

5th World Congress on Physics

July 17-18, 2018 Prague, Czech Republic



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Physics and Prague

Physics has been cultivated in Prague since at least 1348, when a University was founded here by Emperor Charles IV. At the beginning the main emphasis was on Astronomy. First astronomers Křišťan from Prachatice (1360 – 1439) and Jan Ondřejov Šindel (1375 – 1456) in co-operation with clockmaker Mikuláš of Kadaň around 1410 had designed and installed the astronomical clock placed on the Old Town Hall tower in Prague. Astronomer and Chief Physician Tadeuš Hájek of Hájek (1525-1600) had influenced Emperor Rudolph II to invite Tycho Brahe (1546 – 1601) and Johannes Kepler (1571 – 1630) to come to Prague where the first two of his laws of planetary motion have been formulated. Jan Marcus Marci of Kronland (1595 – 1667), a physicist, physician and rector of Prague University made original research in mechanics (impact of bodies) and optics (diffraction of light, explanation of rainbow). In the middle of the 18th century at the Clementinum, the Jesuit College, physicist Josef Stepling (1716 -1778) and his successors at the Prague Faculty of Philosophy promoted Newtonian Physics . Christian Doppler (1803 – 1853) as professor at Prague Polytechnic in 1842 published important phenomenon of the frequency shift due to the velocity of the source of waves relative to the observer. His younger colleague Bohumil Kučera (1874 – 1921) had started pioneering research in radioactivity and had inspired professor Jaroslav Heyrovský (1890 – 1967) to develop polarography for which he in 1959 earned Nobel Prize for chemistry. The most prominent personality Albert Einstein (1879 – 1955) was appointed professor of theoretical physics at the German University of Prague in the period 1911 – 1912 when he already prepared the formulation of general theory of relativity. After World War II leading professors of physics have been Viktor Trkal (1888 – 1956) , Václav Petržílka (1905 – 1976), Václav Votruba (1909 – 1990) and Zdeněk Matyáš (1914-1957). Later have been recognized many specialists in nuclear physics, elementary particle physics, plasma physics and solid state physics working at Universities and at the Institutes of newly founded Academy of Sciences. After Soviet invasion to Czechoslovakia in 1968 many well known physicists have emigrated and have made successful scientific research abroad. In the final etape – Velvet Revolution in 1989, the division of Czechoslovakia into Czech and Slovak Republics in 1993 and the entrance of Czech Republic to European Union in 2004, our physicists have generated new trends in up-to-date scientific research, education and application in physics together with extension of international cooperation.

Biography

Štefan Zajac has completed his Ing. study at the Faculty of Nuclear Sciences and Physical Engineering of the Czech Technical University in Prague in 1961 and CSc. study at Faculty of Mathematics and Physics of the Charles University in Prague in 1976. He was appointed Associate Professor of theoretical physics in 1988. He has published more than 50 papers in scientific journals and about 50 reports and reviews. He has been President of the Union of Czech Mathematicians and Physicists in 1993-1996 and 2002-2010. From 1993 until now he is the Member of the Steering Committee of the Association of Innovative Entrepreneurship of the Czech Republic.

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