

## Angela Faragasso

Postdoctoral research fellow in Robotics

Associate Editor for IEEE Robotics &amp; Automation Magazine

Service Robotics Lab, Department of Precision Engineering, Graduate School of Engineering, The University of Tokyo.

**Current Work:**

Project Assistant	Service Robotics Lab, Department of Precision Engineering, Graduate School of Engineering, The University of Tokyo, Tokyo, Japan.	4/2019
Professor	PIs: Prof. Asama Hajime	Present

**Academic qualifications:**

<b>PhD in Robotics</b>		14/11/2012
King's College London		-
Thesis title: <i>Vision-based Sensing Mechanism for Soft Tissue Stiffness Estimation</i>		28/06/2016

<b>Master in Artificial Intelligence and Robotics</b>		1/1/2010
La Sapienza, University of Rome (including eight months abroad periods at the Texas A&M)		-
Thesis title: <i>Vision Control For Humanoid Navigation in Office-Like Environments</i>		26/07/2012

<b>Bachelor in Computer Science Engineering</b>		22/09/2006
La Sapienza, University of Rome		-
Thesis title: <i>Online Applications to compile evaluations boards about Courses and the Teachers</i>		18/11/2009

**Previous Work:**

Post-doctoral research fellow	Service Robotics Lab, Department of Precision Engineering, Graduate School of Engineering, The University of Tokyo, Tokyo, Japan. Project Title: Vision-based sensing mechanism for assistive and rescue robots. PIs: Prof. Asama Hajime	11/2018 - 3/2019
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JSPS post-doctoral research fellow	Service Robotics Lab, Department of Precision Engineering, Graduate School of Engineering, The University of Tokyo, Tokyo, Japan. Project Title: Vision-based sensing mechanism for assistive and rescue robots. PIs: Prof. Asama Hajime	11/2016 - 10/2018
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Research Associate	Centre for Robotics Research, Dept. of Informatics, KCL, UK Project Title: Motion PIs: Prof. Thrishantha Nanayakkara	6/2016 - 10/2016
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Research Associate	Centre for Robotics Research, Dept. of Informatics, KCL, UK Project Title: FourbyThree PIs: Prof. Kaspar Althoefer	01/2016 - 06/2016
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Lead Robotics Advisor	Richer Education Exhibition Road, London, UK SW7 2AZ	09/2015 - 10/2016
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Assistant Exam Support	Dept. of Informatics, KCL, UK Teaching support to a visually impaired undergraduate student in Computer Science with Robotics	04/2014 - 08/2016
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Teaching Assistant	Dept. of Informatics, KCL, UK First Order Logic, Robotics System, Data Structures, Computer System, AI, Foundations of Computing, Elementary Logic with Applications, Sensor and Actuators, Real Time Systems and Control	01/2013 - 7/2016
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**Grants & awards:**

<b>Grant:</b>	2016
Grants-in-Aid for Scientific Research (2.3 million yen)	- 2018
<b>Fellowship:</b>	
Japan Society for the Promotion of Science (JSPS) Postdoctoral Fellowship for Overseas Researchers (Standard)	2016
<b>Award:</b>	
CRAS best poster award “Clip-on stiffness sensor for endoscopic cameras retrieving sense of touch in minimally invasive intervention”.	2016
<b>Scholarships:</b>	
RosConf Diversity Scholarship	2016
PhD Scholarship EU FP7 project STIFF-FLOP: “STIFFness controllable Flexible and Learnable manipulator for surgical Operations”	2012
Engineering and Physical Sciences Research Council Award (EPSRC)	2012/2015
Scholarships for mobility to Texas A&M University	2010

### Conferencing & research review roles:

Session Chair for:

- Annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC 2018),
- International Symposium on System Integration (SII 2017).

Organiser of the Workshop

Human-Aiding Robotics: open issues and future direction (IROS 2018).

Member of the Award Committee for:

- International Symposium on System Integration (SII 2017).

