

Davide Calvaresi

International Ph.D. Fellow

- Curriculum Vitae, October 2017 -

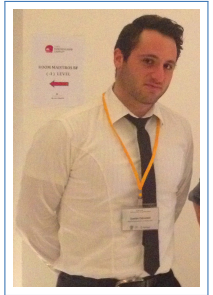
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Education

- Since Nov 2014 **International Ph.D. Fellow**, in *Emerging Digital Technologies*, Scuola Superiore Sant'Anna, Pisa, Italy,
Research Areas: Real-Time Multi-Agent Systems, Assistive and Telerehabilitation Technologies.
Supervisor: Prof. Giorgio. Buttazzo.
- 2011 – 2014 **M.Sc.** in Computer and Automation Engineering,
Università Politecnica delle Marche, Ancona, Italy, **Italian Mark 105/110**.
Thesis: *Requirements Engineering on a Wide Domain: i* Modeling of the Ambient Assisted Living*,
Prof. A. F. Dragoni, Prof. Eric Yu & Prof. Arnon Sturm - Computer Science, University of Toronto, Canada.
- 2005 – 2011 **B.Sc.** in Computer and Automation Engineering,
Università Politecnica delle Marche, Ancona, Italy, **Italian Mark 94/110**.
Thesis: *Study of an UPnP standard extension for the semantic description of heterogeneous devices in home automation environment*,
Prof. Francesco Piazza & Dr. Michele Nucci, Università Politecnica delle Marche, Ancona, Italy

Work

- Since Apr-'17 **Research Assistant**, *University of Applied Science Western Switzerland (HES-SO)*, AISLAB, Sierre, Switzerland.
- Since 2015 **Co Founder**, *Wriggle Solutions s.r.l.s.*, Innovative Startup, Pisa, Italy.
- Since 2014 **Co Founder & Scientific Committee Member**, *"Polo Tecnico - Professionale per Domotica Assistenziale"*, Italy.
- 2013 **Freelance Engineer**, *Design and Development of a web based product*, CarbonMill s.n.c., Jesi, Italy.
- 2012 **Freelance Engineer**, *Personalization of a Customer Relationship Management*, STEP s.a.s, Jesi, Italy.

Awards - Grants - Patents

- Awards: **Best-Paper Award**, Venue: *X Workshop on Agents Applied in Health Care @ AAMAS*, May 2017.
GSVC2016, SMARTTyre Winner of "Best social and environmental ICT Idea Award".
EGO Ericsson 2015, SMARTTyre Winner of "Change makers for a connected society".
START CUP Toscana 2015, SMARTTyre Winner of "Best business and high-tech ideas".
- Grants: **COST Action**: AAPELE (IC1303), Oct - Dec 2016.
University of Gdańsk: 19th European Agent Systems Summer School, Aug 2017.
- Patents: **SMARTTyre**, Patent n: 102015000079497.

Abroad Experiences

- August 2017 **European Agent Systems Summer School**, *University of Gdańsk*, Gdańsk, Poland.
Focused on deepening the knowledge on several branches of autonomous systems (e.g. M.A. Reinforcement Learning, Learning Dynamics, Security, Game Theory, Probabilistic Model Checking, Dynamic epistemic logic, Predicting Human Decision-Making).
- Oct - Mar '17 **Internship**, *University of Applied Science Western Switzerland, eHealth Division*, Sierre, Switzerland.
Development of a real-time negotiation protocol for multi-agent systems applied to wearable devices for telerehabilitation.
- July 2015 **Summer School on Health and Wellbeing**, *EIT Digital, Philips Res. Lab & Holst Center*, Eindhoven, Netherlands.
Focused on assessment, measurement and promotion of mental / physical fitness and well-being. Worked with an international team to develop HWB business models, innovation routes and revenue models.
- June 2015 **Summer School on Cyber Physical Systems**, *EIT ICT Lab & KTH*, Stockholm, Sweden.
Focused on performing in industrial and academia environment CPS applications. Moreover, business coaching was provided throughout the summer school.
- 2013-2014 **Internship**, *University of Toronto*, Toronto, Canada, *Master Thesis*.
Modelization of Ambient Assisted Living Domain using a Goal Oriented Requirement Engineering & i* modeling lang

