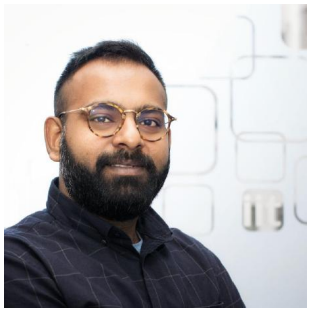
# Yeshasvi Tirupachuri




## about

Italian Institute of Technology
30 Via Morego
16163, Genova, Italy
yeshasvi.tirupachuri@iit.it
yeshasvitvs


## languages

English, French, Italian
Hindi, Telugu, Tamil

## software

C++, Matlab, Python
OpenCV, Gazebo
ROS, YARP
Latex, Github, Linux

## references

daniele.pucci@iit.it
silvio.traversaro@iit.it
chiara.bartolozzi@iit.it
fulvio.mastrogiovanni@unige.it

## hobbies

Hiking
Photography

## interests

Human-Robot Collaboration, Humanoids, Nonlinear Control and Reinforcement Learning

## education

since 2015 **Ph.D.** fellow Cognitive Robotics — iCub Facility/IIT, DIBRIS/Unige
*Enhanced Human-Robot Collaboration*

2014–2015 **M.Sc. in Advanced Robotics** — University of Genova, Italy

2013–2014 **M.Sc. in Robotics Engineering** — Ecole Centrale de Nantes, France

2007–2011 **B.Tech. in Electrical and Electronics Engineering** — Pondicherry University

## experience

2017-2019 **Dynamic Interaction Control, IIT, Italy** — Research Collaborator
*Advancing Anticipatory Behaviors in Dynamic Human-Robot Collaboration (AnDy)*[1]

03–09 2015 **iCub Facility, IIT, Italy** — Research Internship
*Vergence control with a neuromorphic iCub [2]*

01–02 2015 **Emaro Lab, Unige, Italy** — Research Internship
*Human-Robot Cooperation using Wearable Sensing [3]*

07–08 2014 **Emaro Lab, Unige, Italy** — Teaching Assistant
*Software Architecture using ROS*

2011-2013 **Madras Rubber Factory Limited, India** — Automation Engineer
Commissioning and Maintenance of Heavy Machinery

## training

2018 **CSAIL@MIT** — Graduate Summer School
*Cognitive Robotics - Planning under uncertainity*

2016 **International Society of Motor Control** — Graduate Summer School
*Human Motor Control*

## scholarships & awards

2015 **European Union** — Early Stage Researcher
*PACE*[2]*ITN Marie skłodowska-curie actions fellowship*

2019 **Intelligent Systems Conference** — Science and Information Conferences
*Best Student Paper Award [1]*

[1] https://andy-project.eu/
[2] https://cordis.europa.eu/project/id/642961/it

# publications


[1] C. Latella, S. Traversaro, D. Ferigo, **Y. Tirupachuri**, L. Rapetti, F. J. Andrade Chavez, F. Nori, and D. Pucci. "Simultaneous Floating-Base Estimation of Human Kinematics and Joint Torques". In: *Sensors* 19.12 (2019). ISSN: 1424-8220. DOI: 10.3390/s19122794. URL: https://www.mdpi.com/1424-8220/19/12/2794.

[2] L Rapetti, **Y. Tirupachuri**, K. Darvish, C. Latella, and D. Pucci. "Model-Based Real-Time Motion Tracking using Dynamical Inverse Kinematics". In: (2019), Under review ICRA 2019.

[3] I. Sorrentino, F. J. Andrade Chavez, C. Latella, L. Fiorio, S. Traversaro, L. Rapetti, **Y. Tirupachuri**, M. Maggiali, S. Dussoni, G. Metta, and D. Pucci. "A Novel Sensorized Skin Insole for Sensing Feet Pressure Distributions". In: (2019), Under review mdpi Sensors. arXiv: 1910.06370.

[4] **Y. Tirupachuri***, K. Darvish*, G. Romualdi, L. Rapetti, D. Ferigo, F. J. Andrade Chavez, and D. Pucci. "Whole-Body Geometric Retargeting for Humanoid Robots". In: *Humanoids*. IEEE. 2019, in press.

[5] **Y. Tirupachuri**, G. Nava, C. Latella, D. Ferigo, L. Rapetti, L. Tagliapietra, F. Nori, and D. Pucci. "Towards Partner-Aware Humanoid Robot Control Under Physical Interactions". In: *Proceedings of SAI Intelligent Systems Conference*. Springer. 2019, pp. 1073–1092.

[6] **Y. Tirupachuri**, G. Nava, L. Rapetti, C. Latella, and D. Pucci. "Trajectory Advancement during Human-Robot Collaboration". In: *RO-MAN*. IEEE. 2019, in press.

[7] **Y. Tirupachuri**, S. Traversaro, F. Nori, and D. Pucci. "Momentum-Based Topology Estimation of Articulated Objects". In: *Proceedings of SAI Intelligent Systems Conference*. Springer. 2019, pp. 1093–1105.

[8] V. Vasco, A. Glover, **Y. Tirupachuri**, F. Solari, M. Chessa, and C. Bartolozzi. "Vergence control with a neuromorphic iCub". In: *2016 IEEE-RAS 16th International Conference on Humanoid Robots (Humanoids)*. 2016, pp. 732–738. DOI: 10.1109/HUMANOIDS.2016.7803355.


# workshops


- **Y. Tirupachuri**, G. Nava, L. Rapetti, C. Latella, K. Darvish, and D. Pucci. "Recent Advances in Human-Robot Collaboration Towards Joint Action". In: (2020), The Communication Challenges in Joint Action for Human-Robot Interaction Workshop, International Conference on Social Robotics (ICSR) 2019, Madrid, Spain. arXiv: 2001.00411 [cs.RO].
- C. Latella, **Y. Tirupachuri**, L. Rapetti, D. Ferigo, S. Traversaro, I. Sorrentino, F. J. Andrade Chavez, F. Nori, and D. Pucci. "A Human Wearable Framework for Physical Human-Robot Interaction". In: (2019), I–RIM, Rome, Italy. URL: https://bit.ly/35iy9k7.
- **Y. Tirupachuri**, G. Nava, L. Rapetti, C. Latella, and D. Pucci. "Trajectory Advancement for Robot Stand-up with Human Assistance". In: (2019), I–RIM, Rome, Italy. arXiv: 1910.06786 [cs.RO].
- C. Latella, L. Tagliapietra, D. Ferigo, **Y. Tirupachuri**, F. Nori, and D. Pucci. "Advancing Human-Robot Collaboration through Online Human Inverse Dynamics Estimation". In: *2018 IEEE Workshop on Advanced Robotics and its Social Impacts (ARSO)*. 2018, pp. 21–22. DOI: 10.1109/ARSO.2018.8625806.
- **Y. Tirupachuri**, P. Ramadoss, B. Bruno, and F. Mastrogiovanni. "Human-Robot Cooperation: is Wearable Sensing the Way to Go?" In: (2015), Robot and Human Interactive Communication (RO-MAN), 2015 IEEE 24th IEEE International Symposium on. eprint: https://bit.ly/2Qmgi7W.