Erik Wijmans

Education

Aug 2017–Present **Ph.D. in Computer Science**, *Georgia Institute of Technology*, Atlanta, GA, Advisors: Irfan Essa and Dhruv Batra.

May 2017 **Bachelor of Science, Computer Engineering, Summa Cum Laude**, *Washington University in St. Louis*, St. Louis, MO.

May 2017 **Bachelor of Science, Engineering Physics, Magna Cum Laude**, *Juniata College*, Huntingdon, PA.

Honors and Awards

o Best Paper Award Nominee at the International Conference on Computer Vision (ICCV), 2019.
Nominated for the Marr Prize at ICCV, which is awarded to the best paper appearing at ICCV. 11 nominees of 4303 submissions = top-0.25%

o 2019-20 Scholar Award Fellowship from the Achievement Rewards for College Scientists (ARCS) Foundation.
Awarded to doctoral students who show exceptional promise to advance science and technology. ($8,500)

o Washington University in St. Louis Department of Computer Science and Engineering Outstanding Junior Award.
Awarded to students who demonstrate academic and research excellence. (3 awards for $\sim$100 eligible juniors)

o Harold P. Brown Engineering Fellowship.
Award to 3-2 engineering students who demonstrate academic excellence and substantial community service. (2 awards for $\sim$100 applicants)

Publications

1. **E. Wijmans**, J. Straub, D. Batra, I. Essa, J. Hoffman, A. Morcos.
Analyzing Visual Representations in Embodied Navigation Tasks.
In *arXiv*, 2020

2. J. Krantz, **E. Wijmans**, A. Majumdar, D. Batra, and S. Lee.
Beyond the Nav-Graph: Vision-and-Language Navigation in Continuous Environments.
In *arXiv*, 2020

3. **E. Wijmans**, A. Kadian, A. Morcos, S. Lee, I. Essa, D. Parikh, M. Savva, and D.

Batra.
DD-PPO: Learning Near-Perfect PointGoal Navigators from 2.5 Billion Frames.
In *International Conference on Learning Representations (ICLR)*, 2020

4. A. Kadian, J. Truong, A. Gokaslan, A. Clegg, **E. Wijmans**, S. Lee, M. Savva, S. Chernova and D. Batra.
Are We Making Real Progress in Simulated Environments? Measuring the Sim2Real Gap in Embodied Visual Navigation.
In *arXiv*, 2019

5. M. Savva[†], A. Kadian[†], O. Maksymets[†], Y. Zhao, **E. Wijmans**, B. Jain, J. Straub, J. Liu, V. Koltun, J. Malik, D. Parikh, and D. Batra.
Habitat: A Platform for Embodied AI Research.
In *International Conference on Computer Vision (ICCV)*, 2019
Oral Talk, top 187 of 4303 submissions = top-4.3%
Best Paper Award Nominee, top 11 of 4303 submissions = top-0.25%

6. **E. Wijmans**[†], S. Datta[†], O. Maksymets[†], A. Das, G. Gkioxari, S. Lee, I. Essa, D. Parikh, and D. Batra.
Embodied Question Answering in Photorealistic Environments with Point Cloud Perception.
In *Computer Vision and Pattern Recognition (CVPR)*, 2019
Oral Talk, top 288 of 5160 submissions = top-5.5%

7. J. Straub, T. Whelan, L. Ma, Y. Chen, **E. Wijmans**, S. Green, J. J. Engel, R. Mur-Artal,C. Ren, S. Verma, A. Clarkson, M. Yan, B. Budge, Y. Yan, X. Pan, J. Yon, Y. Zou,K. Leon, N. Carter, J. Briales, T. Gillingham, E. Mueggler, L. Pesqueira, M. Savva, D. Batra, H. M. Strasdat, R. D. Nardi, M. Goesele, S. Lovegrove, and R. Newcombe.
The Replica Dataset: A Digital Replica of Indoor Spaces.
In *arXiv*, 2019

8. **E. Wijmans** and Y. Furukawa.
Exploiting 2D Floorplan for Building-Scale Panorama RGB-D Alignment.
In *Computer Vision and Pattern Recognition (CVPR)*, 2017

9. Y. Cao, S. Li, and **E. Wijmans**.
(Cross-)Browswer Fingerprinting via OS and Hardware Level Features.
In *Network and Distributed System Security Symposium (NDSS)*, 2017

Internships

May–Present **Research Intern, Intelligent Systems**, *Intel.*
Host: Vladlen Koltun

May–Aug. 2019	**Research Intern**, *Facebook AI Research*, Menlo Park, CA. With Manolis Savva and Dhruv Batra ○ Studying what agents learn when they solve a large-scale AI task
May–Aug. 2018	**Research Intern**, *Facebook Reality Labs*, Redmond, WA. With Julian Straub (FRL) and Dhruv Batra (FAIR) ○ Worked on the first steps towards the Replica Dataset and AI Habitat.
May–Aug. 2016	**NSF REU Fellow**, *Lehigh University*, Bethlehem, PA. Mentored by Yinzhi Cao (now at Johns Hopkins University).
May–Aug. 2015	**NSF REU Fellow**, *Washington University in St. Louis*, St. Louis, MO. Mentored by Yasutaka Furukawa (now at Simon Fraser University).

Posters and Invited Talks

2019	**Poster and Invited Talk**, *CVPR 2019*, Long Beach, CA. For Embodied Question Answering in Photorealistic Environments with Point Cloud Perception
2019	**Invited Talk**, *Habitat Embodied Agents Workshop, 2019*, Long Beach, CA. About my top entry to the Habitat-Challenge leader-board
2017	**Poster**, *CVPR 2017*, Honolulu, Hawaii. For Exploiting 2D Floorplan for Building-scale Panorama RGBD Alignment

Professional Activities

○ Reviewer for NeurIPS2019, CVPR2020, ECCV2020, NeurIPS2020

○ Organizer for Visually Grounded Interaction and Language Workshop, 2018, 2019, 2020

○ Organizer for Habitat: Embodied AI Challenge & Workshop, 2019

○ Organizer for Embodied AI Workshop, 2020

Teaching

○ Teaching Assistant, Deep Learning, Fall 2018

○ Teaching Assistant, Machine Learning, Fall 2017

○ Teaching Assistant, Introduction to Systems Software, Spring 2016 – Spring 2017