



Roberto Capobianco

Nazionalità: Italiana | **Indirizzo:** Italia (Abitazione)

● ESPERIENZA LAVORATIVA

01/2022 - ATTUALE

SENIOR RESEARCH SCIENTIST SONY AI

12/2019 - 01/2022

RESEARCH SCIENTIST SONY AI

01/08/2019 - 15/03/2021 Roma, Italia

RICERCATORE A TEMPO DETERMINATO (RTD-A) SAPIENZA UNIVERSITY OF ROME

Area: Robotica, Explainable Artificial Intelligence, Reinforcement Learning, Deep Learning

11/2016 - 11/2019

RESEARCH SCIENTIST COGITAI, INC.

08/2018 - 10/2019

DEEP LEARNING SCIENTIST RADICAL SOLUTIONS LLC

02/2018 - 07/2019 Roma, Italia

DOCENTE UNIVERSITARIA A CONTRATTO SAPIENZA UNIVERSITY OF ROME

Corsi: Artificial Intelligence, Laboratorio di intelligenza artificiale e grafica interattiva.

03/2017 - 07/2019 Roma, Italia

ASSEGNO DI RICERCA SAPIENZA UNIVERSITY OF ROME

Area: Robotica, Reinforcement Learning, Robot Learning, Deep Learning, Benchmarking di Sistemi Robotici.

● ISTRUZIONE E FORMAZIONE

11/2013 - 02/2017 Roma

PHD IN COMPUTER ENGINEERING Sapienza University of Rome

Areas: Robotics, Robot Learning, Artificial Intelligence. Advisor: Prof. Daniele Nardi.

08/2015 - 03/2016 Pittsburgh (PA)

RESEARCH SCHOLAR Robotics Institute, Carnegie Mellon University

Professor: Prof. J. Andrew (Drew) Bagnell, Robotics Institute.

2013 Örebro

FIRST ÖREBRO WINTER SCHOOL IN ARTIFICIAL INTELLIGENCE AND ROBOTICS University of Örebro

2011 - 2013 Roma

LAUREA MAGISTRALE IN ARTIFICIAL INTELLIGENCE AND ROBOTICS Sapienza University of Rome

Graduation score: 110/110 cum laude.

Graduation score: 109/110.

COMPETENZE LINGUISTICHELingua madre: **ITALIANO**

Altre lingue:

	COMPRESIONE		ESPRESSIONE ORALE		SCRITTURA
	Ascolto	Lettura	Produzione orale	Interazione orale	
INGLESE	C2	C2	C2	C2	C2
FRANCESE	A2	A2	A2	A2	A1

*Livelli: A1 e A2: Livello elementare B1 e B2: Livello intermedio C1 e C2: Livello avanzato***COMPETENZE DIGITALI**

Cognitive Robotics | Machine Learning | Python | C | C++ | Microsoft Office | Linux | TensorFlow | MXNet | Artificial Intelligence | HTML | SVN, GIT, GitHub | Robot Operating System (ROS) | LaTeX | Software-based conference: MICROSOFT TEAMS, ZOOM

ULTERIORI INFORMAZIONI**ONORIFICENZE E RICONOSCIMENTI****Onorificenze e Premi**

- 2016 AAAI Robotics Fellowship, AAAI, Phoenix, AZ, USA.
- 2015 Progetto di Avvio alla Ricerca, Sapienza University of Rome, Italy.
- 2014 Premio d'eccellenza, Sapienza University of Rome, Italy. Top 2% degli studenti laureandi nell'Anno Accademico 2012/2013
- 2014 Primo Posto, Computer Vision track, RoCKIn Camp 2014, RoCKIn@Work Challenge, Rome, Italy.
- 2013 Borsa di Studio Triennale per il Dottorato, Sapienza University of Rome, Italy.
- 2012–2013 Programma d'Eccellenza, Sapienza University of Rome, Italy.

