



Univerza v Ljubljani  
Fakulteta za *matematiko in fiziko*  
Oddelek za fiziko

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## *Liquid crystalline blue phase and its exotic defect structures under confinement*

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Liquid crystals have attracted physicists as intriguing self-organizing soft materials with various types topological defects associated with broken rotational or translational symmetry. In this talk, I will particularly focus on cholesteric blue phases of a chiral liquid crystal which comprise an intricate network of topological line defects of orientational order (disclinations).

After a brief review of cholesteric blue phases, I will present some of our numerical results concerning the structures of a cholesteric blue phase when is is strongly confined between parallel plates. It is shown that a confined system exhibits a rich variety of defect structures not found in bulk cholesteric blue phases or any other liquid crystalline materials.

One notable example is a hexagonal lattice of Skyrmion excitations, a vortex-like structure that has been drawing considerable attention in diverse fields of condensed matter physics.

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*Predavanje bo v ponedeljek, dne 3. decembra 2012, ob 16:15 v predavalnici F1 (soba 016 v pritličju) na Jadranski 19. Trajalo bo eno uro.*

*Ob 16:00 so vsi udeleženci vabljeni na čaj.*