

Curriculum vitae di *Paolo Fiorini*

Sottosettori ERC primari (max 3): *PE6, PE7*

Eventuali sottosettori ERC secondari (max 3): *PE7_10, PE6_7, PE7_1*

PERSONAL DETAILS

Family name, First name: **Fiorini, Paolo**
Researcher unique identifier: **ORCID 0000-0002-0711-8605**
H-index: Scopus 40, Google Scholar 53
Nationality: **Italian**
Date of birth: **February 1st, 1953**
URL for web site: **<https://www.needleverobotics.com>**

Education

1995 **Doctor of Philosophy in Mechanical Engineering**, UCLA
1982 **Master of Science in Electrical Engineering**, University of California, Irvine
1976 **Laurea (5-year) in Electronic Engineering**, Università degli Studi di Padova
1971 **Diploma of Maturità Scientifica**

Current Position

2022-present **CEO and Founder** Needle Robotics Srl, Verona, Italy

Previous Positions

2011-2023 **Full Professor**, University of Verona, Department of Engineering for Innovation
Medicine, Verona, Italy
2016 **Visiting Associate**, California Institute of Technology, Department of Mechanical
Engineering
2014 **Distinguished Visiting Professor**, Irell & Manella Graduate School of Biological
Sciences, Beckman Research Institute of the City of Hope, Duarte (CA. USA)
2001-2010 **Associate Professor**, University of Verona, Dep. of Computer Science, Verona, Italy
1985-2000 **Member of Technical Staff**, NASA-JPL, Caltech, Pasadena (CA-USA)
1984-1985 **Principal Engineer**, Trimedyn Corp., Irvine (CA-USA)
1982-1984 **Control System Designer**, Parker-Hannifin Corp., Irvine (CA-USA)
1980-1981 **Software Analyst**, Studio di Informatica, Milano (Italy)
1977-1980 **Microprocessor System Designer**, Zeltron-Zanussi, Udine (Italy)

RESEARCH ACHIEVEMENTS AND PEER RECOGNITION

Fellowships and Awards

2025 **IEEE RAS Distinguished Service Award**, IEEE Robotics and Automation Society
2023 **Rudolf Kalman Distinguished Professorship**, Obuda University, Budapest (Hungary)
2023 **Founding Member of the Italian Academy of Engineering**
2018 **Life Fellow** of the Institute of Electrical and Electronic Engineers (IEEE)
2016 **Honorary Professor**, Obuda University, Budapest (Hungary)
2015 **Corresponding Member**, Academy of Agriculture, Sciences and Humanities of Verona
2013 **Finalist**, Entrepreneurship Workshop of the European Robotics Forum, Lyon (France)
2011 **3rd prize euRobotics Technology Transfer Award**, Vasteras (Sweden)
2011 **Antonio D'Auria Prize**, robotic applications for disabled, elderly users, Milano (Italy)
2009 **Fellow** of the Institute of Electrical and Electronic Engineers (IEEE)
2008 **Group Award** for Springer Handbook in Robotics, Ass. of American Publishers
2006 **Most Active Chapter**. Italian Chapter of IEEE Robotics and Automation Soc. (RAS)
2003 **Most Active Technical Committee**. Service Robotics of IEEE RAS
2000 **Finalist** for Best Conference Paper at the IEEE ICRA2000 conference
1993 **Finalist** for Best Student Paper at the IEEE ICRA1993 conference
1993 **NASA Group Award** for contribution to NASA telerobotics program

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1985-2000 **Awarded 13 NASA Technical Awards**

Funding Profile

2024-2025 **ERC-Proof of Concept:** Prostate Focal Therapy (PROFTH)
2022-2026 **EIC-Transition:** Robotic Prostate Biopsy (ROBIOPSY)
2022-2024 **ERC-Proof of Concept:** Prostate Optical Biopsy using OCT (PROCT)
2020-2021 **ERC-Proof of Concept:** Autonomous Robot for Prostate Biopsy (PROST)
2019-2022 **Marie Skłodowska-Curie Action:** AuTonomous intraLuminAl Surgery (ATLAS)
2017-2022 **ERC-Advanced Grant:** Autonomous Robotic Surgery (ARS)
2016-2019 **H2020-ICT:** MRI and Ultrasound Robotic Assisted Biopsy (MURAB)
2011-2014 **FP7-ICT:** Intelligent Surgical Robotics (I-SUR)
2011-2012 **FP7-ICT:** Network of European Robotic Surgery Laboratories (EUROSURGE)
2010-2013 **FP7-ICT:** Patient Safety in Robotic Surgery (SAFROS)
2009-2012 **FP7-ICT:** Robotic Flsh LOcomotion and Sensing (FILOSE)
2006-2008 **FP6-ICT:** Robotic Standardization (ROSTA)
2006-2009 **FP6-ICT:** Cognition by Experimentation (XPERO)
2006-2009 **FP6-ICT:** The Accurate Robotic Assistant (ACCUROBAS)
2001-2004 **FP5-ICT:** The control, identification and delivery of prescribed medication (MEDICATE)

