

(1) Algebraic geometry

Many of the models are being used for various purposes in algebraic geometry. Authors such as Simpson, Toën, and Vezzosi are using Segal categories [43], [72], Lurie is using quasi-categories [50], [51], and Barwick is using complete Segal spaces and quasi-categories [3].

(2)  $K$ -theory

Simplicial categories are used frequently in this area; we mention Blumberg-Mandell [26] and Toën-Vezzosi [73]; the latter mention ways to generalize their work to Segal categories as well.

(3) Representation theory

Quasi-categories are being used, for example by Ben-Zvi, Francis, and Nadler [10], [11], [12], [13], [14]. The author has done some work using complete Segal spaces [18].

(4) Deformation theory

Lurie is using quasi-categories [52], and Pridham has developed an application of complete Segal spaces [60].

(5) Homotopy theory

Lurie has used quasi-categories to prove results in stable homotopy theory [56], and other models for Goodwillie calculus [54].

(6) Topological field theories

Lurie has used complete Segal spaces to prove the Cobordism Hypothesis [55].