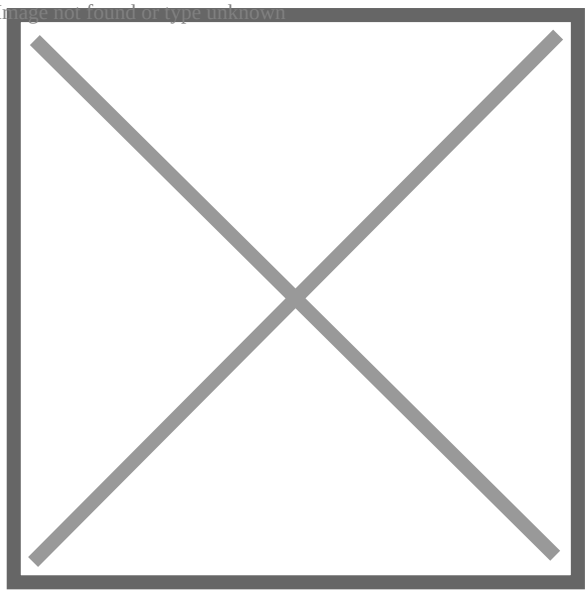
James Kuffner

Image not found or type unknown



Dr. James Kuffner is Senior Fellow in charge of the Software Development Center of Toyota Motor Corporation (TMC), and Executive Advisor of Toyota Research Institute (TRI). Dr. Kuffner previously served as a Member of the Board of Directors, Operating Officer, and Chief Digital Officer of TMC from 2020 to 2023, was the founding Chief Executive Officer (CEO) and Representative Director of Woven by Toyota, Inc. from 2018 to 2023, and Chief Technology Officer (CTO) of TRI from 2016 to 2018.

As TMC Senior Fellow, Dr. Kuffner serves to strengthen the business and technology vision for Toyota's Software Development Center, and support software and digital skills development and education across the Toyota group, specifically in the areas of Advanced Safety, Automated Driving, AI, Robotics, and new mobility technology and products.

Dr. Kuffner was Research Scientist and Engineering Director at Google from 2009 to 2016. He was part of the initial engineering team that built Google's self-driving cars. In 2010, he introduced the term "Cloud Robotics" to describe how network-connected robots could take advantage of distributed computation and data stored in the cloud. He was appointed head of Google's Robotics division in 2014.

Dr. Kuffner was Associate Professor at Carnegie Mellon University's Robotics Institute from 2002 to 2008, leading research and teaching both Computer Science and Robotics. Dr. Kuffner is best known as a co-inventor of the Rapidly-exploring Random Tree (RRT) algorithm, which has become a key standard benchmark for robot motion planning. He has published over 125 technical papers, holds more than 50 patents, and received the Okawa Foundation Award for Young Researchers in 2007.

Dr. Kuffner earned Doctor of Philosophy (2000), Master of Science (1995), and Bachelor of Science (1993) degrees in Computer Science from Stanford University. He was a Japan Society for the Promotion of Science (JSPS) Postdoctoral Research Fellow at the University of Tokyo working on software and planning algorithms for humanoid robots from 1999 to 2001.