



Special Issue Reprint

Applications of Fractional-Order Calculus in Robotics

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This reprint has captured the breadth of research on fractional calculus applications in various robotic systems. This reprint highlights fractional calculus's numerous and diverse applications in improving robotic systems, emphasizing its importance in modern robotics research and development. Researchers have addressed complex problems with greater precision and efficiency by incorporating fractional calculus into their methodologies, demonstrating the versatility and robustness of this mathematical approach, which ranges from improving control accuracy and path planning to increasing system robustness against disturbances and uncertainties. This reprint pushes the boundaries of robotics, stressing both theoretical advances and practical applications. It also proposes novel answers to long-standing robotics difficulties, demonstrating fractional calculus's potential to transform several elements of robotic technology. In conclusion, this reprint emphasizes the importance of fractional calculus in advancing robotic technology and urges more research and development in this promising field.



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