Stratified Homotopy Theory: Presenting the topological stratified homotopy hypothesis

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The stratified homotopy hypothesis proclaims an equivalence between a homotopy theory of stratified spaces, and the homotopy theory of layered infity-categories, i.e., such small (infinity,1)-categories in which every endomorphism is an isomorphism. In this talk, after a short introduction into the homotopy theory of stratified spaces, I want to talk about an explicit presentation of this equivalence in terms of a Quillen equivalence that uses Lurie's construction of the infinity-category of exit-paths.

Crucially, I will talk about a new semi-model structure on topological stratified spaces, which presents the aforementioned

homotopy theory, and interacts particularly well with classical geometrical examples, such as Whitney stratified spaces – thus bridging the gap between the geometry and homotopy theory of stratified spaces.