Academic Activities

Program committee	A2HC 2017 , <i>X Workshop on Agents Applied in Health Care, A2HC 2017</i> .
Reviewer	Journals , <i>ACM Transactions on Cyber-Physical Systems, IEEE Transactions on Industrial Informatics. Conferences, ICAART 2017, EPIA 2017, A2HC 2017, SAC 2016, RTSS-CPS 2016</i> .
Lecturer	Leap Motion and Real Time , <i>TeCIP - Scuola Superiore Sant'Anna, Italy</i> , Falls 2014/2015.
Seminars	Distributed Data Service (DDS) , <i>TeCIP, Scuola Superiore Sant'Anna, Italy</i> , Fall 2015. DDS middleware and its applications in the avionics and Assistive fields with emphasis on real-time constraints. Introduction to Agent Oriented Paradigm , <i>TeCIP, Scuola Superiore Sant'Anna, Italy</i> , Fall 2014. Agents concept, Multi Agent Paradigm and Software Engineering. Requirement Engineering , <i>Univpm, Ancona, Italy</i> , Fall 2014. Goal Oriented Requirement Engineering, Multi Agent Software Engineering and Ambient Assisted Living Modelization. Virtual Caregiver, a novel approach , <i>Istituto d'Istruzione Superiore E. Fermi, Italy</i> , Fall 2014. Overview on assistive technologies with emphasis on smart environments for elderly people.
Research projects	Silence MultiMedia , <i>Team member</i> , <i>TeCIP - Scuola Superiore Sant'Anna, Italy</i> , Winter 2015. Distributed embedded system for real time audio streaming with embedded and web management interfaces.
Supervisor	2 MSc and 3 BSc Thesis , <i>at, UNIVPM, Ancona, Italy</i> .

Social Engagements

2014 – 2016	PhD Student Representative in Academic Council	<i>Scuola Superiore Sant'Anna, Pisa</i>
Since 2003	Blood Donor - AVIS, Volunteer - First Aid	
June 2016	Volunteer Staff at ADA-Europe 2016 Conf: 21st Int. Conf. on Reliable Software Tech.	<i>Pisa</i>
Apr 2016	Volunteer Staff at SAC 2016 Conf: 31st ACM Symposium on Applied Computing	<i>Pisa</i>

Miscellaneous

2012	[Project] Web Application - CVRP , <i>D.I.I., Univpm, Italy, Teamwork</i> . Dynamic web Capacity Vehicle Routing Problem solver. Expertise: Operational Research, AMPL, Reg Exp.
2012	[Project] Fault Detection in a wind farm , <i>D.I.I., Univpm, Italy, Teamwork on:</i> . Fault Predictions and Diagnosis in wind turbines. Expertise: Matlab, Simulink, Neural Network.
2011	[Project] Hive - Enterprise application integration , <i>D.I.I., Univpm, Italy, Team Leader</i> . Integration of (Kettle, SugarCRM, AlfrescoECM, OpenBravoERP) at web service level and database level.
2001 – 2014	Fine dining, catering and banquet waiter , <i>several restaurants</i> , Central Italy. Supervisor, waiter and barman. Several tasks with different responsibility levels.

