

Doing Science Internationally in the early 20th century



Science done internationally?

- What does it mean?
 - Letter Exchange
 - Translations
 - Universities as meeting places
 - Studying abroad
- Obstacles to meeting in person:
 - Distance
 - Borders
 - ...

1893: Columbian exhibition

- Meeting of mathematicians: associated
- Organised by Felix Klein
- Two other participants from Europe:
 - Eduard Study
 - Norbert Herz
- Compare: Antonín Dvořák (1892-1895)
 - Journey nine days (train, ship, train)
 - for a stay months, not days, long

American mathematics: offspring of German and British mathematics?

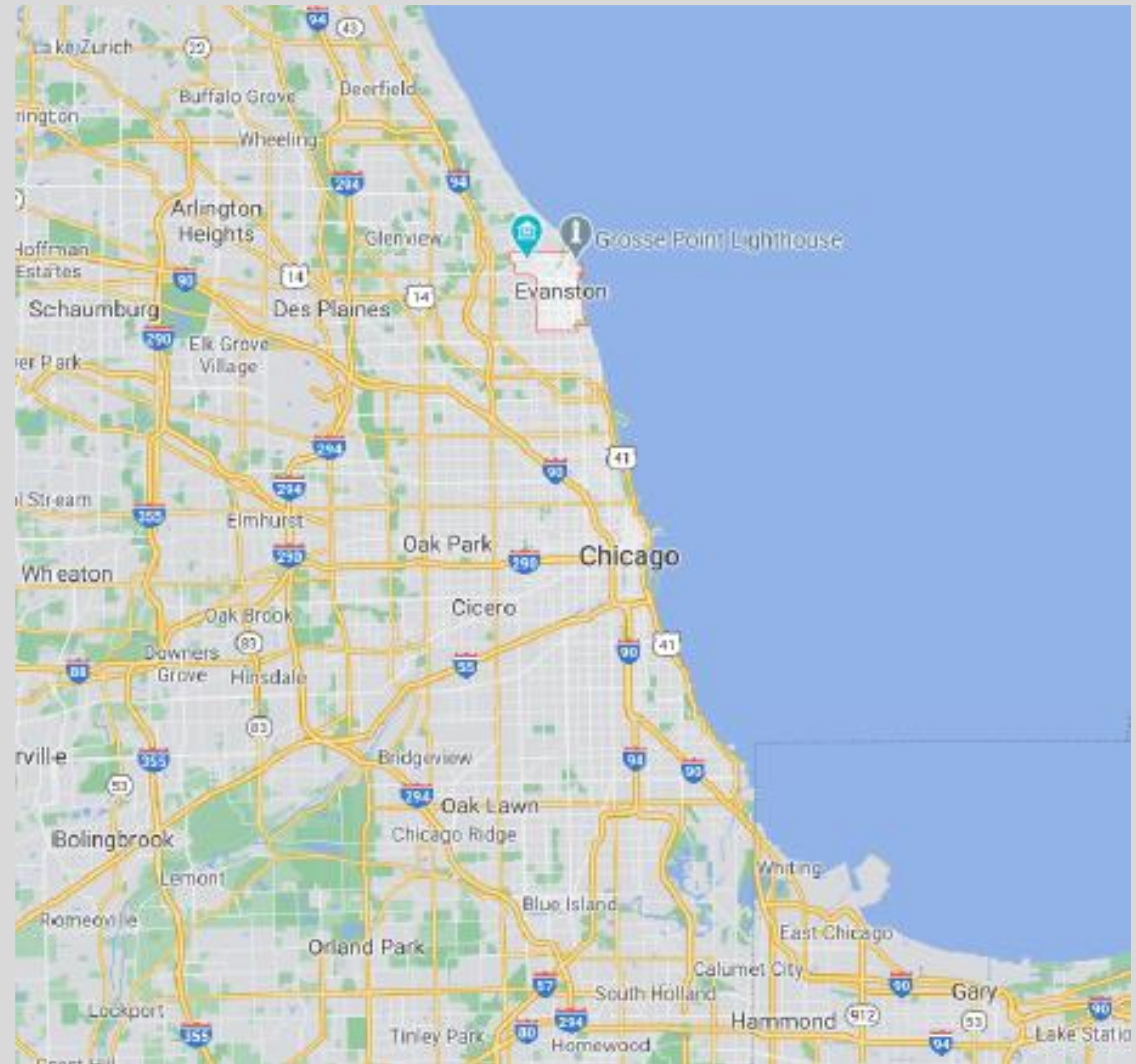
James Joseph Sylvester
(1814-1897)

