

Spectral Sequence of Operad Algebras

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Operads have been used for many years in the study of many useful algebras and operations, such as Dyer-Lashoff operations and algebras whose operations satisfy various conditions up to homotopy. Spectral sequences are an invaluable calculational tool for just about anything defined algebraically. However, until now, spectral sequences have not been able to provide information about operad algebras. In joint work with Laura Scull, we provide conditions which guarantee that a spectral sequence of operad algebras converges to an algebra of the same type. In this talk, I will explain these conditions and indicate examples of how the conditions can be used.