Skills

Technical	Web languages, C, C++, Java, Software Engineering, i* Modeling, L ^A T _E X, Office, Computer Graphics
Soft	Problem Solving, Team-Leading, Team-working, Software Engineering, Scientific Writing, Business Planning

Membership, Certifications & Licenses

Since 2015	IEEE Graduate Student Member	<i>Institute of Electrical and Electronics Engineers (IEEE)</i>
2015	High Tech Business Venturing, Inside ICT & Robotic Driving License - B, A3	<i>Scuola Superiore Sant'Anna & Tuscan Academy Autovehicle, Motorbike</i>

Languages

Italian	Native
English	Professional working proficiency - C1
French	Basic communication skills

Hobbies

- Chess, Archery and Aeromodelism	- Knowledge Sharing, Science and Technology
- Team- and Solo-sports, Gym and Hiking	- Cooking, Music, Movies and Operas

References

Person	Role	Institute	contact
o Prof. Giorgio Buttazzo	PhD Supervisor	Scuola Sup. Sant'Aanna	g.buttazzo@sssup.it
o Prof. Arnon Sturm	MSc Advisor	University of Toronto	sturm@bgu.ac.il
o Dr. Daniel Cesarini	PhD Tutor	Scuola Sup. Sant'Aanna	d.cesarini@sssup.it

