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Mahya Ghandehari* (mahya@udel.edu), 15 Orchard Rd, Room 501, Newark, DE 19716, and
Hun Hee Lee, Jean Ludwig, Nico Spronk and **Ludmyla Turowska**. *Gelfand spectrum of weighted Fourier algebras.*

Weighted Fourier algebras, *a.k.a.* Beurling-Fourier algebras, are analogues of the Beurling algebra in the non-commutative setting. These Banach algebras for general locally compact groups were defined as the predual of certain weighted von Neumann algebras, where a weight on \widehat{G} is defined to be a suitable unbounded operator affiliated with the group von Neumann algebra. In this talk, we present the general definition of a Beurling-Fourier algebra, and discuss how their spectra can be identified. In particular, we determine the Gelfand spectrum of Beurling-Fourier algebras for some representative examples of Lie groups, such as $SU(n)$ and the Heisenberg group, representing spectra in terms of the complexification of the underlying Lie groups. This talk is based on joint work with Lee, Ludwig, Spronk, and Turowska. (Received January 15, 2020)