

**Teijo Arponen, Samuli Piipponen, Jukka Tuomela:** *Kinematic analysis of Bricard's mechanism*; Helsinki University of Technology, Institute of Mathematics, Research Reports A537 (2007).

**Abstract:** *We show how the tools of computational algebra can be used to analyse the configuration space of multibody systems. One advantage of this approach is that the mobility can be computed without using the jacobian of the system. As an example we treat thoroughly the well known Bricard's mechanism, but the same methods can be applied to arbitrary multibody systems. It turns out that the configuration space of Bricard's system is a smooth closed curve which can be explicitly parametrized. Our computations also yield a new formulation of constraints which is better than the original one from the point of view of numerical simulations.*

**AMS subject classifications:** 70B15, 13P10, 70G25

**Keywords:** Multibody systems. Configuration space. Ideal decomposition. Over-constrained linkages. Gröbner bases.

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ISBN 951-22-9133-5  
ISSN 0784-3143

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