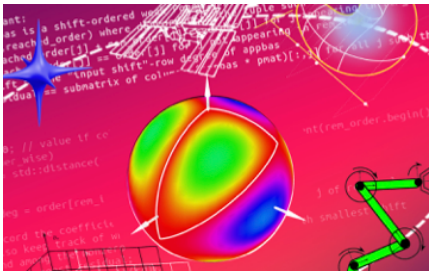

ID de Contribution: **23** Type: **Non spécifié**

# Polynomial Systems Arising in Paradoxical 6R Linkages by Zijia Li

*mardi 17 octobre 2023 14:30 (1 heure)*

Abstract. In this talk, we first provide a comprehensive definition of closed n-linkages and explain their mobility, typically denoted as n-6. We then focus on the intriguing subset of closed n-linkages with a mobility higher than n-6, known as paradoxical linkages. Based on the powerful tools of Bond Theory and the freezing technique, we present a thorough classification of n-linkages with a mobility of n-4 or higher, incorporating revolute, prismatic, or helical joints. Additionally, we explicitly derive strong necessary conditions for nR-linkages with a mobility of n-5. Utilizing these necessary conditions, we explore and discuss possible polynomial systems that arise in paradoxical 6R linkages.