Identification of Isomorphism and Detection of Kinematic Chains having different Kinematic Pair

MD Akhtar¹, Dr. Baiju D. Tharakan², Sayeed Ahamad³

¹Parthivi College of Engineering & Management, Bhilai, Chhattisgarh mdakhtar20067@gmail.com

²Parthivi College of Engineering & Management, Bhilai, Chhattisgarh

³Department Of Mechanical Engineering, Jamia Millia Islamia University New Delhi sayeedmi08@gmail.com

Abstract: Development of the method for generalizing the planer kinematic chains having same number of links but different kinematic pairs. By using link-link form of the incidence matrix or [JJM]Matrix. and elements of the matrix was chosen as one and zero depending on the absence or presence of a direct kinematic connection in between the joints, we found that kinematic chains having same number of link and different kinematic pair are isomorphic but in real practice it should be different. To overcome this problem we are trying to develop a different set of matrix called kinematic pair matrix.

Keywords: Isomorphism, Kinematic chain, JJM matrix, Kinematic Pair Matrix