

## MP 6: Mathematical physics

Time: Wednesday 16:15–16:45

Location: MP-H5

**Invited Talk**

MP 6.1 Wed 16:15 MP-H5

**State sum models with defects** — ●CATHERINE MEUSBURGER —  
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State sum models arise in topological quantum field theories, quantum topology, 3d quantum geometry, in the quantisation of Chern-Simons gauge theories and are also closely related to topological models in

condensed matter physics such as Kitaev's quantum double model and Levin-Wen models. The inclusion of defects into such models is of interest in several of these research fields.

In the talk I introduce a model that includes defects in Turaev-Viro-Barrett-Westbury state sum models. It involves defect surfaces, defect lines and defect points decorated with higher categorical data and yields topological invariants.