

Shashank Pathak

CONTACT INFORMATION Italian Institute of Technology *Cell: (+39) 3802385974*
PhD candidate, Robotics, Brain and Cognition *Cell: (+49)15754147118*
Sciences
Via Morego 30, Genova *E-mail: shashank.pathak@iit.it*
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RESEARCH INTERESTS Artificial Intelligence, Cognition, Robotics, Game Theory

EDUCATION **Warsaw University of Technology**, Warsaw, Poland

M.S., Faculty of Electronics and Information Technology , October 2010

- Thesis Topic: Safe Reinforcement Learning for Control Tasks in Humanoids
- Advisors: Pawel Wawrzynski Armando Tacchella
- Area of Study: Artificial Intelligence, Robotics
- Overall score: 4.37/5.0

University of Genoa, Genoa, Italy

M.S., Department of Computer and Informatics, June 2009

- Emphasis on Robotics
- Majority grades 'A'

Indian Institute of Technology, Delhi, New Delhi, India

B.Tech, Department of Mechanical Engineering, June 2007

- Specialization in Control
- CGPA: 7.11/10.0

ACADEMIC ACHIEVEMENTS

Scholarship grant for Lucia Winter School in AI and Robotics, Örebro, Sweden, Dec 2013

Scholarship grant for winter school by CNRS and CIRM (France)

IEEE-RAS/IFRR scholarship for School of Robotics Science on Social and Cognitive Robotics 2010

Erasmus Mundus Scholarship European Masters on Advanced Robotics 2008-2010

Excellent Domain Knowledge, Annual Awards, Manhattan Associates 2007-2008

Best Five Papers, National Technical Paper Session, Delhi 2005

Runners Up Paper, National Technical Paper Session, Delhi 2004

Merit-cum-mean Scholarship, IIT-Delhi

All India Entrance Ranks: IIT-JEE, 657 (top .3%) DCE, 39 (top .04%)

Top 5 Meritorious Student, Mathematics, Government of State (pop: 200 million)

Extra-ordinary achievements in Board Examinations, Head of ICSE, 2000

PROFESSIONAL EXPERIENCE **LIRA-Lab, IIT-Genova** Genoa, Italy

<i>Research Assistant (LIRA-Lab) and Fellow(IIT-Genova)</i>	Feb 2011- present
Department of Informatics and Telecommunications, Genoa, Italy	
<i>Summer Intern, Mind Lab</i>	July 2009- Sept 2009
Goldman Sachs, Bangalore, India	
<i>Software Engineer</i>	Offered, June 2008
Manhattan Associates, Bangalore, India	
<i>Software Engineer, Product Development Team</i>	June 2007- July 2008
Carrier Aircon, Gurgaon, India	
<i>Summer Intern, Research and Engineering Facility</i>	May 2007- July 2007

PAPERS

Shashank Pathak, Luca Pulina, Giorgio Metta, Armando Tacchella. *Ensuring safety of policies learned by reinforcement: Reaching objects in the presence of obstacles with the iCub.* IEEE/RSJ International Conference on Intelligent Robots and Systems, (IROS 2013).

Shashank Pathak, Luca Pulina, Giorgio Metta, Armando Tacchella. *How to Abstract Intelligence?(If Verification Is in Order).* AAAI Fall Symposium 2013.

Giorgio Metta, Lorenzo Natale, Shashank Pathak, Luca Pulina, Armando Tacchella. *Safe and Effective Learning: Case Study.* IEEE International Conference on Robotics and Automation, (ICRA 2010).

Giorgio Metta, Lorenzo Natale, Shashank Pathak, Luca Pulina and Armando Tacchella. *Safe learning with real-time constraints: a case study.* Appeared in 23th International Conference On Industrial, Engineering & Other Applications of Applied Intelligent Systems (IEA-AIE 2010).

Shashank Pathak. Student related Optimization, National Technical Paper Session, Delhi 2005

Shashank Pathak, Saurabh Suman. Tacoma Narrows Bridge: Learnings, National Technical Paper Session, Delhi 2004

TECHNICAL SKILLS

Applications: MATLAB Extensive use, alongwith advanced toolboxes, Scilab, ADAMS, NX

Tools: L^AT_EX, Emacs, GDB, Visual Studio Enterprise, OpenCV, Gimp, Fluid(FGTK), SVN

Operating Systems: Linux, Microsoft Windows NT2003, AIX, QNX

Languages: C/C++, Java, SML, Scheme, Perl, Python, CORBA, MySQL, x86 programming

Languages(2): fluent: English, Hindi beginner: Italian, Sanskrit, Polish, French

RELEVANT COURSES

Computer Science: Introduction to Algorithms, Data Structures, Computer Vision, Neural Networks, Artificial Intelligence, Real-time Operating System, Embedded System

Mathematics: Linear Programming, Probability and Stochastic Processes, Differential Equations, Numerical Methods, Optimization

Robotics: Mobile robots, Multivariable control, Non-linear control, Control of Manipulators, Multi-body systems, Advanced Mechanical Design, Biorobotics, Biomechanics

RECENT SCHOOLS

Lucia Winter School in AI and Robotics, Örebro, Sweden winter 2013

Learning: EuCogIII Member's Conference in conjunction with PASCAL2, Palma De Mallorca (Spain) summer 2013.

Modelling and Verifying Parallel processes (MOVEP), winter 2012, Luminy (Marseille), France

Summer School Marktoberdorf 2012, Engineering Dependable Software Systems, Munich, Germany. Sponsored DAAD, NATO.

Interdisciplinary Methods Spring school: A. Cangelosi(University of Plymouth),B. Scassellati (Yale), Michael A. Arbib (USC) (spring, 2011 Budapest,Hungary)

Embodiment: Fad or future: Martin Buss(TUM), Rolf Pfeifer(ETH), Gregor Schner(Bremen) (spring,2011 Thessaloniki, Greece)

Regularization Methods for high dimensional learning: Lorenzo Rosasco (MIT and IIT) and Francesca Odone (DISI) (summer, 2011 Genova,Italy)

Social and Cognitive Robotics: Adrian Stoica (JPL,NASA), Paulo Fiorini (University of Verona and JPL), Ossuma Khatib (Stanford) (summer,2010 Iasi Romania)

MEMBERSHIPS

IEEE Graduate Student Member #90722871

IEEE Systems,Man, & Cybernetics Society IEEE Robotics and Automation Society
IEEE Computational Intelligence Society IEEE Communications Society
European Network for the Advancement of Artificial Cognitive Systems, Interaction and Robotics

OTHER ACTIVITIES IN PAST

Member, National Service Scheme

House Representative for Board of Student Publication, IIT- Delhi

NSE Certificates in Financial Markets

Member, Pragya, NGO for education to poor

General Secretary, Literary and Cultural Academy

Youngest Chess Champion (school level, at the age of 13)

PERSONAL INFORMATION

Birth: 18th May,1985 at Allahabad, INDIA

Nationality: Indian

DATE AND SIGN

April 13, 2014

Shashank