

Georgios Pierris

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Education

PhD in Robot Learning for Complex Motor Skills

Cognitive Robotics Research Centre

University of South Wales

Advisor: Torbjørn S. Dahl, Plymouth University

Summary: <http://www.pierris.gr/me/index.php/phd-research>

June 2009 - *Submitted* June 2014

Wales, United Kingdom

Diploma in Electronic and Computer Engineering (5 year degree)

Technical University of Crete

Thesis title: Soccer Skills for Humanoid Robots

Advisor: Michail G. Lagoudakis

Summary: <http://goo.gl/smyvNe>

April 2009

Chania, Greece

Research Interests

Human-Robot Interaction

Machine Learning

Space Telerobotics

Motion Planning

Neural Networks

Cognitive Systems

Computational Investing

Motion Capture

Simulations

Research Experience

International Research-Centered Summer School 2014, NCSR Demokritos

July 2014

Summer school in Cognitive Systems and Interactive Robotics, and Data and Content Analysis.

Worked in parallel in two projects: *a) Enhanced Assisted Training for Teleoperation Applications* and *b) Smart Buildings and the Human-Machine Cloud*.

Research Visit at CRNS, Plymouth University

June 2013 - September 2013

Summer research visit at the Centre for Robotics and Neural Systems, Plymouth University, to work on tactile gesture learning.

Open Source Machine Learning for Computational Investing

November 2012 - present

Author of "Protogoras", an open source market simulator to test traditional machine learning algorithms for quantitative trading and forecasting.

Protogoras also features an interface with Metatrader 5.

<https://bitbucket.org/gpierris/protogoras>

<https://bitbucket.org/gpierris/protogoras-expert-advisor>

Early Stage Development Funded (ESDF) project Responsible for the Machine Learning work package to develop applications for file pattern recognition	February 2011 - March 2011
Research Coordinator in ICT, Engineers Without Borders, UK Engineers Without Borders is a non-profit organization aiming to alleviate poverty through engineering projects	December 2010 - June 2011
EU-COGNITION member European Network of researchers in Cognitive Science	March 2010 - present
Research Associate in RobotDoc project Marie-Curie Funded Project	March 2010 - August 2013
Motion Capture Technologies Retargeting methods for real time human to robot teleoperation	December 2009 - September 2010
Noxious RoboCup Team A collaboration between Oxford University and University of Wales, Newport	November 2010 - August 2011
RoboCup Team "Kouretes", Technical University of Crete Member of the RoboCup team working in motor skills and localization	November 2006 - May 2009

Publications

1. *Submitted: Georgios Pierris and Torbjørn S. Dahl, "Emerging Complex Swimming Behavior on Robotic Salamander through Demonstration", IEEE International Conference on Robotics and Automation (ICRA), 2015*
2. *Submitted: Nikolaos Mavridis, Georgios Pierris, Paolo Gallina, Zacharoula Papamitsiou, Alexandros Astaras, and Nikolaos Moustakas, "Subjective Difficulty and Indicators of Performance of Joystick-based Robot Arm Teleoperation with Auditory Feedback", IEEE International Conference on Robotics and Automation (ICRA), 2015*
3. *Submitted: Nikolaos Mavridis, Georgios Pierris, Paolo Gallina, Zacharoula Papamitsiou, and Umair Saad, "On the subjective difficulty of Joystick-based robot arm teleoperation with auditory feedback", 8th IEEE GCC Conference and Exhibition, 2015*
4. *Submitted: Nikolaos Mavridis, Georgios Pierris, Chiraz Benabdelkader, Aleksandar Krstikj, and Christos Karaiskos, "Smart Buildings and the Human-Machine Cloud", 8th IEEE GCC Conference and Exhibition (GCC), 2015*
5. *Georgios Pierris and Torbjørn S. Dahl, "A Developmental Perspective on Humanoid Skill Learning using a Hierarchical SOM-based Encoding", IEEE World Congress on Computational Intelligence - International Joint Conference on Neural Networks, 2014*
6. *Georgios Pierris and Torbjørn S. Dahl, "Humanoid Tactile Gestures Production using a Hierarchical SOM-based Encoding", IEEE Transactions on Autonomous Mental Development, 2014 Impact factor: 2.17*
7. *Georgios Pierris and Stilianos Vidalis, "Forensically Classifying Files Using HSOM Algorithms", Proceedings of the 3rd International Conference on Emerging Intelligent Data and Web Technologies, Bucharest, Romania, September 19-21, 2012.*

