1120-46-202   **Vrej Zarikian*** (`zarikian@usna.edu`), USNA Department of Mathematics, 572C Holloway Road, Annapolis, MD 21402. *Unique pseudo-expectations for C*-inclusions.*

A pseudo-expectation for a C^*-inclusion $D \subset C$ is a generalization of a conditional expectation. Precisely it is a ucp map $\Phi : C \to I(D)$ such that $\Phi|_D = id$. (Here $I(D)$ is the injective envelope of D.) Whereas a C^*-inclusion may not admit any conditional expectations, it must have at least one pseudo-expectation, by injectivity. In this talk, based on recent joint work with David Pitts, we investigate the relationship between a C^*-inclusion and its pseudo-expectation space, in particular how the existence of a unique pseudo-expectation relates to structural properties of the inclusion. First we consider examples, emphasizing the cases of abelian inclusions and W^*-inclusions. Then we state some general results, the strongest of which hold when D is abelian. In that case there is a Krein-Milman theorem for the pseudo-expectation space, and an order-theoretic characterization of the unique pseudo-expectation property. Finally, as applications, we explore the connection between the unique pseudo-expectation property and norming (in the sense of Pop, Sinclair, and Smith), as well as its impact on C^*-envelope calculations. (Received February 22, 2016)