Supervision of Graduate Students and Postdoctoral Fellows

2001-present **Supervision of 20 Doctoral Students**, 2 on-going, at the University of Verona, Department of Computer Science, Verona, Italy
1 Doctoral Student at the University of Karlsruhe, Karlsruhe (Germany)
3 Doctoral Students at the Universidad Nacional de San Juan, San Juan (Argentina)
1999-2023 **Supervision of about 70 Master Students**, at the Univ. of Verona, Comp. Sci. Dep.
1989-2023 **More than 20 Post-Doctoral Fellows** either at JPL or at the University of Verona

Publications

1980-present More than 300 publications in peer reviewer journals (source Scopus); tot. 20101 citations (source Google Scholar); H-index 53 (source Google Scholar), see: <https://scholar.google.com/citations?user=FsovWSkAAAAJ&hl=en>

Teaching Activities

2001-2023 **Undergraduate Courses:**
1. Systems and Signals: elements linear system analysis and signal processing
2. Industrial Informatics: basic concepts of system analysis and control
Graduate Courses:
1. Introduction to robotics: robotic kinematics, planning and control
2. Linear System Theory: State space model and analysis of linear systems
3. Surgical Robotics: laboratory experiments using the da Vinci surgical robot

Organization of Scientific Meetings

2026 **IEEE ICRA 2026:** Member of the Org. Comm. and Financial Chair, Vienna (AT)
2024 **IEEE IROS 2024:** Member of the Org. Comm. and Financial Chair, Abu Dhabi (UAE)
2023 **IEEE ICRA 2023:** Member of the Org. Comm. and Financial Chair, London (UK)
2018 **Int. Symposium of Medical Robotics (ISMR18):** awards co-chair, Atlanta (GA)
2018 **Doctoral School on Control of Surgical Robots (COSUR2018):** organizer, Verona
2017 **Int. Symposium of Medical Robotics (ISMR18):** program co-chair, Atlanta (GA)
2016 **Doctoral School on Control of Surgical Robots (COSUR2016):** organizer, Verona
2013-present **Conference on Computer and robot Assisted Surgery (CRAS):** Verona (IT) '13, Genova (IT) '14, Brussels (BE) '15, Pisa (IT) '16, Montpellier (FR) '17, London (UK) '18, Genova (IT) '19, Barcelona (ES) '20, Napoli (IT) '22, Lisbon (PT) '25
2014 **European Robotics Forum 2014 (ERF2014):** Local host and organizer
2013 **IEEE Int. Conf. on Robotics and Automation (ICRA):** Prg. Co-Chair, Karlsruhe (D)
2012 **IEEE Int. Conf. on Intelligent Robots and Systems (IROS):** Editor, Vilamoura (P)
2011-2012 **IEEE ICRA 2011-2012:** Associate Editor, Shanghai (China), St. Paul (USA)
2009-present **Organizer of the Int. Conf. on Advanced Robotics (ICAR):** Munich (D) '09, Tallinn (Est) '11, Montevideo (U) '13, Istanbul (TR) '15, Hong Kong (HK) '17, Belo Horizonte (BR) '19, Ljubljana (Slo) '21, Abhu Dhabi (UAE) '23, San Juan (AR) '25
2007 **IEEE ICRA 2007:** Member of the Organizing Comm. and Financial Chair, Roma (I)
2006 **IEEE ICRA 2006:** Poster Chair, Orlando (FL USA).

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- 2001-2017 **Discovery on Film:** Organizer and speaker, Science Museum of Rovereto, Rovereto (I)
1995-present **Member of program committee** of more than 30 international robotics conferences, including BIOROB, ICAR, SYROCO, ICINCO.

Institutional Responsibilities

- 2022-present **Rector Referent for Robotics** at the University of Verona
2019-2021 **Rector Delegate for Scientific Research** of the University of Verona
2013-2019 **Chair of the Patent and Spin-off** committee of the University of Verona
2013-2016 **Department Coordinator** of the Doctoral Program in Computer Science
2001-2012 **Department Coordinator** for International Programs (Erasmus/Socrates)
2007-2010 **University Coordinator** of Information Technology projects
2001-2003 **Member of the Administrative Board** of the Computer Science Department.

