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A new Saffman-Taylor growth rate formula PRABIR DARIPA,
Texas A&M University — In this talk, we discuss modification of the classical
Saffman-Taylor growth rate formula when the dynamic Laplace law including vis-
cous stress tensor on the interface is included in the linear stability analysis for the
displacement of a Newtonian fluid by air. In particular, we derive a new formula
for the growth rate and show that the problem is linearly well-posed for all values
of surface tension. This is a joint work with Gelu Pasa.

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