COMPETENZE ORGANIZZATIVE**Capacità Organizzative**

- Esperienza pluriennale nell'insegnamento in corsi di laurea triennale e magistrale;
- Esperienza pluriennale nell'ambito della ricerca scientifica sia accademica che industriale;
- Buona esperienza nel lavoro sotto pressione e con scadenze;
- Buona esperienza con il lavoro autonomo e remoto;
- Membro del Comitato Organizzatore (e.g., RoCKIn, workshops) o volontario (e.g., RSS) per eventi locali ed internazionali;

PUBLICATIONS**Pubblicazioni Selezionate**

1. Wurman, Peter R.; Barrett, Samuel; Kawamoto, Kenta; MacGlashan, James; Subramanian, Kaushik; Walsh, Thomas J.; Capobianco, Roberto; Devlic, Alisa; Eckert, Franziska; Fuchs, Florian; Gilpin, Leilani; Kompella, Varun; Khandelwal, Piyush; Lin, HaoChih; MacAlpine, Patrick; Oller, Declan; Sherstan, Craig; Seno, Takuma; Thomure, Michael D.; Aghabozorgi, Houmehr; Barrett, Leon; Douglas, Rory; Whitehead, Dion; Duerr, Peter; Stone, Peter; Spranger, Michael; Kitano, Hiroaki Outracing Champion Gran Turismo Drivers with Deep Reinforcement Learning. In: Nature, vol. 62, iss. 7896, pp. 223–28, 2022.
2. Capobianco, Roberto; Kompella, Varun; Ault, James; Sharon, Guni; Jong, Stacy; Fox, Spencer; Meyers, Lauren; Wurman, Peter R.; Stone, Peter Agent-Based Markov Modeling for Improved COVID-19 Mitigation Policies, Journal of Artificial Intelligence Research (JAIR), 71 , pp. 953–992, 2020.

3. F. Riccio, R. Capobianco, and D. Nardi. Loop: Iterative learning for optimistic planning on robots. *Robotics and Autonomous Systems*, 136:103693, 2021
4. G. Sharon, J. Ault, P. Stone, V. Kompella, and R. Capobianco. Multiagent Epidemiologic Inference through Realtime Contact Tracing. In *Proceedings of the 20th International Conference on Autonomous Agents and MultiAgent Systems (AAMAS)*, 2021
5. B. La Rosa, R. Capobianco, and D. Nardi. Explainable inference on sequential data via memorytracking. In *Proceedings of the 29th International Joint Conference on Artificial Intelligence (IJCAI)*, 2020
6. F. Riccio, R. Capobianco, and D. Nardi. Guess: Generative modeling of unknown environments and spatial abstraction for robots. In *Proc. of the 19th International Conference on Autonomous Agents and Multiagent Systems (AAMAS)*, 2020
7. M. T. Lazaro, R. Capobianco, and G. Grisetti. Efficient long-term mapping in dynamic environments. In *Proc. of the IEEE/RSJ Int. Conf. on Intelligent Robots and Systems (IROS)*, 2018
8. F. Riccio, R. Capobianco, and D. Nardi. Q-CP: Learning action values for cooperative planning. In *2018 IEEE International Conference on Robotics and Automation (ICRA)*, 2018
9. G. Gemignani, R. Capobianco, E. Bastianelli, D. Bloisi, L. Iocchi, and D. Nardi. Living with robots: Interactive environmental knowledge acquisition. *Robotics and Autonomous Systems (RAS)*, 78:1–16, 2016
10. Wen Sun, R. Capobianco, G. J. Gordon, J. A. Bagnell, and Byron Boots. Learning to smooth with bidirectional predictive state inference machines. In *Proceedings of the 32nd Conference on Uncertainty in Artificial Intelligence (UAI-2016)*, 2016
11. A. Venkatraman, R. Capobianco, L. Pinto, M. Hebert, D. Nardi, and J. A. Bagnell. Improved learning of dynamics models for control. In *The 15th International Symposium on Experimental Robotics (ISER-2016)*, 2016
12. E. Bastianelli, D. Bloisi, R. Capobianco, F. Cossu, G. Gemignani, L. Iocchi, and D. Nardi. On-line semantic mapping. In *Advanced Robotics (ICAR)*, 2013 16th International Conference on, pages 1–6. IEEE, 2013

