Research Notes

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Hello World! [1]

1 Reviews

ID, Title, Author, Journal	Research areas, Tools	Objectives, Methodology, Discussion	Conclusions, My inference, Gaps
• **authyear** • *paper title* • firstname1 surname1 and firstname2 surname2 • journal	• keyword1 • keyword2	• objec • method • disc	• concl • gap
• **aydin2006** • *Quaternion Based Inverse Kinematics for Industrial Robot Manipulators with Euler Wrist* • Yavuz Aydın and Serdar Kucuk • IEEE 3rd International Conference on Mechatronics (ICM 2006)	• wrist IK • quaternion-vector pair for 6-dof pose	• Double quaternion instead of dual quaternion • Approximate translation magnitue d as rotation by angle $\psi = \frac{d}{R}$ about normalised vector d.	• Results obtained by using double quaternions are coordinate frame invariant.
• **authyear** • *paper title* • firstname1 surname1 and firstname2 surname2 • journal	• keyword1 • keyword2	• objec • method • disc	• concl • gap

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• **ge1998** • *Double quaternions for motion interpolation* • Ge, Q J and Varshney, Amitabh and Menon, Jai P and Chang, Chu-Fei • —	• dual quaternions	• Double quaternion instead of dual quaternion • Approximate translation magnitue d as rotation by angle $\psi = \frac{d}{R}$ about normalised vector d.	• Results obtained by using double quaternions are coordinate frame invariant.
• **lee2012a** [2] • *Estimation of Attitude and External Acceleration Using Inertial Sensor Measurement During Various Dynamic Conditions* • Jung Keun Lee and Edward J. Park and Stephen N. Robinovitch • IEEE Transactions on Instrumentation and Measurement	• IMU • attitude estimation • Kalman filter	• objec • method • disc	• concl • gap
• **authyear** • *paper title* • firstname1 surname1 and firstname2 surname2 • journal	• keyword1 • keyword2	• objec • method • disc	• concl • gap
• **oland2018** [3] • *Quaternion-based Control of Fixed-Wing UAVs Using Logarithmic Mapping* • Espen Oland • 9th International Conference on Mechanical and Aerospace Engineering, IEEE	• DQ log map • UAV stability analysis	• objec • method • disc	• concl • gap

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• **oliveira2015** [4] • *A new method of applying dfferential kinematics through dual quaternions* • Andre Schneider de Oliveira and Edson Roberto De Pieri and Ubirajara Franco Moreno • Robotica, Cambridge	• DQ diff. kinematics, DQ Jacobian	• objec • method • disc	• concl • gap
• **authyear** • *paper title* • firstname1 surname1 and firstname2 surname2 • journal	• keyword1 • keyword2	• objec • method • disc	• concl • gap
• **thomas** • *Approaching Dual Quaternions from Matrix Algebra* • Frederico Thomas • —	• double quaternion derivation	• objec • method • disc	• concl • gap
• **wang2012a**[5] • *The geometric structure of unit quaternion with application in kinematic control* • Xiangke Wang and Dapeng Han and Changbin Yu and Zhiqiang Zheng • Journal of Mathematical Analysis and Applications, Elsevier	• DQ geom. struc., DQ log mapping, kinematic control	• objec • method • disc	• concl • gap

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End of Notes			

References

[1] Ramkumar Gandhinathan and Lentin Joseph. *ROS Robotics Projects: Build and control robots powered by the Robot Operating System, Machine Learning, and Virtual Reality*. Packt Publishing, 2 edition, 2019.

[2] Jung Keun Lee, Edward J. Park, and Stephen N. Robinovitch. Estimation of Attitude and External Acceleration Using Inertial Sensor Measurement During Various Dynamic Conditions. *IEEE Transactions on Instrumentation and Measurement*, 61(8):2262–2273, 2012.

[3] Espen Oland. Quaternion-based control of fixed-wing uavs using logarithmic mapping. In *9th International Conference on Mechanical and Aerospace Engineering*, 2018.

[4] Andre Schneider de Oliveira, Edson Roberto De Pieri, and Ubirajara Franco Moreno. A new method of applying dfferential kinematics through dual quaternions. *Robotica*, 35:907–921, 2015.

[5] Xiangke Wang, Dapeng Han, Changbin Yu, and Zhiqiang Zheng. The geometric structure of unit quaternion with application in kinematic control. *Journal of Mathematical Analysis and Applications*, 389:1352–1364, 2012.