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Michael Helmers* (helmers@iam.uni-bonn.de), Institute for Applied Mathematics, University of Bonn, Endenicher Allee 60, 53115 Bonn, Germany. *A simple model for coarsening in infinite particle systems.*

We consider coarsening dynamics in an infinite particle system governed by nearest-neighbor interactions between particles of positive size, which resemble a one-dimensional discrete backward-parabolic PDE. Despite its simplicity, our system shares many interesting features with well-known, more complex coarsening models.

In the talk, we present the first steps of a rigorous treatment of the particle system. To this end, we discuss key dynamic properties, in particular the transport of mass, screening and long-range interactions, which substantially influence the statistical behavior as well as the mathematical analysis of the system. (Received February 09, 2015)