Felix Klein
(1849-1925)



Evanston, IL 1893

Lectures by Felix Klein
for American
mathematicians
from 28 August
to 9 September



International Congress of Mathematicians: Before the Great War

- Zurich, Switzerland (1897)
- Paris, France (1900)
- Heidelberg, Germany (1904)
- Rome, Italy (1908)
- Cambridge, UK (1912)

Zurich 1897

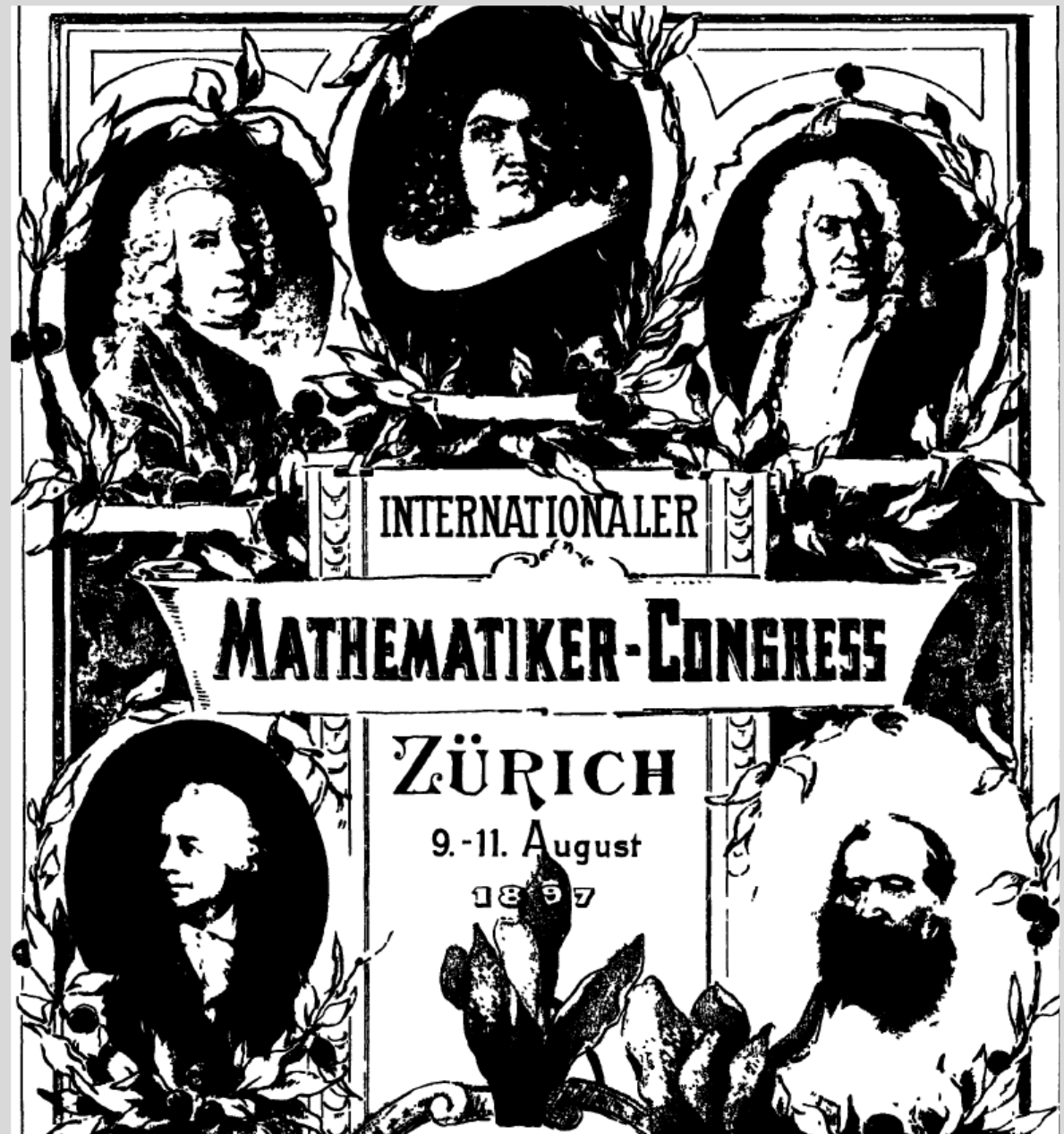
Daniel Bernoulli
(1700-1782)

