

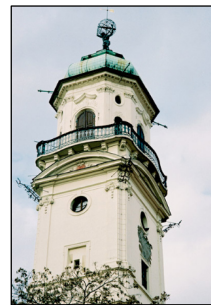


Albert Einstein was professor of theoretical physics in Prague in 1911-1912 and read his lectures in the Clementinum and at the Physical Institute. In the same time a new view of space appeared in the Prague cubistic architecture which is unique in the world.

Ernst Mach lived in Prague and contributed to the development of several parts of physics. Christian Doppler discovered and formulated in Prague the physical effect now known as the Doppler principle.



In the first half of the 19th century, Bernhard Bolzano, mathematician and philosopher, advanced significantly fields of logic, variables, limits, continuity and concept of infinity.



Joseph Stepling, a member of the Jesuit Order at St Clement College, represented a new trend in science based on Newton's work. In 1751 he founded the Clementinum observatory which keeps the longest series of meteorological records in the world.



Johannes Marcus Marci of Kronland (1595-1667), professor and rector of the Charles University, investigated e.g. different properties of light (spectral colors, wave nature, diffraction), being a predecessor of Huygens and Newton.

# Frontiers of Quantum and Mesoscopic Thermodynamics

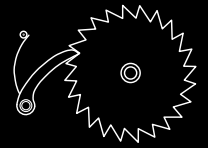
21-27 July 2024, Prague, Czech Republic

[fqmt.fzu.cz/24/](http://fqmt.fzu.cz/24/)

10<sup>th</sup> FQMT conference

20<sup>th</sup> anniversary of the first (FQMT'04) conference

With public evening lectures and concerts



The high level of science in Prague at that time is confirmed by the sophisticated Prague Astronomical Clock at the Old Town Hall. Its mathematical model was developed by professor Jan Šindel. The clock was made by Mikuláš of Kadaň in 1410.

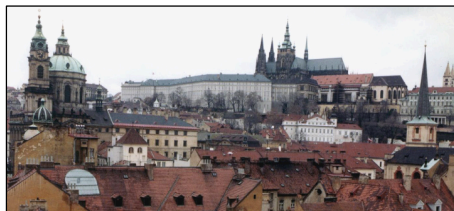


The beginning of science in the Czech territory is related to the founding of the Charles University in 1348, the first university in the Central European region. Prague became the capital of the Holy Roman Empire.

Civilization, science, physics - Prague milestones



The Prague Castle was founded around 880, Prague became a centre of Czech Lands.



Rudolph II (1576-1612) invited to Prague many significant scientists, painters, architects and musicians. During his reign Prague became the European centre of science and arts.

Tycho Brahe came to Prague in 1599 and began to form a circle of younger co-workers. In 1600 Johannes Kepler arrived.

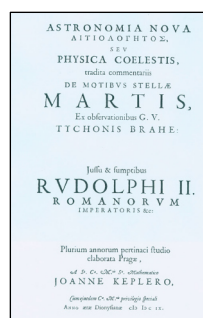


The paper in which Brahe explained his planetary system was published in Prague.

Tycho Brahe is buried in the Church of Our Lady before Týn at the Old Town Square.



Brahe's high precision astrometric observations of the planets combined luckily with Kepler's theoretical knowledge and resulted in the discovery of law of planetary motion, the most significant and famous scientific result of that time.



## Topics:

Non-equilibrium quantum phenomena

Foundations of quantum physics

Quantum measurement, vacuum, entanglement, coherence

Dissipation, dephasing, noise, decoherence

Many body physics, quantum field theory

Quantum simulations

Quantum optics

Optoelectronics, plasmonics

Imaging, quantum sensors

Physics of quantum information and computing

Statistical physics, thermodynamics, quantum heat engines

Physics of active matter, molecular motors

Topological states of quantum matter, quantum phase transitions

Macroscopic quantum behavior, cold atoms and molecules

Mesoscopic, nano-electromechanical and nano-optical systems

Biological systems, organoids, quantum biology

Neural networks, artificial intelligence

Cosmology, gravitation, astrophysics