

Exponential function on nonuniform lattices and solutions to some q -indeterminate moment problems**11.09** **Maurice Kenfack Nangho***(Department of Mathematics and Computer Science, University of Dschang, Cameroon)***Time:** Tuesday 23.07., 10:30 - 11:00, Room HS 4

Abstract: We develop analogs of exponential and trigonometric functions (including the basic exponential function) and derive their fundamental properties: addition formula, positivity, reciprocal and fundamental relations of trigonometry. We establish a binomial theorem provide a formula for computing the n th-derivatives for analytic functions on nonuniform lattices (q -quadratic and quadratic variables). We also develop solutions to q -indeterminate moment problems related with Askey-Wilson polynomials. This talk is based on [1,2].

- [1] M. Kenfack Nangho, M. Foupouagnigni and W. Koepf: On exponential and trigonometric functions on nonuniform lattices, *Ramanujan Journal*, Volume 49, Issue 1, May 2019, Pages 1–37.
- [2] M. Kenfack Nangho and K. Jordaan: A characterization of Askey-Wilson polynomials, *Proceedings of the AMS*, Volume 147, Number 6, June 2019, Pages 2465–2480.