1046-46-2044 Masayoshi Kaneda* (mkaneda@math.uci.edu), Department of Mathematics, The University of Mississippi, University, MS 38677-1848. Quasi-Multipliers and Algebrizations of Operator Spaces.
One of the most interesting questions in the operator space theory was: What are the possible operator algebra products a given operator space can be equipped with? I answered the question by using quasi-multipliers. That is, a bilinear mapping on a given operator space is an operator algebra product if and only if the bilinear mapping is implemented by a contractive quasi-multiplier. Moreover, I gave an elegant metric (matrix norm) characterization of operator algebra products using the Haagerup tensor product. This is interesting because an algebraic structure (product) is induced by a geometric structure (matrix norm). This characterization also gives a short proof of the Blecher-Ruan-Sinclair Theorem as a simple corollary. If time permits, we discuss a characterization of operator algebras with a contractive approximate (one-sided) identity in terms of quasi-multipliers and extreme points. We also give an operator space characterization of C*-algebras and their one-sided ideals. (Received September 16, 2008)