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**David Blanc** ([blanc@math.haifa.ac.il](mailto:blanc@math.haifa.ac.il)), Department of Mathematics, University of Haifa, 31905 Haifa, Israel, **Mark W Johnson** ([mwj3@psu.edu](mailto:mwj3@psu.edu)), Department of Mathematics, Pennsylvania State University, Altoona, Altoona, PA 16601-3760, and **James M Turner\*** ([jturner@calvin.edu](mailto:jturner@calvin.edu)), Department of Mathematics and Statistics, Calvin College, Grand Rapids, MI 49546. *On interpreting cohomological obstructions to topologically realizing  $\Pi$ -algebras.*

In this talk, an overview is given of recent work aimed at understanding the various approaches to determining when a  $\Pi$ -algebra (the proper model for the primary algebraic structure on the homotopy groups of spaces) can be realized as the homotopy groups of some space. Some of these approaches come in the form of elements in certain cohomology groups whose non-triviality serve as obstructions to the possibility of such realizations. One particular aim of this talk will be to indicate how these cohomology obstructions may be interpreted in terms of higher homotopy operations. (Received August 25, 2008)