

Stable moduli spaces of hermitian forms

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We develop an algebraic analogue of the Galatius–Randal-Williams surgery technique on the cobordism category, extending Ranicki’s algebraic analogue of classical surgery. As a result, we prove that Grothendieck–Witt spaces of Poincaré categories are, in many cases, group completions of certain moduli spaces of hermitian forms. This, in particular, identifies Karoubi’s classical hermitian and quadratic K -groups with the genuine Grothendieck–Witt groups from our joint work with Calmès, Dotto, Harpaz, Hebestreit, Land, Moi, Nardin and Nikolaus, and thereby completes our solution of several conjectures in hermitian K -theory. (Joint work with Fabian Hebestreit.)