Jacob Bernoulli
(1654-1705)

Johann Bernoulli
(1667-1748)

Leonhard Euler
(1707-1783)

Jakob Steiner
(1796-1863)



Paris 1900

Start of a new century

David Hilbert

(1862-1943)

French mathematicians:

Charles Hermite

(1822-1901)

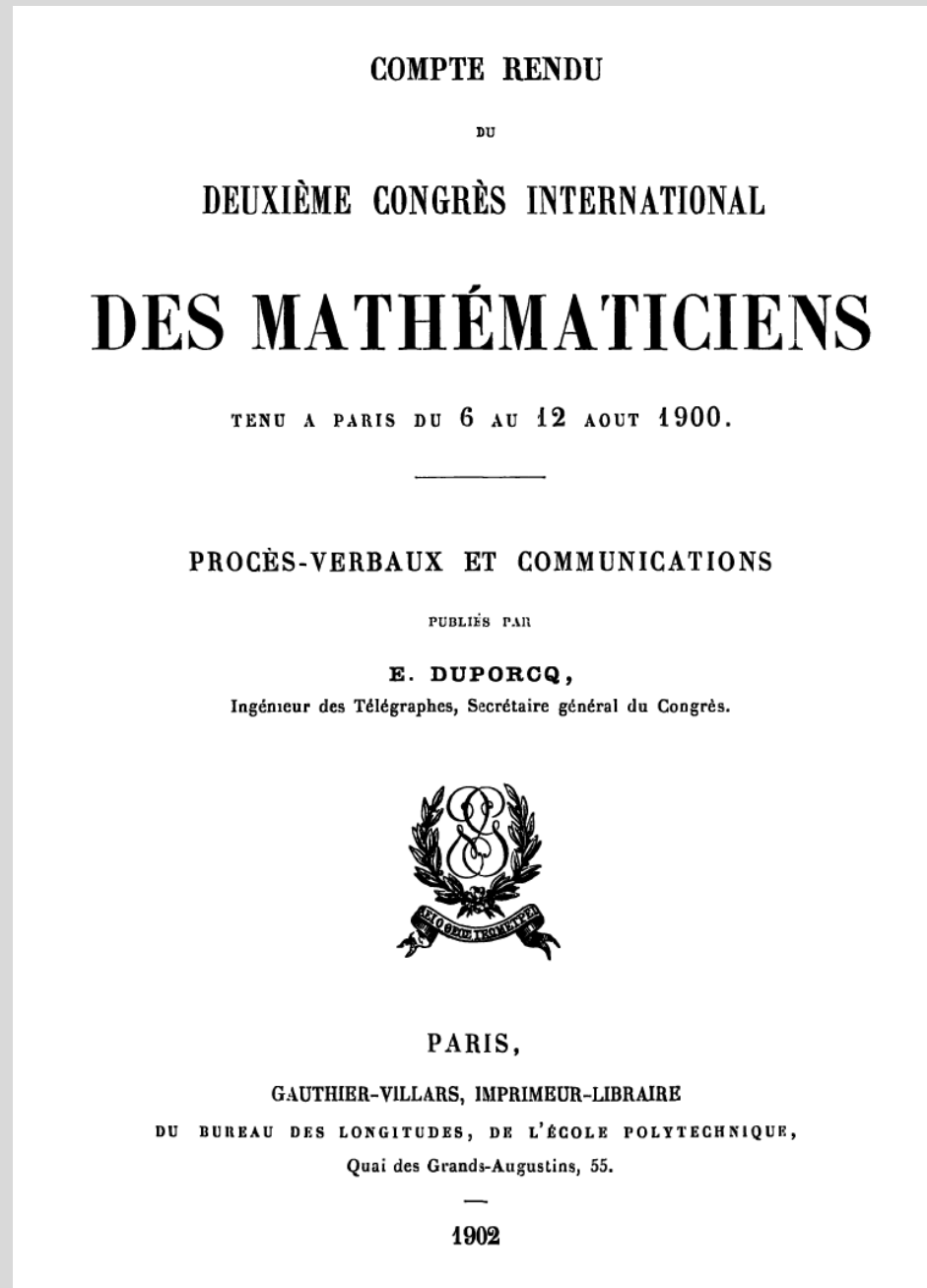
Friend with M. Lerch

(1860-1922)

