

A Simon Fraser University Workshop on

Special Functions in the Digital Age

January 23 and 24, 2003



Figure courtesy of Alois van den Waik. The curve of the cubical paraxial ray $f_{\text{ray}}(s) = 1 + 2s^2 + 3s^4 + 4s^6 + 5s^8 + 6s^{10} + 7s^{12} + 8s^{14} + 9s^{16} + 10s^{18} + 11s^{20} + 12s^{22} + 13s^{24}$

The Centre for Experimental and Constructive Mathematics and the Pacific Institute for the Mathematical Sciences are pleased to cosponsor an informal workshop on Special Functions in the Digital Age.

Refreshments will be served.

Please email jen@cecm.sfu.ca to register.



Thursday, January 23, 2003
CECM/CoLab, P8493

09:30 – 12:30

A small group discussion in CoLab identifying issues of common interest for the participants to profitably work on together, and with others, will be followed by a mini conference with hour long talks.

14:00 – 16:00

Elementary Functions in an Automatic Symbolic Context
Part I: *Inverse functions and the unwinding number*
David Jeffrey, UWO
Part II: *Closure, continuity and correctness*
Rob Corless, UWO

16:00 – 17:00

Special Functions & Maple
Edgardo Cheb-Terrab, UERJ Brazil, CECM and Maple

18:00

Self-hosting workshop dinner

Friday, January 24, 2003
Morning Workshop in P8493

09:30 – 10:30

The Multiple Gamma Function: Theory, Computation and Applications
Victor Adamchik, Carnegie-Mellon

10:30 – 11:30

Digital Library of Special Functions Technical Issues
Dan Lozier, NIST

11:30 – 12:30

Experiments in Mathematics
Jon Borwein, SFU

Friday, January 24, 2003
Afternoon Presentation in K9509

14:30 – 15:30

Toward a New (and New-Age) Abramowitz and Stegun
Dan Lozier, NIST

Abstract

Abramowitz and Stegun's Handbook of Mathematical Functions (with Formulas, Graphs, and Mathematical Tables) was first published by the National Bureau of Standards in 1964. It remains a technical bestseller and is among the most widely cited of all math reference compendia. But the Handbook is increasingly out-of-date. A project is underway at the National Institute of Standards and Technology (the heir to NBS) to develop a replacement which will become a major resource of math reference data for special functions and their applications (<http://dlmf.nist.gov/>).

