

1135-33-1311      **Bruce R Miller\*** ([bruce.miller@nist.gov](mailto:bruce.miller@nist.gov)), 100 Bureau Drive, Gaithersburg, MD 20899.  
*Cataloging of DLMF's Special Functions*. Preliminary report.

The initial efforts in NIST's Digital Library of Mathematical Functions (DLMF; <http://dlmf.nist.gov/>) project focused on an informal view of the mathematics, with an eye to human engineers and scientists. And yet these efforts were taken with an acute awareness of the underlying semantics and its ultimate utility.

We will discuss ongoing efforts to (at least in part) formalize the DLMF's data, in particular leading towards machine-readable representations of the information. A fundamental stage in this evolution is the development of an effective catalog of the special functions covered in DLMF, in particular their definitions, domains of applicability and most significant properties. This effort is in support of the 'Special Function Concordance' which will lead to the interoperability of different libraries and software systems which deal with these functions. (Received September 21, 2017)