

## **I-modules and symmetric spectra**

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The symmetric spectra introduced by Hovey, Shipley and Smith are a convenient model for the stable homotopy category with a nice associative and commutative smash product on the point set level and a compatible Quillen closed model structure. About the only disadvantage of this model is that the stable equivalences cannot be defined by inverting those morphisms which induce isomorphisms on homotopy groups – the naively defined homotopy groups are ‘wrong’. The naive homotopy groups are the colimit, over inclusions, of a natural functor from the category  $I$  of finite sets and injections to abelian groups. Because of this, the representation theory and homological algebra of such  $I$ -functors are relevant for stable homotopy theory, and they explain various features around the homotopy groups of symmetric spectra. The purpose of this talk is to explain this connection.