|  |  |
| --- | --- |
| Speaker: | Dr. Arseniy Filin  |
| Title: | *Hadronic molecules in the spectrum of heavy quarkonia within an effective field-theory approach* |
| Date: | 15 June 2018 |
| Time: | 15:00 |
| Place: | Minkowski room |

|  |
| --- |
| Abstract |
| Recent experiments discovered numerous states in the heavy quarkonium sector which do not fit into predictions of the quark model. The states X(3872), Zb(10610), and Zb(10650) are of particular interest because they are located very close to some meson-antimeson thresholds. Near-threshold position of these states indicates that they are good candidates for hadronic molecules. We employ an effective field theory with contact and one-pion exchange interactions together with the nonperturbative formalism based on the Lippmann-Schwinger equation to study these states within molecular picture. In particular, we study the role of non-perturbative pion interactions on the properties of these states. We revisit the heavy-quark spin symmetry predictions for the spin partners of the X(3872), Zb(10610) and Zb(10650). Finally, we analyse the most recent experimental data for the line shapes associated with the Zb(10610) and Zb(10650) to extract their pole positions and to predict their spin partners parameter free. |