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## 7. MATEMATICKÉ KOLOKVIUM

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Modular functors in analysis, geometry and  
mathematical physics

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posluchárna K1

budova MFF UK, Sokolovská 83, Praha 8

*Abstract:*

The local data for a CFT in dimension  $d$  allow to assign to each  $d$ -dimensional cobordism  $\Sigma$  a vector space of correlators: the functions on the space of conformal structures on  $\Sigma$  that have the correct behaviour to qualify as the (chiral-) correlators of a CFT. This is called a space of conformal blocks associated to  $\Sigma$ . This assignment is functorial under diffeomorphisms and the corresponding functor is called a modular functor.

We present a definition of a (super)-modular functor which includes certain interesting cases that previous definitions do not allow. We also introduce a notion of topological twisting of a modular functor, and discuss its realization by a 2-dimensional topological field theory valued in twisted  $K$ -modules.