**Title and abstract**

Special function solutions of Painlevé equations

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Special function solutions of the Painlevé equations are relevant in several areas of analysis, like the theory of semiclassical orthogonal polynomials. They can be constructed using Wronskian determinants, where the seed functions are classical special functions, and this formulation is particularly useful for asymptotic analysis. We will consider the case of the Painlevé IV equation, where the special function solutions are written in terms of parabolic cylinder functions; these special function solutions can be related to Hermite-type polynomials with a discontinuous weight function defined on the real line.

Joint work with Christophe Charlier (Université Catholique de Louvain, Belgium)