

Fillmore–Springer–Cnops Construction Implemented in GiNaC

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Abstract. This is an implementation of the Fillmore–Springer–Cnops construction (FSCc) based on the Clifford algebra capacities [10] of the GiNaC computer algebra system. FSCc linearises the linear-fraction action of the Möbius group. This turns to be very useful in several theoretical and applied fields including engineering.

The core of this realisation of FSCc is done for an arbitrary dimension, while a subclass for two dimensional cycles add some 2D-specific routines including a visualisation to PostScript files through the *MetaPost* or *Asymptote* software.

This library is a backbone of many result published in [9], which serve as illustrations of its usage. It can be ported (with various level of required changes) to other CAS with Clifford algebras capabilities.

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