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**Wolfram Bauer, Boo Rim Choe and Hyungwoon Koo\***, Department of Mathematics, Korea University, Seoul, 136-713, South Korea. *Commuting Toeplitz operators with pluriharmonic symbols on the Fock space.*

In the setting of the Bergman space over the disk or the ball, it has been known that two Toeplitz operators with bounded pluriharmonic symbols can (semi-)commute only in the trivial cases. In this talk we present the analogues on the Fock space over the multi-dimensional complex space. As is the case in various other settings, we are naturally led to the problem of characterizing certain type of fixed points of the Berezin transform. For such fixed points, we obtain a complete characterization by means of eigenfunctions of the Laplacian. We also obtain other characterizations. In particular, it turns out that there are many nontrivial cases on the Fock space for (semi-)commuting Toeplitz operators with pluriharmonic symbols. All in all our results reveal that the situation on the Fock space appears to be much more complicated than that on the classical Bergman space setting, which partly is caused by the unboundedness of the operator symbols. (Received August 18, 2015)