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*Dongguk University, Republic of Korea***Nature inspired path planning for robotics**

Path planning is one of the core research areas in robotics which deals with finding the optimal path for robots considering the required constraints. In this talk, we will revisit two primitive path planning methods, cell decomposition-based path planning and artificial potential field-based path planning. By using the inspiration from nature, new concepts using opposite angle and water-sink model are introduced for advanced path planning. These methods give us not only the efficiency but also the effectiveness in robot path planning problem.

Speaker Biography

Jin-Woo Jung received the B.S. and M.S. degrees in electrical engineering and Ph.D. degree in electrical engineering and computer science from Korea Advanced Institute of Science and Technology, Daejeon, Korea, in 1997, 1999, and 2004,

respectively. Since 2006, he has been with the Department of Computer Science and Engineering, Dongguk University, Seoul, Korea, where he is currently a Professor. During 2001–2002, he was a Visiting Researcher with the Department of Mechano-Informatics, University of Tokyo, Tokyo, Japan. During 2004–2006, he was a Researcher with the Human-friendly Welfare Robot System Research Center, Korea Advanced Institute of Science and Technology, Daejeon, Korea. During 2014, he was a Visiting Scholar with the Department of Computer and Information Technology, Purdue University, West Lafayette, IN, USA. He has published more than 50 papers in reputed journals and has been serving as an editorial board member of several journals including Journal of Fuzzy Logic and Intelligent Systems.

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