

# Luca Scimeca, Ph.D. Candidate

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🏠 Robinson College Grange Rd, Cambridge CB3 9AN, United Kingdom

## Employment History

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- 2017 – current    📌 **Ph.D Candidate** at Biologically Inspired Robotics Laboratory, University of Cambridge.
- 2017 – 2019    📌 **Demonstrator** Demonstrator for the University of Cambridge course "Engineering Tripos Part IIA – 3D Printing", Engineering.
- 📌 **Demonstrator** Demonstrator for the University of Cambridge course "3F8 Inference", Machine Learning.
- 📌 **Demonstrator** Demonstrator for the University of Cambridge course Part IA Lego, Robotics.
- 2016    📌 **Junior Software Engineer** at EXTRAORDINARY MANAGED SERVICES LTD, Edinburgh

## Education

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- 2017 – current    📌 **Ph.D. in Engineering (Biologically Inspired Robotics)**, University of Cambridge, United Kingdom.
- 2013 – 2017    📌 **BEng (Hons) in Software Engineering and Artificial Intelligence**, University of Edinburgh, United Kingdom.  
First Class Honours (summa cum laude) – 4.0 GPA, Department prize and Howe Prize for highest cumulative GPA of graduating class

## Research Publications

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### Journal Articles




- 1    Hughes, J., **Scimeca, L.**, Ifrim, I., Maiolino, P., & Iida, F. (2018). Achieving robotically peeled lettuce. *IEEE Robotics and Automation Letters*, 3(4), 4337–4342.
- 2    Stone, T., Webb, B., Adden, A., Weddig, N. B., Honkanen, A., Templin, R., ... Heinze, S. (2017). An anatomically constrained model for path integration in the bee brain. *Current Biology*, 27(20), 3069–3085.
- 3    Hughes, J., Gilday, K., **Scimeca, L.**, & Iida, F. (forthcoming). Flexible, adaptive industrial assembly: driving innovation through competition. *IEEE Robotics and Automation Letters*.
- 4    **Scimeca, L.**, Hughes, J., Maiolino, P., & Iida, F. (forthcoming). Model-free soft-structure reconstruction for proprioception using tactile arrays. *IEEE Robotics and Automation Letters*.

### Conference Proceedings

- 1    **Scimeca, L.**, Maiolino, P., & Iida, F. (2018). Soft morphological processing of tactile stimuli for autonomous category formation. In *2018 IEEE International Conference on Soft Robotics (RoboSoft)* (pp. 356–361). IEEE.
- 2    **Scimeca, L.**, Maiolino, P., Cardin-Catalan, D., P. del Pobil, A., & Iida, F. (forthcoming). Non-destructive robotic assessment of mango ripeness via multi-point soft haptics. In *Icra*.

## Skills



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- Languages     English (fluent), Italian (native)
- Coding        Python, C++, C, Java, MATLAB, Haskell, Assembly, SQL, XML/XSL
- Misc.         TensorFlow, ROS, V-Rep, CAD, 3D-Printing





## Miscellaneous

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### Academic Services

- 2018         **Workshop Co-organizer** Agri-Food Robotics, Cambridge, UK (2018)
- 2017 – current     **Reviewer** for IEEE Robotics and Automation Letters.

### Awards and Achievements



- 2018         **AJS Special Award** for Industrial Manipulation Challenge, World Robotics Summit 2018, Tokyo, Japan.
-  **1st Place Award** Robot Rescue Simulation League, RoboCup 2018, Montreal, Canada.
-  **1st Place Award** at "RoboSoft Competition – Manipulation", RoboSoft 2018 IEEE Conference on Soft Robotics, Livorno, Italy.
- 2017         **Howe Undergraduate Prize**, The University of Edinburgh, United Kingdom. Best performance in Artificial Intelligence of the graduating class.
-  **BEng AI & SE class Prize**, The University of Edinburgh, United Kingdom. Highest cumulative grade of the graduating class.
- 2016         **Winner of Robotic 2-a-side Football Tournament** (System Design Project), The University of Edinburgh, United Kingdom.
- 2015         **Edinburgh Award** University of Edinburgh, United Kingdom..
- 2014         **Hackathon Winner**, The Smart Data Hack, Edinburgh, United Kingdom.
- 2013, 2010, 2009     **Scholarship "Borsa di Studio Benivegna"**, three times winner. Highest final cumulative grade achieved in current year of "Vittorio Emanuele III", Palermo, Italy.
- 2013         **Informatics Diploma**, graduated with a score of 100 in "Esami di Stato", Palermo, Italy.
- 2010         **Scholarship "Premio di studi prof. Erasmo Siino"**  
Highest final grade achieved among all students in the town of Capaci, Palermo, Italy.

### Other Projects

- 2017         **RoboAnt Research Project**, Edinburgh, United Kingdom.  
Implemented path integration network based on insect brain (mobile-powered, bio-inspired robotics).
- 2016         **CIFAR Image Classification with Deep Neural Networks**, Edinburgh, United Kingdom.  
Achieved state of the art performance on CIFAR-10 and CIFAR 100 dataset;  
Devised new Multitask Learning procedures.
-  **Robot-Football**, Edinburgh, United Kingdom.  
Built autonomous robot for two-a-side football game, including: autonomous path planner, image tracking and recognition, physical design and implementation.


## Miscellaneous (continued)


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- 2015     **Bidirectional Transformations**, Edinburgh, United Kingdom.  
Researched in the area of Bidirectional Transformations; implemented Object Oriented prototype in Java.
-  **Carneades Argumentation System**  
Developed a python implementation of the Carneades System of argument evaluation (Artificial Intelligence).

## References

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**Dr Fumiya Iida**  
Cambridge University,  
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**Prof Perla Maiolino**  
Oxford University,  
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