8. **Georgios Pierris** and Torbjørn S. Dahl, "Compressed Sparse Code Hierarchical SOM on Learning and Reproducing Gestures in Humanoid Robots", *Proceedings of the IEEE International Symposium in Robot and Human Interactive Communication (RO-MAN'10), Viareggio, Italy, September 12-15, 2010.*
9. **Georgios Pierris** and Michail G. Lagoudakis, "An Interactive Tool for Designing Complex Robot Motion Patterns", *Proceedings of 2009 IEEE International Conference on Robotics and Automation (ICRA 2009), May 12 - 17, 2009, Kobe, Japan.*
10. Michail G. Lagoudakis, **Georgios Pierris et al.**, "Kouretes+AUEBo 2008, Aibo Standard Platform League Team Description Paper", *Proceedings of the 12th RoboCup International Symposium, July 2008, Suzhou, China.*
11. Michail G. Lagoudakis, **Georgios Pierris et al.**, "Kouretes 2008, Nao Standard Platform League Team Description Paper", *Proceedings of the 12th RoboCup International Symposium, July 2008, Suzhou, China.*

Technical Reports

1. Michail G. Lagoudakis, **Georgios Pierris et al.**, Kouretes 2008: Nao Team Report, November 2008.

Invited Talks

1. Tactile Feedback for Social and Industrial Robots, invited by the British Computing Society, February 2011
2. An Interactive Tool for Designing Complex Robot Motion Patterns, Forum Mobile Roboter And Autonome Systeme, Hannover Messe, April 2009

Participations

Competitions

1. 2nd Semagrow Hackathon 2014, NCSR, Demokritos, Athens, Greece, July 3-6, 2014
2. RoboCup 2011, Istanbul, Turkey, July 5-11, 2011
3. GermanOpen 2011, Magdeburg, Germany, March 31-April 3, 2011
4. RoboCup 2008, Suzhou, China, July 14-20, 2008
5. RomeCup 2008, Rome, Italy, May 15, 2008
6. GermanOpen 2007, Hanover, Germany, April 16-21, 2007

Expositions / Fairs

1. The National Eisteddfod Event, Ebbw Vale, Wales, UK, July 31 - August 7th, 2010
2. Festival della Creativita, Florence, Italy, October 24-26, 2008
3. Athens Digital Week, Athens, Greece, October 14-16, 2008
4. Technotown, Villa Torlonia, Rome, Italy, May 10-11, 2008
5. Hi-Tech Innovators Partenariat, Thessaloniki, Greece, October 5-6, 2007

Work Experience

Self-Employed Software Engineering Consultant

C++, Python, Matlab, Machine Learning
(Part-Time during studies)

February 2011 - January 2013
Cardiff, UK

Private Lessons Tutor

Math Lessons, High School Students
(Part-Time during studies)

September 2006 - June 2008
Chania, Greece

Various Roles

First Data Corporation

Summer Internships 2004-2006
Athens, Greece

Honors and Awards

- 2014 2nd SemaGrow Hackathon: Runner up with our *Food & Safety Monitor* web application
- 2014 Travel grant to participate at the *International Research-Centered Summer School in Cognitive Systems and Interactive Robotics, Data and Content Analysis*, at NCSR Demokritos
- 2014 IRSS: Co-advisor of international teams led by Dr. Nikolaos Mavridis in *Teleoperation* and *Smart Buildings* projects
- 2013 EUCog Full Sponsorship for Research Visit in CRNS, Plymouth University
- 2011 Welsh Government Grant to study and develop neural networks for partial file recognition
- 2011 Travel Award to participate to the *Spring School on Interdisciplinary Methods for Cognitive Robotics*
- 2011 2nd place in the world for Noxious-Kouretes, Standard Platform League Open Challenge, RoboCup 2011
- 2010 Member of the European Network of researchers in Cognitive Science
- 2010 Travel Award to participate to the RobotDoc training workshop
- 2010 Member of the Hellenic Chamber of Electronic and Electrical Engineers
- 2009 Three year PhD-Studentship in the FP7 ROBOSKIN project
- 2008 3rd place in the world for Kouretes, Standard Platform League, RoboCup 2008
- 2007 3rd place out of 16 agents in Othello/Reversi university competition for the course "Artificial Intelligence"
- 2003 Graduated 1st in High School and awarded a scholarship from Eurobank Group, Greece

Technical Expertise

Programming Languages:

High Expertise: C, C++, Python, Matlab, C#, L^AT_EX

Medium Expertise: Java, Ruby, MQL5, Urbi, HTML, CSS, SQL, VHDL, Assembly, flex, bison

Operating Systems: Linux, Windows

Various Applications:

ROS, Git version control, Webots, MSOffice, OpenOffice, MySQL, Qt, FLTK, Opencart, Google App Engine

Miscellaneous: Network programming, troubleshooting and debugging skills

Language Skills

Greek: Mother tongue

English: Fluent

German: Basic

Extracurricular Activities

Member of MENSA, The High IQ Society

Licensed lifeguard since August 2005

Joined the Research and Rescue Volunteer Unit 'Dias' as Lifeguard

'Bouzouki' - Greek traditional instrument

Fishing, Skiing, Basketball, Music, Traveling