INSTITUTUL DE MATEMATICĂ "SIMION STOILOW" AL ACADEMIEI ROMÂNE

cu sprijinul BITDEFENDER

Conferința lunară

Mathematical models in early vision and problem of conformal invariancy

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Abstract: We give a survey of known facts about of architecture of retina, LGN and primary visual cortex V1 and transformation of visual information in retina, LGN and V1 cortex. We discuss mechanisms of perception of visual objects in early vision. We formulate the problem of stability (invariancy of visual contours with respect of eyes movement) as the main problem of conformal geometry of curves (description of a curve on the conformal sphere up to conformal transformations) and discuss how the brain solves this problem.