Henri Poincaré

(1854-1912)

1 April 2021



Selected topics in history of science

Heidelberg 1904

Remembering:

Carl Gustav Jacobi
(1804-1851)

Affiliations:

Towns, not countries

VERHANDLUNGEN
DES DRITTEN INTERNATIONALEN
MATHEMATIKER-KONGRESSES

IN HEIDELBERG VOM 8. BIS 13. AUGUST 1904.

HERAUSGEGEBEN VON DEM SCHRIFTFÜHRER DES KONGRESSES

DR. A. KRAZER

PROFESSOR AN DER TECHNISCHEN HOCHSCHULE KARLSRUHE I. B.

MIT EINER ANSICHT VON HEIDELBERG IN HELIOGRAVÜRE.



Rome 1908

Guido Castelnuovo
(1865-1952)

Representatives of math.
societies and institutions:

Academies of science

Mathematical societies

Smithsonian Institution

Ministries

Government representation



Cambridge 1912

Local organising
committee

International
programme committee

Introducers of sections
(nowadays: chairs)

PROCEEDINGS
OF THE FIFTH INTERNATIONAL CONGRESS
OF
MATHEMATICIANS
(Cambridge, 22—28 August 1912)

EDITED BY THE GENERAL SECRETARIES OF THE CONGRESS

E. W. HOBSON

SADLEIRIAN PROFESSOR OF PURE MATHEMATICS IN THE UNIVERSITY OF CAMBRIDGE

AND

A. E. H. LOVE

SEDLEIAN PROFESSOR OF NATURAL PHILOSOPHY IN THE UNIVERSITY OF OXFORD

Repercussions of the Great War

- ICSU – international science council
- Abbreviations: in French (diplomatic language, language of post office, ...)
- Founded by the French and Belgians
- Excluded from international scientific communication: Germans

(also: Austrians, Bulgarians --- that is those who lost)

International Congress of Mathematicians: Interbellum

- Strasbourg, France (1920)
- Toronto, Canada (1924)
- Bologna, Italy (1928)
- Zurich, Switzerland (1932)
- Oslo, Norway (1936)

