

Report on the
Current State
of the
French Digital Mathematics Libraries

Thierry Bouche

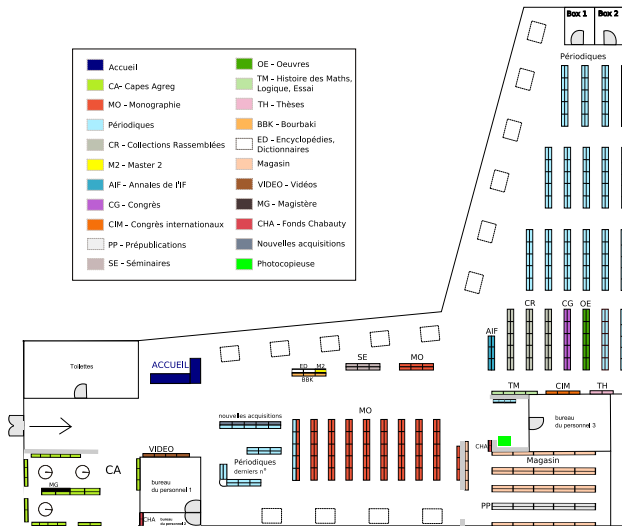
Cellule MathDoc & institut Fourier,
Université de Grenoble

Towards a Digital Mathematics Library
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Outline

- 1 Introduction
- 2 Books and theses
- 3 Journals and other serials
- 4 Archives and rare items
- 5 Electronic collected works
- 6 Personal collected works

A Typical Mathematics Library (Institut Fourier, France)



The Digital Mathematics Library

What's that?

- A list? (REHMANN, UW MATH LIBR.)
- A database? (MINI-DML)
- A list of databases? (DMR)
- Virtual shelves? (MATHGUIDE)
- A database of databases?
- A list of national DMLs?? (DMLs)

The French Digital Mathematics Libraries

Main providers (≈ 50,000 items)

Books ≈ 1,500 items

- Gallica (1683-1939)
- University libraries
- Jussieu/Springer

Theses ≈ 2,000 items

- TEL (Thèses en ligne, 1929-current)
- University libraries
- NUMDAM (1913-1945)

Serials ≈ 38,000 items + 75,000 CRAS

- NUMDAM: 30 journals + 28 seminars (1830-current)
- Gallica: 5-15 journals (-1939, except CRAS -1996)

Electronic collected works

- HAL (and arXiv)
- NUMDAM/SMF/Polytechnique: Laurent Schwartz
- Bourbakistas: Grothendieck
- Personal collected works

Books & Theses

Gallica

- Gallica has about 740 digitised math books (GALLICA, LiNUM)
- published between 1683-1939
- Usually 300 dpi monochrome
- 214 with OCR text

Books & Theses

TEL, NUMDAM

TEL (Thèses en ligne) French university theses
1,500 math theses (1927-2009) (TEL, CMD)

NUMDAM 450 doctoral theses (1913-1945)
doctorat d'État, not Ph. D. (HERBRAND)

Books & Theses

Other

- Patrimoine numérisé du Service de la documentation de l'université de Strasbourg
139 books (1544-1917) (SICD)
 - Les bibliothèques virtuelles humanistes
5 books (1516-1581) (BVH)
 - PôLib : 2 old books (1634, 1731) (POLIB)
 - NUMIX: 4 books (NUMIX)
 - Jubilothèque (Jussieu): x books & theses. (Site)
- + Jussieu-Chevaleret mathematics' library intends to digitise about 500 out-of-print books published by Springer group.

Journals and other serials

NUMDAM

- 27 “French” journals, 3 from Europe (Site)
- 27 seminar proceedings series (from Paris IHP, ENS, Collège de France, Strasbourg)
- Bourbaki seminar
- 31,000 articles; 647,000 pages online
- 2,000 articles behind the moving wall, 10% content born digital
- 11,500 articles; 124,000 pages digitised but not posted yet
- Still growing. . .

Journals and other serials

Gallica

- Old generalist journals (*Journal des Sçavans, Journal de l'École polytechnique...*)
(JSç, JEP)
- Elsevier journals not in NUMDAM, with a 70 years "moving wall" (BSM)
- Catalogue enhanced by MathDoc when possible (JMPA)
- *Comptes rendus de l'académie des sciences* up to 1996 (CRAS1)
- 2 duplicates with NUMDAM so far (BSMA, BSMF!)

Journals and other serials

Other sources

- EDP Science/HAL: *Journal de Physique, Le Radium*. . . (JPHYS, HAL)
13 journals, 41973 articles, 300,000 pages
- *Publications mathématiques d'Orsay* (Orsay, PMO)
181 volumes, seminar proceedings
- Modulad: 40 volumes (Site)
- *Les cahiers de l'analyse des données* (1994-1997) (Site)
- *Bulletin astronomique* (30 volumes) at Astrophysics Data System (SAO/NASA, Harvard) (ADS)

Journals and other serials

Unarchived or unarchivable

- *International Journal On Finite Volumes* (2004-) (Site)
- *Journal of the Institute of Mathematics of Jussieu* (2002-) (Site)
- *European Journal of Control* (7(2-3);2001-) (Site)

Archives and rare items

- Nicolas Bourbaki's manuscripts and archives (CMD)
- Laurent Schwartz' personal archives (Polytechnique)
- Unpublished or unfinished works by Michel Herman, edited by Jean-Christophe Yoccoz at Collège de France (List)
- Videos at EHESS (List)

Electronic collected works

- Grothendieck circle/Bourbakistas
- NUMDAM/SMF/Polytechnique: Laurent Schwartz

Personal electronic collected works

IMU 2001 Call to all mathematicians “to make available electronically as much of their own work as feasible”

Examples CEIC members (2001)

- Jonathan M. Borwein
- Jonas Gomes
- Martin Grötschel
- Wilfrid Hodges
- Peter Michor
- David R. Morrison
- Kapil Paranjape
- Alfred J. van der Poorten
- John Ewing, Alexei Borisovich Zizchenko, Qing Zhou

Alain Connes bibliography