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Strictly Semistable Quasimaps to $\mathbb{P}^n$

One important moduli stack in enumerative geometry is that of ϵ-stable quasimaps, introduced by Ciocan-Fontanine, Kim, and Maulik for a broad class of GIT quotients. Varying the parameter ϵ yields a wall and chamber structure, giving rise to a family of intermediate Deligne-Mumford stacks that interpolate between the moduli of stable quasimaps and Kontsevich's stable maps. In this talk, I will describe an intrinsic perspective on the resulting wall-crossing phenomena via algebraic stacks, employing the framework of infinite-dimensional geometric invariant theory developed by Halpern-Leistner and collaborators. We construct an algebraic stack encoding an ϵ-stable quasimap wall crossing in the case where the semistable locus of the target is $\mathbb{P}^n$, and analyze necessary and sufficient filling conditions for this stack to admit a good moduli space.