# WISDOM C. AGBOH

School of Computing, University of Leeds, UK Berkeley Artificial Intelligence Research (BAIR), UC Berkeley, USA.

# **EDUCATION**

University of Leeds, UK. PhD, Robotics and AI (Advisors: Prof. Mehmet Dogar & Prof. Anthony Cohn).	2017 - 2021
Middle East Technical University, Turkey. BS Mechanical Engineering, First Class Honours, Top 3%. Minor degree in Mechatronics.	2011 - 2015
RESEARCH EXPERIENCE	
University of California, Berkeley, USA. Visiting Postdoctoral Researcher (Advisor: Prof. Ken Goldberg)	2022 - 2023
University of Leeds, UK. EPSRC Doctoral Prize Research Fellow.	2021 - 2023
Procter & Gamble (P&G), UK. Research internship on machine learning. (6 months).	2020 - 2021
University of Leeds, UK. PhD research in physics-based robotic manipulation.	2017 - 2021
Sabanci University, Turkey. Graduate research in haptics and robot mechanism design.	2015 - 2017
Modesis, Turkey. Start-up research intern in feedback control, mechanical design, and state estimation.	2013
Middle East Technical University, Turkey. Undergraduate research in mechanical vibrations and mobile robots.	2012 - 2015
AWARDS	
Alan Turing Institute Post-Doctoral Enrichment Award Research fund.	2022
UK EPSRC Doctoral Prize Fellowship A prestigious 2-year research fellowship, University of Leeds, UK.	2021 - 2023
UK Royal Academy of Engineering Endorsement as a Global Talent Endorsed through peer-review under robotics with a prestigious fellowship.	2021
EPS Research Mobility Fund Research visit fund, University of Leeds, UK.	2020
Postgraduate Researcher of the Year School of Computing, University of Leeds, UK.	2019
Full Travel Grant — 8 <sup>th</sup> Parallel-in-Time Conference Travel fund, Julich Supercomputing Centre, Germany.	2019
EPSRC PhD Scholarship	2017 - 2021

### Full Masters Scholarship

2015 - 2017

Sabanci University Graduate School, Turkey.

## Full Undergraduate Scholarship

2010 - 2015

The Prestigious Bilateral Education Agreement Scholarship. Ministry of Education, Nigeria & Turkey.

#### PEER-REVIEWED ARTICLES

- W. C. Agboh, S. Sharma, K. Srinivas, M. Parulekar, G. Datta, T. Qiu, J. Ichnowski, E. Solowjow, M. Dogar, K. Goldberg, "Learning to Efficiently Plan Robust Frictional Multi-Object Grasps", IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), 2023. [PDF]
- 2. S. Aeron, E. Llontop, A. Adler, **W. C. Agboh**, M. Dogar, and K. Goldberg, "Push-MOG: Efficient Pushing to Consolidate Polygonal Objects for Multi-Object Grasping", IEEE International Conference on Automation Science and Engineering (CASE), 2023. [PDF]
- 3. K. Srinivas, S. Ganti, R. Parikh, A. Ahmad, W. C. Agboh, M. Dogar, K. Goldberg, "The Busboy Problem: Efficient Tableware Decluttering Using Consolidation and Multi-Object Grasps", IEEE International Conference on Automation Science and Engineering (CASE), 2023. [PDF]
- 4. **W.C. Agboh**, J. Ichnowski, K. Goldberg, and M.R. Dogar, "Multi-Object Grasping in the Plane", International Symposium on Robotics Research (ISRR), 2022. [PDF]
- 5. L. Pauly, W.C. Agboh, D.C. Hogg, and R. Fuentes, "One-Shot Observation Learning Using Visual Activity Features", Frontiers in Robotics and AI, 2021. [PDF]
- 6. W. Bejjani, W.C. Agboh, M. Leonetti, and M.R. Dogar, "Occlusion-Aware Search for Object Retrieval in Clutter", IEEE International Conference on Intelligent Robots and Systems (IROS), 2021. [PDF]
- 7. **W.C. Agboh**, O. Grainger, D. Ruprecht, and M.R. Dogar, "Parareal with a Learned Coarse Model for Robotic Manipulation", Comput. Visual Sci. 23, 8, pp. 1-10, (2020). [PDF]
- 8. M. Hasan, M. Warburton, **W.C. Agboh**, M.R. Dogar, M. Leonetti, H. Wang, F. Mushtaq, M. Mon-Williams, A. Cohn, "Human-like Planning for Reaching in Cluttered Environments" IEEE International Conference on Robotics and Automation (ICRA), 2020. [PDF] [Media]
- W.C. Agboh and M.R. Dogar, "Pushing Fast and Slow: Task-Adaptive Planning for Non-Prehensile Manipulation Under Uncertainty", Algorithmic Foundations of Robotics XIII. WAFR 2018. Springer Proceedings in Advanced Robotics, vol 14, pp. 160-176, 2020. [PDF]
- 10. **W.C. Agboh**, D. Ruprecht, and M.R. Dogar, "Combining Coarse and Fine Physics for Manipulation using Parallel-in-Time Integration", International Symposium on Robotics Research (ISRR), 2019. [PDF]
- 11. W.C. Agboh and M.R. Dogar, "Real-Time Online Re-Planning for Grasping Under Clutter and Uncertainty", IEEE International Conference on Humanoid Robots, pp. 387-394, 2018. [PDF]
- 12. W.C. Agboh, M. Yalcin, and V. Patoglu, "A Six Degrees of Freedom Haptic Interface for Laparoscopic Training", IEEE IROS, pp. 1107-1112, 2016. [PDF]

