

## The mathematical functions grimoire

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**06.08****Fredrik Johansson***(INRIA Bordeaux and Institut de Mathématiques de Bordeaux, France)***Time:** Wednesday 24.07., 12:00 - 12:30, Room HS 5

**Abstract:** Fungrim (<http://fungrim.org>) is a new, open source database of formulas and tables for special functions. All formulas are encoded symbolically and include explicit conditions of validity for the variables, representing rewrite rules that can be applied mechanically without implicit exceptions (for instance, regarding branch cuts).

The immediate goal is to create a web-based special functions reference work that addresses some of the drawbacks of resources such as the NIST Digital Library of Mathematical Functions, the Wolfram Functions site, and Wikipedia. A potential longer-term ambition is to provide a software library for symbolic knowledge about special functions, usable by computer algebra systems and theorem proving software.

This talk will discuss the motivation behind the project, design issues, and possible applications. The project is still in experimental stages, and feedback is invited.