1108-81-514   **Aurel Iulian Stan*** (`stan.7@osu.edu`), 1465 Mount Vernon Avenue, Marion, OH 43302, and **Gabriela Popa** (`popag@ohio.edu`), Department of Physics, College of Arts and Sciences, 240 Elton Hall, Zanesville, OH 43701. *A characterization of Meixner random variables in terms of semi-quantum operators.* Preliminary report.

The commutators of the quantum operators: creation, preservation, and annihilation can be used to describe the class of Meixner random variables, due to the almost Lie Algebra structure of this class. However, to describe completely the Meixner random variables in this way, we must split this class into the symmetric and non-symmetric random variables, and describe each of these two subclasses separately. By splitting the annihilation operators into two halves, and combining one half with the creation operator and the other half with the annihilation operator, we form the semi-quantum operators. Using the commutators of the semi-quantum operators, we can describe the entire class of Meixner random variables in a simple and unitary way. Moreover, the semi-quantum operators allow us to define the notion of d-dimensional n-Meixner random vectors, for any d and n natural numbers. We describe completely the class of 2-dimensional 1-Mexiner random vectors. (Received January 20, 2015)