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Carlo Bardaro* (carlo.bardaro@unipg.it), Department of Mathematics and Computer Sci.,
Via Vanvitelli, 1, 06123 Perugia, Italy, and **Paul Leo Butzer** and **Ilaria Mantellini**. *Sampling
and reproducing kernel theory in the setting of Mellin transform analysis; applications.*

This invited lecture will deal with the exponential sampling theorem for Mellin bandlimited functions and its links with reproducing kernel theory and the Parseval formula in the Mellin transform setting. It will be shown that the three basic results are all equivalent to another. The sampling theorem for non-band-limited functions, which is important in engineering circles, will also be considered. Applications with detailed error analyses will be presented. (Received September 13, 2014)