1167-22-186   **Tsao-Hsien Chen***, 1005 5TH ST. SE, Minneapolis, MN 55418, and **Bao Chau Ngo**. *On the invariant theory for the commuting scheme.*

The commuting scheme has always been of great interest in invariant theory but it was only recent that it appears as a primordial object in the study of the Hitchin morphism for higher dimensional varieties. I will explain how the invariant theory for the commuting scheme, in particular the Chevalley restriction theorem for the commuting scheme, was used in the study of Hitchin morphism and the proof of the Chevalley restriction theorem in the case of symplectic Lie algebras. The talk is based on joint work with Ngo Bao Chau. (Received March 06, 2021)