



## Roberto Martin Martin

Postdoctoral Research Fellow, Computer Science

### Bio

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#### PROFESSIONAL EDUCATION

- Doctor of Philosophy, Technische Universitat Berlin (2018)
- Master of Science, Technische Universitat Berlin (2011)
- Ingeniero, E.T.S. Ingen. Telecomunicacion (2009)

### Teaching

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#### COURSES

##### 2019-20

- Robot Perception and Decision-Making: Optimal and Learning-based Approaches: CS 336 (Aut)

### Publications

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#### PUBLICATIONS

- **Interactive Gibson Benchmark: A Benchmark for Interactive Navigation in Cluttered Environments** *IEEE ROBOTICS AND AUTOMATION LETTERS*  
Xia, F., Shen, W. B., Li, C., Kasimbeg, P., Tchapmi, M., Toshev, A., Martin-Martin, R., Savarese, S.  
2020; 5 (2): 713–20
- **GTI: Learning to Generalize Across Long-Horizon Tasks from Human Demonstrations**  
Mandlekar, A., Xu, D., Martin-Martin, R., Savarese, S., Li Fei-Fei, Toussaint, M., Bicchi, A., Hermans, T.  
MIT PRESS.2020
- **Deep Visual MPC-Policy Learning for Navigation** *IEEE ROBOTICS AND AUTOMATION LETTERS*  
Hirose, N., Xia, F., Martin-Martin, R., Sadeghian, A., Savarese, S.  
2019; 4 (4): 3184–91
- **VUNet: Dynamic Scene View Synthesis for Traversability Estimation Using an RGB Camera** *IEEE ROBOTICS AND AUTOMATION LETTERS*  
Hirose, N., Sadeghian, A. R., Xia, F., Martin-Martin, R., Savarese, S.  
2019; 4 (2): 2062–69
- **Deep Local Trajectory Replanning and Control for Robot Navigation**  
Pokle, A., Martin-Martin, R., Goebel, P., Chow, V., Ewald, H. M., Yang, J., Wang, Z., Sadeghian, A., Sadigh, D., Savarese, S., Vazquez, M., IEEE, Howard, A., et al  
IEEE.2019: 5815–22
- **Mechanical Search: Multi-Step Retrieval of a Target Object Occluded by Clutter**  
Danielczuk, M., Kurenkov, A., Balakrishna, A., Matl, M., Wang, D., Martin-Martin, R., Garg, A., Savarese, S., Goldberg, K., IEEE, Howard, A., Althoefer, K., Arai, F., et al

IEEE.2019: 1614–21

- **Variable Impedance Control in End-Effector Space: An Action Space for Reinforcement Learning in Contact-Rich Tasks**

Martin-Martín, R., Lee, M. A., Gardner, R., Savarese, S., Bohg, J., Garg, A., IEEE

IEEE.2019: 1010–17

- **Social-BiGAT: Multimodal Trajectory Forecasting using Bicycle-GAN and Graph Attention Networks**

Kosaraju, V., Sadeghian, A., Martín-Martín, R., Reid, I., Rezatofighi, S., Savarese, S., Wallach, H., Larochelle, H., Beygelzimer, A., d'Alche-Buc, F., Fox, E., Garnett, R.

NEURAL INFORMATION PROCESSING SYSTEMS (NIPS).2019

- **Regression Planning Networks**

Xu, D., Martín-Martín, R., Huang, D., Zhu, Y., Savarese, S., Fei-Fei, L., Wallach, H., Larochelle, H., Beygelzimer, A., d'Alche-Buc, F., Fox, E., Garnett, R.

NEURAL INFORMATION PROCESSING SYSTEMS (NIPS).2019

- **DenseFusion: 6D Object Pose Estimation by Iterative Dense Fusion**

Wang, C., Xu, D., Zhu, Y., Martín-Martín, R., Lu, C., Li Fei-Fei, Savarese, S., IEEE Comp Soc

IEEE COMPUTER SOC.2019: 3338–47

- **Opening a Lockbox through Physical Exploration**

Baum, M., Bernstein, M., Martín-Martín, R., Hofer, S., Kulick, J., Toussaint, M., Kacelnik, A., Brock, O., IEEE

IEEE.2017: 461–67

- **Cross-Modal Interpretation of Multi-Modal Sensor Streams in Interactive Perception Based on Coupled Recursion**

Martin-Martín, R., Brock, O., Bicchì, A., Okamura, A.

IEEE.2017: 3289–95

- **Probabilistic Multi-Class Segmentation for the Amazon Picking Challenge**

Jonschkowski, R., Eppner, C., Hofer, S., Martín-Martín, R., Brock, O., IEEE

IEEE.2016: 1–7

- **An Integrated Approach to Visual Perception of Articulated Objects**

Martin-Martín, R., Hofer, S., Brock, O., Okamura, A., Menciassi, A., Ude, A., Burschka, D., Lee, D., Arrichiello, F., Liu, H., Moon, H., Neira, J., Sycara, et al

IEEE.2016: 5091–97

- **Online Interactive Perception of Articulated Objects with Multi-Level Recursive Estimation Based on Task-Specific Priors**

Martin, R., Brock, O., IEEE

IEEE.2014: 2494–2501

- **Deterioration of Depth Measurements Due to Interference of Multiple RGB-D Sensors**

Martin, R., Lorbach, M., Brock, O., IEEE

IEEE.2014: 4205–12