Abstract Submitted
for the MAR17 Meeting of
The American Physical Society

Cell Motility and Jamming across the EMT STEFFEN GROSSER, LINDA OSWALD, JRGEN LIPPOLDT, PAUL HEINE, JOSEF A KAES, Univ Leipzig — We use single-cell tracking and cell shape analysis to highlight the different roles that cell jamming plays in the behaviour of epithelial vs. mesenchymal mammary breast cell lines (MCF-10A, MDA-MB-231) in 2D adherent culture. An automatic segmentation allows for the evaluation of cell shapes, which we compare to predictions made by the self-propelled vertex (SPV) model [Bi et al, Nat. Phys. 2015]. On top of that, we employ co-cultures to study the emerging demixing behaviour of these cell lines, demonstrating that the mesenchymal MDA-MB-231 cell line forms unjammed islands within the jammed collective.

Steffen Grosser
Univ Leipzig

Date submitted: 11 Nov 2016 Electronic form version 1.4