1090-13-434 **Alina Florescu*** (`alina-florescu@uiowa.edu`). *Generalized Integer Factorizations.* Preliminary report.

D. D. Anderson and A. Frazier introduced a general theory of factorization in *On a general theory of factorization in integral domains*, Rocky Mountain J. Math. vol. 41, no. 3 (2011), 663-705.

Fixing a non-negative integer n, a τ_n-factorization of an integer a ($\neq -1, 0, 1$) is a factorization of the form

$$a = a_1 a_2 \dots a_k \qquad \text{or} \qquad a = (-1) a_1 a_2 \dots a_k$$

where $a_1 \equiv a_2 \equiv \dots \equiv a_k \mod n$ and a_i are non-units. A reduced τ_n-factorization of a is a τ_n-factorization of the first type, $a = a_1 a_2 \dots a_k$, with $a_1 \equiv a_2 \equiv \dots \equiv a_k \mod n$ and $a_i \neq \pm 1$. We will compare τ_n-factorizations of the integers, reduced τ_n-factorizations and τ_n-factorizations of the natural numbers and discuss how the Fundamental Theorem of Arithmetic extends to these factorizations. (Received March 06, 2013)