

# Rational cuspidal curves in $\mathbb{P}^1 \times \mathbb{P}^1$

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## Abstract

Tentative topic for a project in MAT2000 spring 2021. Read the description and please contact me at karoline.moe@ub.uio.no if you are interested in working on one of this topic, or something tangential.

An algebraic curve is called cuspidal if it has cusp singularities only, and in particular, rational cuspidal curves in the projective plane have been intensively studied, see [Mau17; Moe08; Moe13] for brief summaries.

Moving to the surface  $\mathbb{P}^1 \times \mathbb{P}^1$ , much less is known about curves and their singularities, but there are some minor results [Moe13].

The main aim of this project is to find, study and describe some rational cuspidal curves in  $\mathbb{P}^1 \times \mathbb{P}^1$  with [Maple] and tools from [MM18].

## References

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- [Moe08] Moe, T. K. “Rational Cuspidal Curves”. <http://urn.nb.no/URN:NBN:no-19416>. MA thesis. Department of Mathematics, University of Oslo, 2008.
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