INTERNATIONAL EVENTS

Eventi Internazionali

- 2021 Organizzatore, Workshop on eXplainable AI approaches for debugging and diagnosis, NeurIPS 2021, Remote.
- 2019 Organizzatore, Workshop on Evaluation and Benchmarking of Human-Centered AI Systems, 2019, Milton Keynes, UK.
- 2019 Membro del Comitato Tecnico, SciRoc Challenge 2019, Milton Keynes, UK.
- 2018 Presentatore, 2018 Int. Conf. on Autonomous Agents and Multiagent Systems, AAMAS 2018, Stockholm, Sweden.
- 2017 Docente, The 4th Lucia PhD School on “Artificial Intelligence and Robotics”, Lisbon, Portugal.
- 2017 Docente, The 4th Lucia PhD School on “Artificial Intelligence and Robotics”, Lisbon, Portugal.
- 2016 Presentatore, 2016 IEEE-RAS Int. Conf. on Humanoid Robots, Humanoids 2016, Cancun, Mexico.
- 2016 Presentatore, 15th International Symposium on Experimental Robotics, ISER 2016, Tokyo, Japan.
- 2016 Presentatore, AAI Robotics Fellowship, AAI 2016, Phoenix, AZ, USA.
- 2016 Presentatore, AAI Workshop on Symbiotic Cognitive Systems, AAI 2016, Phoenix, AZ, USA.
- 2015 Invited Speaker, Digital Signal Processing Day, Mexico City, Mexico.
- 2015 Invited Speaker, RoCKIn Workshop, Mexico City, Mexico.
- 2015 Volontario, 2015 Robotics: Science and Systems Conference, RSS 2015, Rome, Italy.
- 2015 Membro del Comitato Locale, RoCKIn Camp 2015, RoCKIn@Work Challenge, Peccioli, Italy.
- 2014 Presentatore, AI*IA Doctoral Consortium 2014, XIII AI*IA Symposium on AI, Pisa, Italy.
- 2014 Membro del Comitato Organizzatore, RoCKIn 2014, RoCKIn@Work Challenge, Toulouse, France.
- 2014 Partecipante, RoCKIn 2014, RoCKIn@Work Challenge, Toulouse, France.
- 2014 Presentatore, IAS-13, 13th International Conference on Intelligent Autonomous Systems, Padua, Italy.
- 2014 Partecipante, RoCKIn Camp 2014, RoCKIn@Work Challenge, Rome, Italy.

ATTIVITÀ D'INSEGNAMENTO

Attività d'Insegnamento

- II Semestre 2022–2023 - **Docente**, *Seminars in Artificial Intelligence*, Sapienza University of Rome, Italy. M.Sc. in Artificial Intelligence and Robotics
- I Semestre 2022–2023 - **Docente**, *Reinforcement Learning*, Sapienza University of Rome, Italy. M.Sc. in Artificial Intelligence and Robotics

- II Semestre 2021–2022 - **Docente**, *Seminars in Artificial Intelligence*, Sapienza University of Rome, Italy. M.Sc. in Artificial Intelligence and Robotics
 - I Semestre 2020–2021 - **Docente**, *Probabilistic Reasoning & Reinforcement Learning*, Sapienza University of Rome, Italy. M.Sc. in Artificial Intelligence and Robotics
 - II Semestre 2019–2020 - **Docente**, *Seminars in Artificial Intelligence*, Sapienza University of Rome, Italy. M.Sc. in Artificial Intelligence and Robotics
 - I Semestre 2019–2020 - **Docente**, *Probabilistic Reasoning & Reinforcement Learning*, Sapienza University of Rome, Italy. M.Sc. in Artificial Intelligence and Robotics
 - I Semestre 2018–2019 - **Docente**, *Probabilistic Reasoning & Reinforcement Learning*, Sapienza University of Rome, Italy. M.Sc. in Artificial Intelligence and Robotics
 - II Semestre 2018–2019 - **Docente**, *Laboratorio di Intelligenza Artificiale e Grafica Interattiva*, Sapienza University of Rome, Italy. B.Eng. Computer Engineering
 - II Semestre 2014–2015 - **Teaching Assistant**, *Artificial Intelligence II*, Sapienza University of Rome, Italy.
 - I Semestre 2014–2015 - **Teaching Assistant**, *Robot Programming*, Sapienza University of Rome, Italy. Spring 2014 Teaching Assistant, Artificial Intelligence II, Sapienza University of Rome, Italy.
 - II Semestre 2013–2014 - **Tutor**, *Seminars in Artificial Intelligence and Robotics*, Sapienza University of Rome, Italy.
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