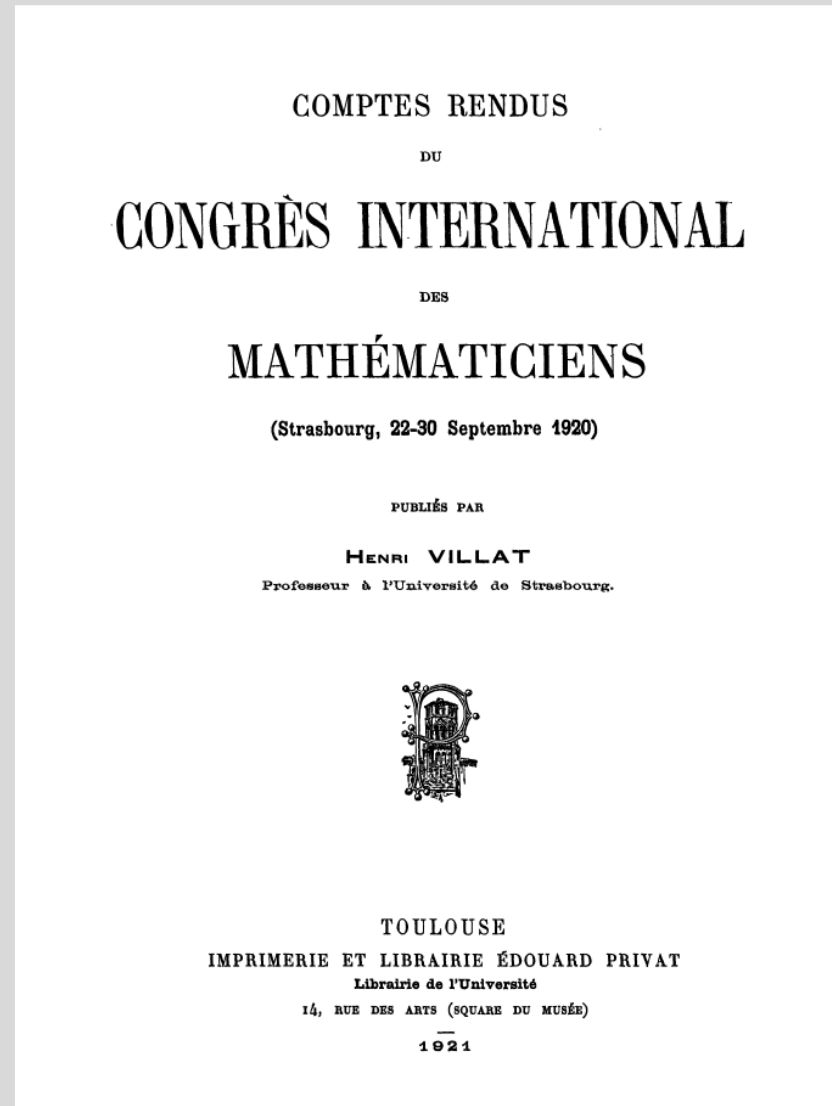
Strasbourg 1920

Introducing new
international
organisations

Excluding Germans

IMU: without Felix
Klein, David Hilbert,
and others

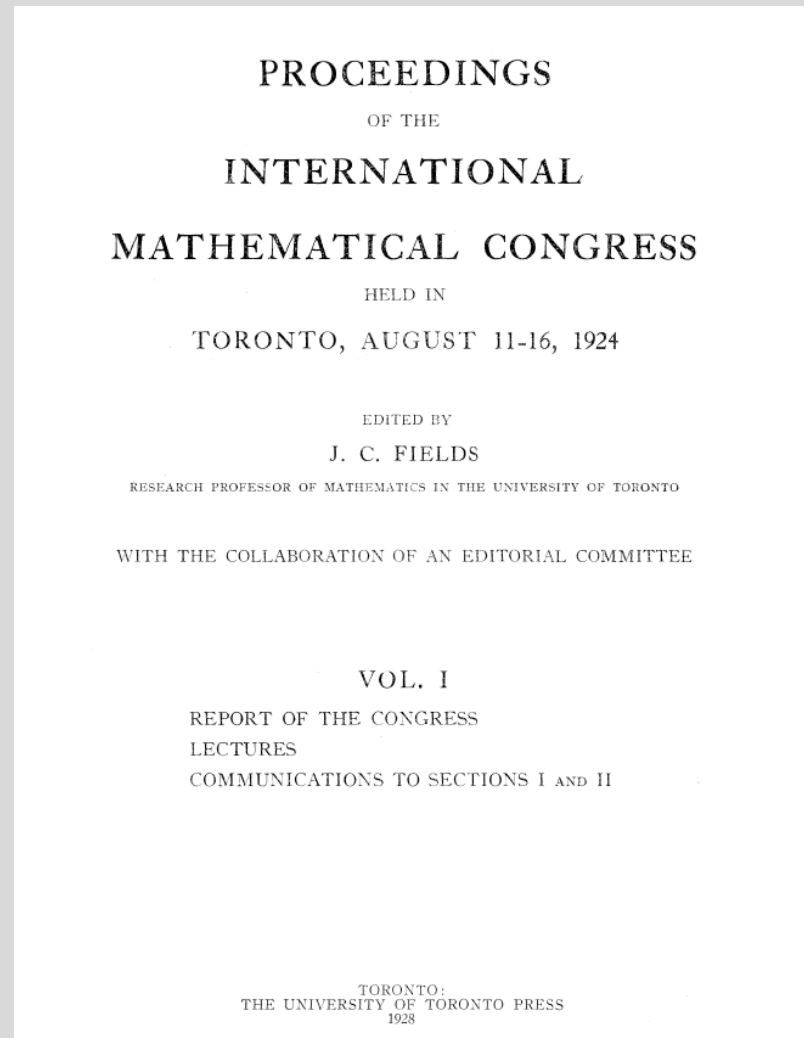
Resistance (1924)



Toronto 1924

First on the American
continent

Czech participation



Bologna 1928

Germans were (finally!)
also allowed to
participate

Diplomacy

Is this an international
congress?

What about the ones
before?

Were they truly
international?

