## **Topologically Based Machine-Learning Methods**

Dušan Repovš (University of Ljubljana)

We shall discuss some new approaches and applications of machine learning architectures, based on tools from topological data analysis and used in conjunction with conventional machine learning methods. Topological data analysis is based on algebraic topology and can identify significant global mathematical structures that are beyond the reach of other approaches. When applying topology one benefits from generality, whereas when applying conventional methods one benefits from specificity.