Reviewer for:

- IEEE Transactions on Robotics (TRO),
- IEEE Transactions on Instrumentation & Measurement,
- Robotics and Computer Integrated Manufacturing,
- Journal of Intelligent and Robotic Systems,
- IEEE Robotics and Automation Letters (RA-L),
- IEEE International Conference on Robotics and Automation (ICRA),
- IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS),
- Annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC),
- Hamlyn Symposium on Medical Robotics,
- International Conference on Ubiquitous Robots and Ambient Intelligence (URAI),
- International Journal of Biosensors & Bioelectronics,
- Workshop on New Technologies for Computer/Robot Assisted Surgery (CRAS),
- Robotics Science and System (RSS),
- International Symposium on System Integration (SII),
- IEEE Sensors,
- Robotics and Autonomous Systems (ELSEVIER),
- Soft Robotics (SoRo),
- Sensors MDPI.

### Invited contributions:

Invited talks:

Seminar @ Tongji University

Vision In the loop

Shanghai, China

7/6/2018

ICRA Workshop on Innovative Haptic Interfaces emerging from Soft Robotics	Towards stiffness sensors for minimally invasive surgery	Singapore	2/6/2017
Invited exhibitions:			
Service robots in MIS	SCHUNK Expert Days: Robots with Impact	Hausen, DE	2014
Surgical Robots	“Robots Live!” at the National Museum of Flight, National Museums Scotland	Edinburgh, UK	2014
Bio-inspired robotics in MIS	“Robot Safari <sup>EU</sup> ” (European Robotics Week), Science Museum London	London, UK	2013

### Competences, training & skills:

- **Continuous participation** in training courses to enhance my **intellectual abilities** and **techniques** to do research and teaching, personal effectiveness, research governance/organisation, and my engagement skills to work with others. Moreover, I have been involved in the organisation of different open days to enhance the interest of young generation in Robotics.
- Attendance of **training course**: “Matlab Robotics Toolbox”, “ROSCONF2016”, “LabVIEW”.
- IT Skills:
  - Programming Language: Robot Operating System (ROS), C/C++, Python, Java, SQL, Assembly, Lisp, Cobol, Android, Prolog.
  - CAD Software: SolidWorks, Abaqus FEA, Illustrator.
  - Operating System: Windows, Linux, MacOS.
  - IDE: OpenCV, OpenGL, LabView, RoboRealm.
  - Robot simulation environments: Rviz, Simulink, SOFA framework (Simulation Open Framework Architecture), Webots, Simulink.
  - Microsoft Office, LaTeX, Adobe Products, Beamer.
- Language Skills: Italian, English, basic Japanese.
- Artistic and other competences and interests: music, travelling, fitness, politics/news.

### Brief description of my roles at the University of Tokyo:

- Post-doctoral research fellow in the Service Robotics Lab, Department of Precision Engineering, Graduate School of Engineering, The University of Tokyo.
- Exploration of novel visual-based technologies for search and rescue robots.
- Staff member of the **ImPACT**: Impulsing Paradigm Change through Disruptive Technologies Program.
- Supervision of international student for the **RoboCup@Home**.
- Supervision of PhD student in “**Mobile Robot Fault Detection combining different localization method**”.
- Supervision of a Master student in “**Iterative Energy Shaping of Port-Hamiltonian Systems**”.
- Supervision of international student in “**Visual-based navigation for small sized humanoid robot**”.

### Brief description of my roles at King’s College London:

- Research Associate within the **EU FP7 project**.
- PhD scholarship students within the **EU FP7 project STIFF-FLOP** responsible for hard- and software integration of **embedded sensors** into a **medical soft manipulator** in ROS (Robot Operating System).
- **Advisor/mentor** of **BSc and MSc and PhD** at King’s CoRe.
- **Teaching Assistant** for undergraduate/postgraduate courses giving lectures/tutorials/lab demonstrations: **Robotic Systems, Distributed Systems, Real Time System, Foundations of Computing, Elementary Logic with Applications, Adaptive and Robotics Systems, Programming Practice, Computer Systems, Artificial Intelligence**.
- Lecturer/mentor for post-16 students from **under-represented groups** teaching “Mobile robots” (Hands-on lectures using the Khepera mobile robot), **K+ widening participation**.
- Lecturer/mentor in Robotics Open Day, Robotics Competition and Maths School Club teaching “Mobile robots” (Hands-on lectures using the Lego Mindstorm/ev3 mobile robot).

- Co-organiser of **invited STIFF-FLOP demonstrations** at the **Science Museum**, the **SCHUNK Expert Days** & the **British Science Festival**.