

# Yujiao Cheng

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## EDUCATION

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### University of California, Berkeley (UC Berkeley)

Berkeley, USA

*Ph.D. in Mechanical Engineering*

*August 2016 - December 2021*

- Major: Controls
- Minors: Optimization, Artificial Intelligence
- Advisor: Prof. Masayoshi Tomizuka

### University of Science and Technology of China (USTC)

Hefei, CHN

*BEng in Electrical Engineering*

*August 2012 - July 2016*

- Major: Automation
- Rank: 1/67

## WORK EXPERIENCE

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### Robotics Research Intern

June 2019 – August 2019

*Fanuc Advanced Research Laboratory*

*Union City, USA*

### Robotics Research Intern

July 2017 – September 2019

*Fanuc*

*Yamanashi, Japan*

## TEACHING EXPERIENCE

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### Department of Mechanical Engineering, UC Berkeley

January 2022 – May 2022

*Graduate Student Instructor*

- Course: ME C231B Experimental Advanced Control Design II (Graduate level)
- Instructor: Prof. Mark Mueller

### Department of Automation, USTC

September 2014 – January 2015

*Undergraduate Student Instructor*

- Course: Linear Circuit (Undergraduate level)
- Instructor: Prof. Wei Lu

## PUBLICATIONS

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### Journal Articles

1. **Y. Cheng** and M. Tomizuka, "Long-Term Trajectory Prediction of the Human Hand and Duration Estimation of the Human Action," in *IEEE Robotics and Automation Letters*, vol. 7, no. 1, pp. 247-254, Jan. 2022, doi: 10.1109/LRA.2021.3124524.
2. **Y. Cheng**, L. Sun and M. Tomizuka, "Human-Aware Robot Task Planning Based on a Hierarchical Task Model," in *IEEE Robotics and Automation Letters*, vol. 6, no. 2, pp. 1136-1143, April 2021, doi: 10.1109/LRA.2021.3056370.
3. **Y. Cheng**, L. Sun, C. Liu and M. Tomizuka, "Towards Efficient Human-Robot Collaboration With Robust Plan Recognition and Trajectory Prediction," in *IEEE Robotics and Automation Letters*, vol. 5, no. 2, pp. 2602-2609, April 2020, doi: 10.1109/LRA.2020.2972874.

### Conference Proceedings

1. **Y. Cheng\***, W. Zhao\*, C. Liu and M. Tomizuka, "Human Motion Prediction using Semi-adaptable Neural Networks," 2019 American Control Conference (ACC), 2019, pp. 4884-4890, doi: 10.23919/ACC.2019.8814980.

2. C. T. Landi, **Y. Cheng**, F. Ferraguti, M. Bonfè, C. Secchi and M. Tomizuka, "Prediction of Human Arm Target for Robot Reaching Movements," 2019 IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), 2019, pp. 5950-5957, doi: 10.1109/IROS40897.2019.8968559.
3. **Y. Cheng**, H. Huang, G. Wu and Q. Ling, "Distributed network resource allocation with integer constraints," 2016 IEEE Global Conference on Signal and Information Processing (GlobalSIP), 2016, pp. 585-589, doi: 10.1109/GlobalSIP.2016.7905909.
4. X. Tan, Z. Zhao, **Y. Cheng** and J. Su, "Flow-based NDN architecture," 2016 IEEE International Conference on Communications (ICC), 2016, pp. 1-6, doi: 10.1109/ICC.2016.7511369.

## Preprints

1. L. Liu\*, T. Te\*, H. Lin\*, **Y. Cheng\***, and M. Tomizuka (2018). Serocs: Safe and efficient robot collaborative systems for next generation intelligent industrial co-robots. arXiv preprint arXiv:1809.08215.

(The superscript \* indicates equal contribution.)

## TALKS

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<b>Robotics Institute, Carnegie Mellon University (virtual)</b> <i>Safe and Efficient Human-Robot Collaboration</i>	November 2021
<b>IEEE International Conference on Robotics and Automation (ICRA, virtual)</b> <i>Human-Aware Robot Task Planning Based on a Hierarchical Task Model</i>	June 2021
<b>IEEE International Conference on Robotics and Automation (ICRA, virtual)</b> <i>Towards Efficient Human-Robot Collaboration With Robust Plan Recognition and Trajectory Prediction</i>	June 2020
<b>American Control Conference (ACC)</b> <i>Human Motion Prediction using Semi-adaptable Neural Networks</i>	July 2019
<b>Bay Area Robotics Symposium</b> <i>Human Motion Prediction</i>	November 2018

## AWARDS AND HONORS

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2016-2018 Berkeley Fellowship  
 2017 Department Award at UC Berkeley  
 2015 Guo Moruo Scholarship (highest honor for undergraduates in USTC)  
 2014 National Scholarship, Ministry of Education of P. R. China

## ACADEMIC SERVICES

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Reviewers for IEEE ICARCV, IEEE ICRA, IEEE RA-L  
 Faculty search student group committees