

Orosz István:
Eötvös Loránd

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1EÖTVÖS

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United Nations
Educational, Scientific and
Cultural Organization

Egyesült Nemzetek
Nevelésügyi, Tudományos és
Kulturális Szervezete

100th anniversary of Roland Eötvös
(1848-1919), physicist, geophysicist,
and innovator of higher education
Commemorated in association with UNESCO

Eötvös Loránd (1848-1919) fizikus,
geofizikus és a felsőoktatás
megújítójának 100. évfordulója
Az UNESCO-val közösen emlékezve



1858 (by Gusztáv Keleti)

Roland EÖTVÖS Loránd
(1848–1919)



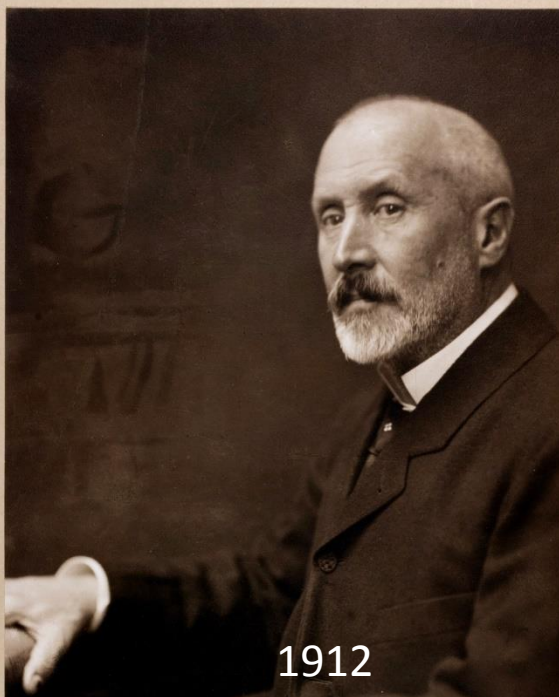
Young professor



1896



1905



1912



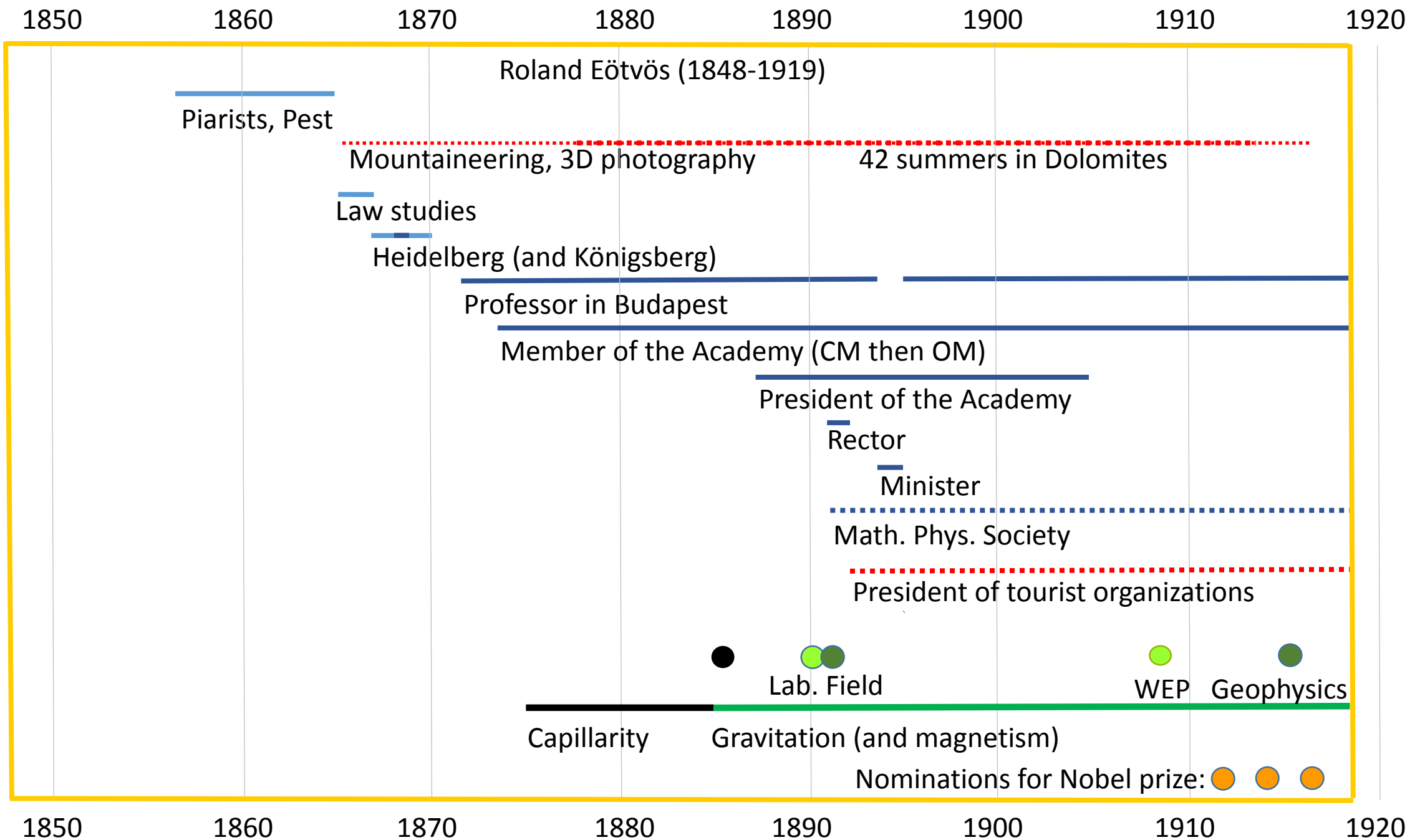
1919



Student in Heidelberg

A contemporary of physicists

Thomas Edison (1847-1931), Nicola Tesla (1856-1943), Albert Einstein (1879-1955)
and earth scientists Eduard Suess (1831–1914), Andrija Mohorovičić (1857–1936), Milutin Milanković (1879–1958)



The Scientist

„A Prince of Physics” (Einstein, 1919), „The Father of Geophysical Prospecting” (Rankine, 1948),
Nominated to Nobel Prize: 1911, 1914, 1917.

10+1 scientific terms are named after Eötvös:

Capillarity: Eötvös rule, Eötvös constant, Eötvös number

Weak Equivalence Principle: Eötvös experiment, Eötvös parameter

Laboratory and field instrument: Eötvös torsion balance

Gravitation on rotating planet: Eötvös effect, Eötvös correction

Geodesy: Eötvös tensor

Geophysics: Eötvös magnetic law (Poisson-Eötvös relation)