Publications

All the papers indicated by (✓) have been personally presented

- 2018 **Calvaresi D.**, Appoggetti K., Lustrissimini L., Marinoni M., Sernani P., Dragoni A.F., & Schumacher M. "Multi-Agent Systems' Negotiation Protocols for Cyber-Physical Systems: Results from a Systematic Literature Review", Proceeding of 10th International Conference on Agents and Artificial Intelligence, Funchal, Madeira-Portugal, Jan 16-18. (to appear) (✓)
- 2017 **Calvaresi D.**, Marinoni M., Lustrissimini L., Appoggetti K., Sernani P., Dragoni A.F., Schumacher M., & Buttazzo G. "Local Scheduling in Multi-Agent Systems: getting ready for safety-critical scenarios", Proceeding of 15th European Conference on Multi-Agent Systems, Evri, France, Dec 14-15. (✓)
- 2017 Calbimonte J.P., **Calvaresi D.**, & Schumacher M. "Multi-Agent Interactions on the Web through Linked Data Notifications", Proceeding of 15th European Conference on Multi-Agent Systems, Evri, France, Dec 14-15. (✓)
- 2017 Buonocunto P., Giantomassi A., Marinoni M., **Calvaresi D.**, & Buttazzo G. "A Limb Tracking Platform for Tele-Rehabilitation". ACM Transactions on Cyber-Physical Systems (TCPS), (to appear)
- 2017 **Calvaresi D.**, Marinoni M., Sturm A., Schumacher M., & Buttazzo G. "The Challenge of Real-Time Multi-Agent Systems for Enabling IoT and CPS", Proceeding of IEEE/WIC/ACM International Conference on Web Intelligence (WI 2017), Leipzig, Germany, Aug 23-26. (✓)
- 2017 **Calvaresi D.**, Schumacher M., Marinoni M., Hilfiker R., Dragoni A.F., & Buttazzo G. Agent-based systems for telerehabilitation: strengths, limitations and future challenges", Post-Proceeding of the 10th Workshop on Agents Applied in Health Care @ AAMAS, S ao Paulo, Brazil, May 8-12. (✓)
- 2017 Falcionelli N., Sernani P., Bromuri S., Mekuria D.N., **Calvaresi D.**, Schumacher M., Dragoni A.F., & Bragues A. "An Event Calculus agent mind applied to diabetes monitoring", Post-Proceeding of the 10th Workshop on Agents Applied in Health Care @ AAMAS, S ao Paulo, Brazil, May 8-12. (✓)
- 2016 **Calvaresi D.**, Vincentini A., Di Guardo A., Cesarini D., Sernani P., & Dragoni A.F. "Exploiting a touchless interaction to drive a wireless mobile robot powered by a real-time operating system", Proceeding of the 2nd International Conference Recent Trends and Applications in Computer Science and Information Technology, Tirana, Albania, Nov 18-19.
- 2016 Montanaro L., Sernani P., **Calvaresi D.**, & Dragoni A.F. "A touchless human-machine interface for the control of an elevator", Proceeding of the 2nd International Conference Recent Trends and Applications in Computer Science and Information Technology, Tirana, Albania, November 18-19.
- 2016 Cesarini D., **Calvaresi D.**, Farnesi C., Taddei D., Frediani S., Ungerechts B.E., & Hermann T.. "MEDIATION: an eMbEddeD system for auditory feedback of hand-water InterActiON while swimming", Proceeding of the 11th conference of the International Sports Engineering Association (ISEA 2016), Delft, Netherlands, July 11-14.
- 2016 Sernani P., **Calvaresi D.**, Calvaresi P., Pierdicca M., Morbidelli E., Dragoni A. F., & Buttazzo G. "Testing Intelligent Solutions for the Ambient Assisted Living in a Simulator", Proceeding of the 9th International Conference on Pervasive Technologies Related to Assistive Environments (PETRA 2016), Corfu Island, Greece, June 29 - July 1.
- 2016 **Calvaresi D.**, Sernani P., Marinoni M., Claudi A., Balsini A., Dragoni A. F., & Buttazzo G. "A Framework based on Real-Time OS and Multi-Agents for intelligent autonomous robot competitions", Proceeding of the 11th IEEE International Symposium on Industrial Embedded Systems (SIES 2016), Krakow, Poland, May 23-26. (✓)
- 2016 **Calvaresi D.**, Cesarini D., Sernani P., Marinoni M., Dragoni A. F., & Sturm A.. "Exploring the ambient assisted living domain: a systematic review". Journal of Ambient Intelligence and Humanized Computing, 1-19.
- 2015 **Calvaresi D.**, Cesarini D., Marinoni M., Buonocunto P., Bandinelli S., and Buttazzo G., "Non-intrusive patient monitoring for supporting general practitioners in following diseases evolution", Proceedings of the 3rd International Work-Conference on Bioinformatics and Biomedical Engineering (IWBBIO 2015), Granada, Spain, April 15-17. (✓)
- 2015 Cesarini D., **Calvaresi D.**, Marinoni M., Buonocunto P., and Buttazzo G. "Simplifying the use of motor tele-rehabilitation devices for their practical use in non-clinical environments", Proceedings of the 3rd International Work-Conference on Bioinformatics and Biomedical Engineering (IWBBIO 2015), Granada, Spain, April 15-17. (✓)
- 2014 Calvaresi, P., **Calvaresi, D.**, Sernani, P., Pierdicca, M., Morbidelli E., Accattoli, D., Dragoni, A.F.: "A Virtual Caregiver for the AAL: Testing in a 3D Simulator". In: Workshop of the XIII AI*IA Symposium on Artificial Intelligence (AI*AAL.it 2014).
- 2014 Calvaresi, P., Dragoni, A.F., Pierdicca, M., **Calvaresi, D.**, Sernani, P.: "3D Simulation for Ambient Assisted Living: Interaction through Mobile Application". In: 1st International Conference Recent Trends and Applications in Computer Science and Information Technology (RTA-CIST 2014).
- 2014 **Calvaresi, D.**, Sturm, A., Yu, E., Dragoni, A.F.: "Exploring domain requirements and technology solutions: a goal modeling approach". In: Proceedings of the 7th International iStar Workshop (iStar 2014). (✓)
- 2014 **Calvaresi, D.**, Claudi, A., Dragoni, A.F., Yu, E., Accattoli, D., Sernani, P.: "A Goal-Oriented Requirements Engineering Approach for the Ambient Assisted Living Domain". in Proceedings of the 7th ACM International Conference on Pervasive Technologies Related to Assistive Environments (PETRA 2014). (✓)

2013 **Calvaresi D.**, Sturm A., and Yu E.: *"Reconciling System Design Options with Domain and Elicited Requirements - A Goal Modeling Approach"*. Poster Presentation in Consortium for Software Engineering Research, Fall 2013 Meeting, Markham, Ontario, CA, 2013. (✓)