



Pozvánka na seminár
Oddelenia teoretickej fyziky
ÚEF SAV, v. v. i.



štvrtok, 3. október 2024 o 11:00
Salónik ÚEF, Watsonova 47, Košice

„Spin-orbital effects in nanostructures“

Prednášajúci:

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Anotácia:

Graphen corrugations affect the hybridization of orbitals of carbon atoms in graphene-based systems. As a result, the momentum distribution of electrons can be selected without external electric and magnetic fields in the graphene strip under experimentally feasible periodic potential created by the ripple structure in graphene. This potential is used to produce the valley-depending focusing effects and spin filtering effects. We also describe the electron transport through a one-dimensional quantum ring, subjected to Rashba spin-orbit interaction in the presence of external fields. We show specific conditions to reach the spin filtering effect in such a system.