1093-11-38 **Abdelmejid Bayad** and **Matthias Beck*** (mattbeck@sfsu.edu). *Relations for Barnes Zeta Functions.* Preliminary report.

The *Barnes ζ-function* is

$$\zeta_n(z, x; a_1, \ldots, a_n) := \sum_{(m_1,\ldots,m_n)\in \mathbf{Z}^n_{\geq 0}} \frac{1}{(x + m_1a_1 + \cdots + m_na_n)^z}$$

defined for $\Re(x) > 0$ and $\Re(z) > n$ and continued meromorphically to $\mathbf{C}$. We exhibit relations between this function, its special evaluations (analogues of Bernoulli polynomials), the Hurwitz ζ-function, and Fourier-Dedekind sums. Our results can be interpreted as bridging between Euler-type identities for Bernoulli numbers and reciprocity theorems for Dedekind-type sums. (Received July 01, 2013)