ATTI
DEL
CONGRESSO INTERNAZIONALE
DEI MATEMATICI

BOLOGNA 3-10 SETTEMBRE 1928 (VI)

TOMO I.
RENDICONTO DEL CONGRESSO
CONFERENZE



Zurich 1932

In parallel:

Rockefeller foundation
grants

Institute for Advanced
Study founded in
Princeton

(Oswald Veblen)

Verhandlungen des Internationalen Mathematiker-
Kongresses Zürich 1932

I. Band

Bericht und Allgemeine Vorträge

Im Auftrage des Komitees für den Interna-
tionalen Mathematiker-Kongress Zürich 1932
herausgegeben von

Dr. Walter Saxer
Professor an der Eidg. Techn. Hochschule



ORELL FÜSSLI VERLAG ZÜRICH UND LEIPZIG

Oslo 1936

Commemorating
Niels Henrik Abel
(1802-1829)

Note the sign
And the language

Congresses growing in
size

COMPTES RENDUS
DU
CONGRÈS INTERNATIONAL
DES MATHÉMATIENS
OSLO 1936

Tome I

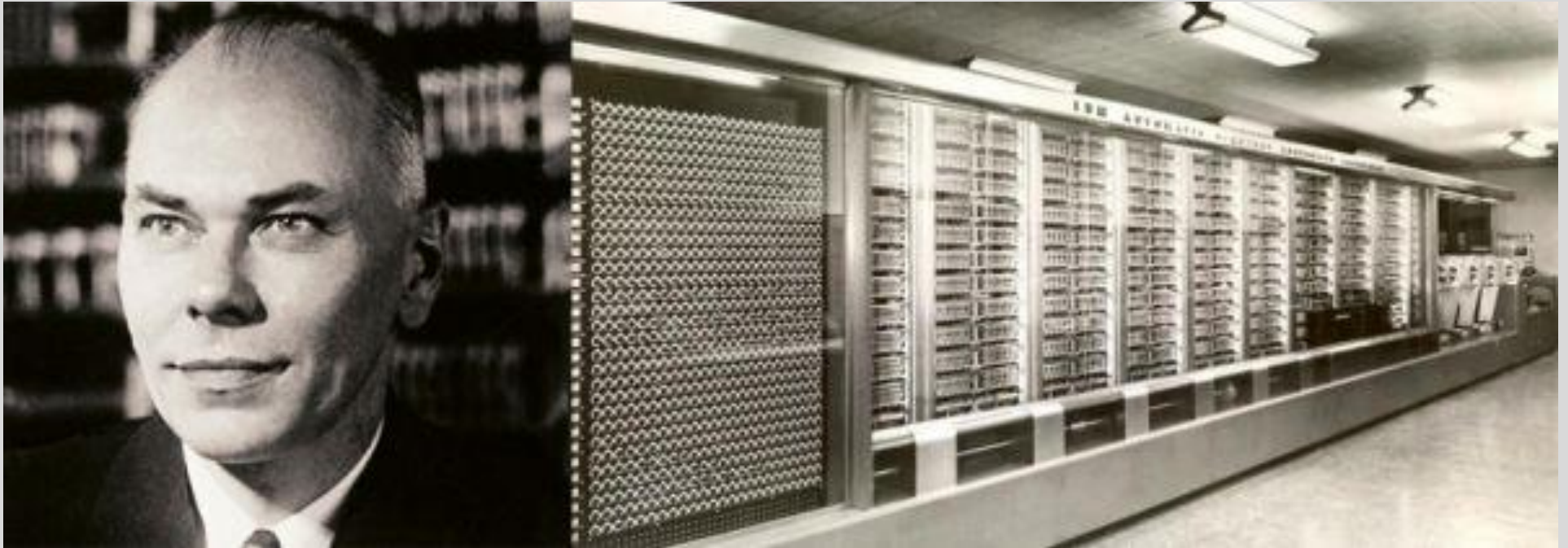
Procès-Verbaux
et
Conférences Générales



A. W. BRØGGERS BOKTRYKKERI A/S

OSLO 1937

Evening lecture
by Howard Aiken at ICM 1950:
Computing Machines



1st International Congress of Mathematicians after WWII: Cambridge, MA / Harvard (1950)



<http://legacy-www.math.harvard.edu/history/icm1950/index.html>