Commissions of Trust

- 2007-present **Evaluator and Reviewer of EU Proposal and Projects**, FP7, FP8, H2020, HE, ERC
2004-present **Evaluation of Academic Career**
iv. of Maryland (USA), Georgia Tech, Lorraine Campus, (France). UC Berkeley (San Francisco, USA). Naval Postgraduate School (Monterey, CA), Imperial College (UK)
2005-present **Evaluation of Canadian, European, Israeli and Italian Grant Proposals**
2018 Ministry of Science and Technology of Israel, **2015-2018** FP7 ICT Reviewer (Stiff-Flop, Futura, RockEU), H2020 Reviewer (RockEU2); **2014** Ontario Research Fund; **2007-2011** FP7 SPACE 2011; **2010** Call 1 FP7 Project ECHORD;
2001-2012 **Doctoral Thesis Committees**
2018 Politecnico di Milano, **2017** Universitat Politecnica de Catalunya, **2017** University of Rennes, **2017** ETH Zurich, **2016** Imperial College London, **2016** Karlsruhe Institute of Technology, **2015** KTH Stockholm, **2013** University Federico II of Naples; **2010** EPFL Lausanne (Switzerland); ETH Zurich (Switzerland); **2009** University of Genova - IIT Genova; **2007** Université d'Orléans, Bourges (France); KTH Stockholm (Sweden); **2006** University of Calabria, Cosenza (Italy);
2007-2010 **Guest Editor**
07/'10 Journal of Applied Bionics and Biomechanics; **03/'05** Autonomous Robot Journal; **01/'08** Transaction on Automation Science and Engineering; **12/'00** Autonomous Robot Journal
1995-present **Editor**
(2012-2020) BJUI Editorial Board Member; **(2006-present)** Journal of Intelligent Service Robots; **(2005-present)** Autonomous Robot Journal; **(2004-2008)** IEEE Transaction of Automation Science and Engineering; **(1995-1998)** IEEE RAS Magazine; **(2020-present)** IEEE Transaction of Medical Robotics and Bionics

Membership of Scientific Societies

- 2019-2021 Secretary of the IEEE Robotics and Automation Society (RAS)
2014-2018 Associate Vice President of Conference Activity Board of IEEE Robotics and Automation Society (RAS)
2008-2010 Elected to the Board of Directors of the European Robotics Network (EURON)
2004-2015 Co-Chair of the Education Committee of RAS
2010-2012 Associate Vice President of Member Activity Board of RAS
2003-2006 Elected for two consecutive terms to the Administrative Committee of RAS
2005 Founder and first President of the Italian Chapter of the IEEE-RAS
2003-2010 Chair of RAS Technical Committee on Service Robotics
2005-2007 Chair of RAS Technical Committee on Search Safety and Rescue Robotics

Major Collaboration

- 1995-present Prof. Joel Burdick, Robotics, California Institute of Technology, Pasadena (CA-USA)
2014-present Prof. Yuman Fong, Robotic Surgery, City of Hope Medical Center, Duarte (CA-USA)
1995-present Prof. Ricardo Carelli, Robotics, Univ. Nacional de San Juan, San Juan (Argentina)

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2003-2018 Dr. Joerg Raczowsky, Surgical Robotics, Karlsruhe Institute of Technology (Ger)

Granted Patents

1.	<u>PCT/IB2020/051437 Surgical device for transperineal biopsy for a movable arm of a robot</u>
2.	<u>EP20159675.6A, Thermal endoscope with three aligned optical windows</u>
3.	<u>PCT/IB2010/050824: 25/02/2010, (WO2010/097771). Methods and apparatus for surgical training.</u>
4.	<u>PCTIB2010052647, 14/06/2010 (WO2010/146526). Method for interactive simulation.</u>
5.	<u>EP - 10170547.3, 22/07/2010 (EP2277441). Device for minimally invasive robotic surgery.</u>
6.	<u>EP - 11156111.4, 25/02/2011 (EP2364825). Device for minimally invasive robotic surgery.</u>
7.	<u>EP - 13187462.0, 05/10/2012 (EP2716252). Device and method for manual needle insertion.</u>

Leadership in Industrial Innovation

- 2022 - present **Needleye Robotics Srl** to develop systems for prostate cancer diagnosis and therapy.
- 2015 - present **BBZ Medical Technologies Srl**, to develop training systems for robotic surgery
- 2009 - 2013 **Surgica Robotica SpA**. To develop and CE certify a new surgical robot. Obtained one round of Venture Capital.
- 2003 - 2006 **TechsTrans Srl**, for technology transfer and industrial innovation.

Career Breaks

- 1976 Service in the Italian Army
- 2001 Relocation to Italy to assist my mother.