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**HUGO CHAPDELAINÉ**, Université Laval

*Conditional convergence in the critical strip for lattice zeta functions associated to totally real fields*

The goal of this talk is to explain how a miraculous formula of Brion, related to the enumeration of lattice points in integral convex polytopes implies the conditional convergence of certain Dirichlet series  $Z(s)$  when the complex parameter  $s$  is such that  $1 - \epsilon < \operatorname{Re}(s)$ , for  $\epsilon$  small enough. Note that the order of summation of the series  $Z(s)$  is defined in a geometrical way. In order to simplify the presentation we shall focus on the simplest non-trivial case namely when  $Z(s)$  is a lattice zeta function associated to a real quadratic field  $K$ . In that case one can take  $\epsilon = \frac{1}{2}$ .