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# Hyperbolic Hypergeometric Functions

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**Abstract.** Basic hypergeometric functions are typically not well-defined if  $|q| = 1$ , unless they terminate. In this talk I will introduce a class of hypergeometric functions which can be used instead of basic hypergeometric functions which avoids these problems at  $|q| = 1$ .

I will discuss its connections to classical, basic and elliptic hypergeometric functions. Subsequently I will discuss several properties of these new hypergeometric functions and indicate how these relate to properties of (basic) hypergeometric functions. In particular I will discuss some identities satisfied by hyperbolic hypergeometric functions and their classical and basic hypergeometric counterparts. Moreover I want to indicate how to obtain hyperbolic hypergeometric functions in representation theory of the Modular Quantum Double of a quantum group.