



**Budapest University of Technology and Economics, BME ,
1782**



Content

Short history, presentation of BME

International relations (education, research)

Pictures



1782 Institutum Geometricum – Hydrotechnicum

1949–2000 Technical University of Budapest

2000– Budapest University of Technology and Economics

- **8 Faculties,**
- **77 Departments**

- **24 000 Students**

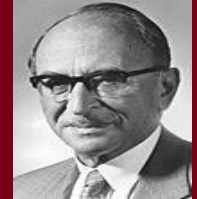
- **Academic Staff: 1 300, with scientific qualification: 700**

Faculties:

- Civil Engineering (1782)
- Mechanical Engineering (1871)
- Architecture (1873)
- Chemical and Biotechnology (1873)
- Electrical Engineering and Informatics (1949)
- Transportation Engineering (1951)
- Natural Sciences (1998)
- Economic and Social Sciences (1998)

Nobel laureates:

Dénes GÁBOR (1900 – 1979) Holography, in 1971



Jenő WIGNER (1902 – 1995) Theoretical physics, in 1963



György OLÁH (b:1927) Organic chemistry, in 1994



A famous former graduate:

Ernő RUBIK (1944 –) inventor of Rubik's cube
(40 years ago)





Gábor Domokos

**Dept. of Mechanics,
Materials and
Structures**

Péter Várkonyi



A GÖMBÖC is a convex 3-dimensional homogeneous body, which when resting on a flat surface has just one stable and unstable point of equilibrium. Its existence was conjectured by Russian mathematician Vladimir Arnold in 1995 and proved in 2006.

SHORT HISTORY of BME – 1956





Presentation of BME – Education 1 – BSc

Faculty of Civil Engineering (EMK)

**Faculty of Mechanical Engineering
(GPK)**

Faculty of Architecture (EPK)

**Faculty of Chemical Engineering and
Bioengineering (VBK)**

**Faculty of Electrical Engineering
and Informatics (VIK)**

Faculty of Transportation Eng. (KSK)

Faculty of Natural Sciences (TTK)

**Faculty of Economic and
Social Sciences (GTK)**

Civil Engineering (8 semesters)

**Mechanical Engineering, Energy Engineering,
Industrial Design Engineering, Mechatronics (7)**

Architecture (8)

**Chemical Engineering, Bioengineering,
Environmental Engineering (7)**

**Electrical Engineering, Computer Science and
Engineering (7)**

Transportation, Vehicle Engineering (7)

Mathematics (6)

Physics (6)

Management in Engineering (7)

Business and Management BA (6+1)

International Business BA (6+1)

Applied Economics BA (6)

Communication and Media Sciences BA (6)

SOME MASTER PROGRAMMES

Structure civil engineer (1,5 year)

Infrastructure civil engineer (1,5)

Geodesy & geoinformatics (1,5)

Mechanical, Mechatronics engineer,

Mechanical modeling (2)

Architecture (5 years)

Chemical engineer, Bioengineer,
Environmental engineer (2)

Electrical engineer, Computer
engineer, Biomedical engineer (2)

Transport, Logistics, Vehicle
engineer (2)

Mathematics, Physics (2)

Economics, Marketing, Accounting,
Cognitive Science (2)

DOCTORATE SCHOOLS

Civil Engineering and Earth Sciences

Mechanical Engineering Sciences

Architectural Art (DLA)

Building Sciences

Chemistry and Chemical Engineering

Electrical Engineering

Information Technology

Transport Science

Vehicle, Mobile Machines Engineering

Mathematics and Computer Science

Physics

Economy, Management and
Organizations

Psychological Sciences

History of Technology and Science

International relations

PRIORITY – Student (Professor) exchange

Background: Education in 4 (5) languages

English – since mid 1980–ties. Regular, exchange foreign (Erasmus, Brazilian, etc.) students, about 1500.

French – since early 1990–s (about 30–100 mainly Hungarian students)

German – since mid 1990–s (about 100–200 mainly Hungarian students)

Hungarian

Russian (until mid 2000–s)

Wide variety of exchange programs

EU Erasmus (1–2 semesters)

CEEPUS. (Central European Exchange Program for University Studies)

ATHENS (Advanced Technology Higher Education Network / Socrates) . 14 leading European universities (Paristech / 14 grandes écoles parisiennes/, BME Budapest, TU Delft, University of Istanbul, KU Leuven – UC de Louvain, IST Lisbon, UP Madrid, TU München, Politecnico di Milano, Czech Technical University Prague, TU Thessaloniki, NTNU Trondheim, TU Warsaw, TU Wien , 2*1week courses. Mobility of about 4000 students / year

T.I.M.E. Network of about 50 leading universities of technology. Double diplomas, doctorate cooperation, summer schools etc. BME is a member of Advisory Committee.

International relations – Membership

EUA (European University Association)

AUF (Agence Universitaire de la Francophonie)

iNEER/ICEE (International Network on Engineering Education and Research/International Conference on Engineering Education)

EAIE (European Association for International Education)

CESAER (Conf. of European Schools of Advanced Engineering Education and Research)

SEFI (European Society for Engineering Education)

CRP (Conference of Rectors and Presidents of European Universities of Technology)

4TU League (Regional cooperation of BME, CTU in Prague, SUT in Bratislava, TU Vienna)

Cooperation Platform of the Metropolitan Universities of Technology from Central and Eastern Europe (11 universities of the region)

Research

Research University

2010 by the Hungarian government (5 in the country)

Rector of BME Gábor PÉCELI with the official document



Strategic Research Areas

1. SE – Sustainable Energy

Environment and Climate Protection, Renewable Energy, Supply Security

2. VTL – Vehicle Technology, Transport and Logistics

Intelligent Vehicle Technologies and Transport Systems, Integrated Logistics

3. BHE – Biotechnology, Health and Environmental Protection

Biopharmaceuticals, Support of Way of Life, Environment Friendly Technologies

4. NNM – Nanophysics, Nanotechnology and Materials Science

Nanoelectronics, Nanostructures, Structural and Functional Materials

5. IET – Intelligent Environment and e-Technologies

Future Internet, Embedded Systems, Network and Software Technology

Main industrial partners

- **Alcoa**
- **Audi**
- **Bosch**
- **Budapest Gas Works**
- **EGIS**
- **E.ON**
- **Ericsson**
- **Flextronics**
- **General Electric**
- **Hewlett–Packard**
- **Hungarian Electric Works**
- **Hungarian Oil Co. (MOL)**
- **Hungarian Post**
- **IBM**
- **Intel**
- **Knorr–Bremse**
- **Microsoft**
- **Nokia**
- **Oracle**
- **Paks Nuclear Power Plant**
- **Richter Gedeon**
- **SAP**
- **Sanofi–Aventis (Chinoin)**
- **Siemens**
- **Telenor**

















Thank you for your kind attention, have a nice

**COOPERATION PLATFORM
OF
CENTRAL AND EAST EUROPEAN
METROPOLITAN UNIVERSITIES
OF
TECHNOLOGY**

meeting in Budapest!

**Budapest University of Technology and Economics, BME
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