1165-35-308 **Camillo De Lellis**, **Matteo Focardi** and **Silvia Ghinassi***, ghinassi@uw.edu. *Regularity of* $2d$ *Mumford-Shah minimizers.*

The Mumford-Shah functional was introduced by Mumford and Shah in 1989 as a variational model for image reconstruction. The regularity theory has seen several contributions, both in two and several space dimensions. The most important regularity problem is the famous Mumford-Shah conjecture, which states that (in 2 dimensions) the closure of the jump set can be described as the union of a locally finite collection of injective C^1 arcs that can meet only at the endpoints, in which case they have to form triple junctions. If a point is an endpoint of one (and only one) of such arcs, it is called a *cracktip*. We give a proof (based on previous work of Anderssonn and Mikayelyan) of the regularity, up to the loose end, of minimizers of the Mumford-Shah functional when they are sufficiently close to the cracktip (the talk is based on joint work with Camillo De Lellis and Matteo Focardi). (Received January 19, 2021)