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Moshe Cohen* (mcohen@vassar.edu) and **Baian Liu**. *Finding line arrangements with interesting realization spaces*. Preliminary report.

When a line is added in a relatively trivial way to a line arrangement whose realization space has just one connected component, the resulting line arrangement also has a realization space of just one component by a result of Nazir and Yoshinaga. We use this tool and others to search for arrangements with interesting realization spaces. Together with Amram, Teicher, and Ye, the first author found a complete list for arrangements of ten lines. In recent work, we use similar techniques to study arrangements of eleven lines. (Received September 25, 2017)