Michał Ławniczak @ University of Hradec Kralove, Czech Republic

From September 17 to October 17, 2018 I visited the group of Jan Kriz from the Department of Physics of the University of Hradec Kralove in the Czech Republic.



During the visit I got acquainted with advanced computational methods, which are most useful for studying of non-Weyl graphs, the recently found category of quantum chaotic systems.

The non-Weyl graphs do not obey the Weyl's law for the density of resonances. They can be obtained by introducing into the graph a balanced vertex (i.e. the vertex with two leads).

Studies of such graphs are very interesting both for the theory and applications concerning nanowire devices, since they show that mean distance between resonances may be changed without varying the graph length.

I also had an opportunity to give a lecture: *Experimental investigation of short-* and long-range spectral fluctuations in microwave networks and billiards at the seminar of the Department of Physics and promote the Institute of Physics PAS.