

# **Matthew Johnson-Roberson**

**Professor at Carnegie Mellon University**

Pittsburgh, PA, US

Matthew Johnson-Roberson's research goal is to develop robotic systems capable of operating in complex dynamic environments.

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## **Biography**

Matthew Johnson-Roberson is the director of the Robotics Institute at Carnegie Mellon University. He has worked on a NASA project on satellite swarms to demonstrate how satellites might track and communicate with each other and has conducted research with NASA's Innovative Advanced Concepts (NIAC) on folding space structures. His research goal is to develop robotic systems capable of operating in complex dynamic environments. To this end, he seeks to expand and improve the perceptual capabilities of autonomous systems. He has focused on the processing and interpretation of three-dimensional data and his work has sought to push the bounds of scale and resolution in 3D reconstruction, segmentation, machine learning and robotic vision. Johnson-Roberson is the co-founder of Refraction AI, a robotics startup for last mile delivery.

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## **Industry Expertise**

Education/Learning, Construction - Residential

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## **Areas of Expertise**

Folding Space Structures, Robotic Vision, 3D Reconstruction, Artificial Intelligence, Robotics/Autonomous Vehicles, Machine Learning, Satellite Swarms, Robotic Systems

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## **Event Appearances**

**Robotics**

(2022) TC Sessions

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## **Education**

**University of Sydney**

Ph.D. Robotics

**Carnegie Mellon University**

B.S. Computer Science

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## **Accomplishments**

**NSF CAREER Award**  
**2015**

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