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William G. Dwyer and **Kathryn Hess*** (kathryn.hess@epfl.ch), EPFL SB MATHGEOM,
Station 8, 1015 Lausanne, Switzerland. *Spaces of long embeddings and right-angled Artin operads.*

(Joint work with Bill Dwyer) Generalizing the notion of a right-angled Artin group or monoid, we define a right-angled Artin operad to be the quotient of a free operad by the operadic ideal generated by a set of “commutator” relations of the form $(x; y, \dots, y) \sim (y; x, \dots, x) \cdot \tau$, where x and y are generators, and τ is an appropriate permutation. The Boardman-Vogt tensor product of two free operads is an important example of a right-angled Artin operad.

Explicit resolutions of a right-angled Artin operad as a bimodule or an infinitesimal bimodule over itself are essential tools in our identification of the space of long embeddings of \mathbb{R}^m into \mathbb{R}^n as the $(m + 1)$ -fold loop space on the derived mapping space of operad maps from the little m -balls operad to the little n -balls operad. I will sketch the proof of this identification briefly, emphasizing the role of right-angled Artin operads. (Received September 14, 2014)