The physical unit $1 \text{ eötvös} = 1E = 10^{-9} \text{ s}^{-2}$

Significance in science:

- The Eötvös law in capillarity ranks with the universal gas laws.
- Experimentally demonstrated the proportionality between the gravitational and the inertial masses with an extremely high precision (uncertainty: $<10^{-9}$)
- The largest CH fields in the first half of the 20th century were discovered by using his torsion balance.



Significance of Eötvös in 2019



For physicists, the Eötvös experiment is of crucial importance in modern theoretical (gravitational) physics.

„Baron Eötvös’ truths on gravitational force and surface tension will remain in a thousand years as true and valuable as they are today, even when our actual concepts for the gravity and for the smallest parts of the matter would happen to be eliminated. ”

Sándor Mikola, 1929

For earth scientists, especially in and around the Carpathian Basin, Roland Eötvös represents a cohesion force.

For the World Science Forum, Roland Eötvös is an ideal of the Ethics and the Responsibility.

For the general public, he deserves to be a role model.



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Partners: Hungarian Academy of Sciences, Eötvös Loránd University, Hungarian National Commission for UNESCO, Eötvös Loránd Physical Society, Association of Hungarian Geophysicists, etc.

Support: Ministry for Innovation and Technology, Ministry for Human Resources, National Cultural Fund of Hungary, National Research and Development Office

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