

William Whittaker

Founders University Research Professor at Carnegie Mellon University

Pittsburgh, PA, US

A field robotics pioneer, William "Red" Whittaker's research interests centers on mobile robots in unpredictable environments.

Biography

Dr. William "Red" Whittaker's research interests centers on mobile robots in unpredictable environments, such as natural terrain and outdoor worksites, including computer architectures to control mobile robots, modeling and planning for non-repetitive tasks, complex problems of objective sensing in random or dynamic environments, and integrations of complete field robot systems. His work encompasses core research, prototyping, and experimentation with the view that all are important to the evolution of field robots. Increasingly, his research interests are manifested through the work of the Field Robotics Center (FRC), which he directs. He has particular agenda in integrating component technologies into complete systems that prove themselves in both research and real world contexts. At FRC, they developed the remote work systems that explored and remediated the basement of the crippled Three Mile Island reactor containment basement. The Remote Reconnaissance Vehicle performed recovery tasks such as inspection, radiological mapping, material sampling, sludge transport and wall cleaning in a highly radioactive environment. Its successor, the Remote Work Vehicle (RWV), a telerobot of unprecedented capability and nuclear qualification, was developed for a broad agenda of clean-up operations. The RWV can wash contaminated surfaces, remove sediments, demolish radiation sources, apply surface treatments, and package and transport materials. Dr. Whittaker is the Fredkin Professor of Robotics at the Robotics Institute and the Chief Scientist of the Robotics Engineering Consortium at Carnegie Mellon University. He is also the Chief Scientist of RedZone Robotics.

Industry Expertise

Computer Hardware, Aerospace, Education/Learning

Areas of Expertise

Multisensor Data Fusion, Robotics in Hazardous Application, Industrial Robotics, Field & Service Robotics, Outdoor Mobile Robots, Robotic Exploration, Robotics, Computer Software, Prototyping, Robotics for Scientific Discovery, Space Robots and Systems

Affiliations

Field Robotics Center, Robotics Institute: Director, Robotic Engineering Consortium, Carnegie Mellon University: Chief Scientist, RedZone Robotics: Chief Scientist

Education

Princeton University
Civil Engineering Civil Engineering

Carnegie Mellon University
M.A. Civil Engineering

Carnegie Mellon University
Ph.D. Civil Engineering

Accomplishments

Engelberger Technology Award

Engelberger, known throughout the world as the founding force behind industrial robotics, the Engelberger Robotics Award is the world's most prestigious robotics honor.

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