-chair, co-organizer: 3rd International Planning in Games Workshop at ICAPS.
- 2013 PC member: 27th AAAI Conference on Artificial Intelligence, AAAI.
- 2013 PC member: 12th International Conference on Autonomous Agents and Multiagent Systems, AAMAS.
- 2013 Reviewer: Artificial Intelligence Journal, AIJ.
- 2013 Reviewer: IEEE Transactions on Computational Intelligence and AI in Games.
- 2012 Co-chair, co-organizer: 8th International Workshop on Cognitive Robotics at AAAI.
- 2012 PC member: 13th International Conf. on Principles of Knowledge Representation and Reasoning, KR.
- 2011 PC member: 22nd International Joint Conference on Artificial Intelligence, IJCAI.

REFEREED PUBLICATIONS IN KNOWLEDGE REPRESENTATION (2012-2015)

- STUD-2015 Studia Logica Journal.
Progression and Verification of Situation Calculus Agents with Bounded Beliefs.
Giuseppe De Giacomo, Yves Lespérance, Fabio Patrizi, Stavros Vassos.
- PRIMA-2015 International Conference on Principles and Practice of Multi-Agent Systems.
Optimizing Long-running Action Histories in the Situation Calculus through Search.
Christopher Ewin, Adrian Pearce, Stavros Vassos.
- AAMAS-2014 International Conference on Autonomous Agents and Multiagent Systems.
Progression and verification of situation calculus agents with bounded beliefs.
Giuseppe De Giacomo, Yves Lespérance, Fabio Patrizi, Stavros Vassos.
- ECAI-2014 European Conference on Artificial Intelligence.
LTL Verification of Online Executions with Sensing in Bounded Situation Calculus.
Giuseppe De Giacomo, Yves Lespérance, Fabio Patrizi, Stavros Vassos.
- JELIA-2014 European Conference on Logics in Artificial Intelligence
Progression and verification of situation calculus agents with bounded beliefs.
Fabio Patrizi, Stavros Vassos.
- KR-2014 International Conference on Principles of Knowledge Representation and Reasoning.
Transforming Situation Calculus Action Theories for Optimized Reasoning.
Christopher J. Ewin, Adrian R. Pearce, Stavros Vassos.
- KR-2014 International Conference on Principles of Knowledge Representation and Reasoning.
Action Theories over Generalized Databases with Equality Constraints (Extended Abstract).
Fabio Patrizi, Stavros Vassos.
- IJCAI-2013 International Joint Conference on Artificial Intelligence.
A Classification of First-Order Progressable Action Theories in Situation Calculus.
Stavros Vassos, Fabio Patrizi.
- AIJ-2012 Artificial Intelligence Journal.
How to progress a database III.
Stavros Vassos, Hector Levesque.

REFEREED PUBLICATIONS IN INTERACTIVE SMART SPACES (2012-2015)

- TEI-2015 International Conference on Tangible, Embedded and Embodied Interaction.
Touching Notes: A Gesture-Based Game for Teaching Music to Children.
Manuela Renzi, Stavros Vassos, Tiziana Catarzi, Stephen Kimani.
- SOCA-2015 IEEE International Conference on Service Oriented Computing & Applications.
Service Composition with PDDL Representations and Visualization over Videogame Engines.
Giuseppe De Giacomo, Valsamis Ntouskos, Fabio Patrizi, Stavros Vassos, Davide Aversa.
- IROS-2015 Workshop on Task Planning for Intelligent Robots in Service and Manufacturing at IROS.
Controlling Logistics Robots with the Action-based Language YAGI.
A. Ferrein, C.Maier, C. Mühlbacher, T. Niemueller, G. Steinbauer, S.Vassos.
- AAMAS-2013 International Conference on Autonomous Agents and Multiagent Systems.
Benchmarking smart spaces through autonomous virtual agents.
Mario Caruso, Francesco Leotta, Massimo Mecella, Stavros Vassos.
- UbiComp-2013 Workshop on Recent Advances in Behavior Prediction and Pro-active Pervasive Computing.
Synthesizing daily life logs through gaming and simulation.
Mario Caruso, Çagri Ilban, Francesco Leotta, Massimo Mecella, Stavros Vassos.
- IROS-2013 IEEE/RSJ International Conference on Intelligent Robots and Systems.
Planning with a task modeling framework in manufacturing robotics.
Jacob Huckaby, Stavros Vassos, Henrik I. Christensen.
- CogRob-2012 International Workshop on Cognitive Robotics at AAAI Conference.
Action-Based Imperative Programming with YAGI.
Alexander Ferrein, Gerald Steinbauer, Stavros Vassos.

REFEREED PUBLICATIONS IN AI FOR VIDEO GAMES (2012-2015)

- AIIDE-2015 AAAI Conference on Artificial Intelligence and Interactive Digital Entertainment.
Path planning with Inventory-driven Jump-Point-Search.
Davide Aversa, Sebastian Sardina, Stavros Vassos.
- AIIDE-2014 AAAI Conference on Artificial Intelligence and Interactive Digital Entertainment.
Belief-Driven Pathfinding through Personalized Map Abstraction.
Davide Aversa, Stavros Vassos.
- CGW-2014 Computer Games Workshop at ECAI 2014.
Coordinating Dialogue Systems and Stories through Behavior Composition.
Stefano Cianciulli, Daniele Riccardelli, Stavros Vassos.
- AI4IE-2014 AI for Interactive Environments Workshop at ECAI conference.
Agent Behavior Composition in Virtual Environments Realized Using Game Engines.
Giuseppe De Giacomo, Valsamis Ntouskos, Fabio Patrizi, Stavros Vassos, Davide Aversa.
- SETN-2014 Hellenic Conference on Artificial Intelligence.
Flexible Behavior for Worker Units in Real-Time Strategy Games Using STRIPS Planning.
Ioannis Vlachopoulos, Stavros Vassos, Manolis Koubarakis.
- SETN-2014 Hellenic Conference on Artificial Intelligence.
Story Generation in PDDL Using Character Moods: A Case Study on Iliad's First Book.
Andrea Marrella, Stavros Vassos.
- FDG-2013 International Conference on Foundations of Digital Games.
Combining deliberation and reactive behavior for AI players in the Mini-Tichu card-game.
Martha Vlachou-Konchylaki, Stavros Vassos.
- PG-2013 Planning in Games Workshop at ICAPS conference.
Planning for Interactive Storytelling Processes.
Stefano Cianciulli, Stavros Vassos.