## ARTICLES UNDER PEER-REVIEW

1. W.C. Agboh, E. Llontop, A. Ahmad, A. Adler, J. Ichnowski, M. Dogar, T. Kollar, R. Cheng, K. Goldberg, "The Teenager's Problem: Efficient Garment Decluttering Using Heap Consolidation", IEEE Robotics and Automation Letters, 2023. [PDF]

- 2. W.C. Agboh and M.R. Dogar, "Robust Physics-Based Manipulation by Interleaving Open and Closed-Loop Execution", IEEE Transactions on Robotics, 2023. [PDF]
- 3. W.C. Agboh, D. Ruprecht, and M.R. Dogar, "Hierarchical Physics-Based Manipulation Planning", IEEE Robotics and Automation Letters, 2023. [PDF]

#### MEDIA COVERAGE

- 1. Learning to efficiently plan robust frictional multi-object grasps: interview with Wisdom Agboh, AIhub (AAAI), 2022 [Article].
- 2. A human-like planner that allows robots to reach for objects in cluttered environments, by Ingrid Fadelli, Tech Xplore, 2020 [Article].

#### RESEARCH SUPERVISION

A total of 20 students at University of Leeds, UK and UC Berkeley, USA.

2019 - 2023

# TECHNICAL TALKS

1. Inter	national Symposium on Robotics Research (ISRR).	Switzerland, 2022
2. Ham	ourg University of Technology (TU Hamburg).	Virtual, 2022
3. IEEH	International Conference on Robotics and Automation (ICRA).	Virtual, 2020
4. Inter	national Symposium on Robotics Research (ISRR).	Vietnam, 2019
$5. \ 3^{rd} \ U$	K Manipulation Workshop.	$\mathrm{UK},2019$
6. Inter	national Workshop on Parallel-in-Time Integration.	Germany, 2019
7. Worl	shop on the Algorithmic Foundations of Robotics (WAFR).	Mexico, 2018
8. IEEE	International Conference of Humanoid Robots (Humanoids).	China, 2018
9. IEEH	International Conference on Intelligent Robots and Systems (IROS).	Spain, 2018
10. IEEH	International Conference on Intelligent Robots and Systems (IROS).	South Korea, 2016
11. $6^{th}$ N	Iechatronics Engineering Student Conference (MeMok).	Turkey, 2015

# **OUTREACH**

1.	. How can AI research create a fairer world?	2020
	Panelist with a focus on robotics, University of Leeds.	

2. Pint of Robotics.

Talk on robotic manipulation and deep learning at the Library Pub, UK.

3. Africa Day
Storytelling about Africa, games, and music, in Leeds Primary Schools.

4. University Open Days. 2017 - 2020 Live robot demonstrations, public engagement, lab tours, University of Leeds.

5. **Be Curious** 2019

Live robot demonstrations for kids and families, University of Leeds.

6. University Technical College Robot Week
Talk with college students in robotics and AI, Leeds, UK.

# TEACHING

University of Leeds: 6 modules, including Robotics and Algorithms. Sabanci University: 6 modules, including Embedded Systems and Mechanisms.	2017 - 2020 2015 - 2017				
PROFESSIONAL ACTIVITIES					
1. Reviewer Robotics conferences and journals - IJRR, Autonomous Robots, ICRA, RSS etc.	2016 - 2023				
2. Robotics at Leeds Postgraduate Researchers Committee Organisation of conferences, seminar series, and other events.	2019 - 2022				

 ${\it Twitter-Linked In-Google\ Scholar-Email}$