

Proof Documents for Automated Origami Theorem Proving

Fadoua Ghourabi

Tetsuo Ida

A proof document for origami theorem proving is a record of entire process of reasoning about origami construction and theorem proving. It is produced at the completion of origami theorem proving as a kind of proof certificate. It describes in detail how the whole process of an origami construction and the subsequent theorem proving are carried out in our computational origami system. In particular, it describes logical and algebraic transformations of the prescription of origami construction into mathematical models that in turn become amenable to computation and verification. The structure of the proof document is detailed using an illustrative examples, which reveal the importance of such a document in the analysis of reasoning of origami theorem proving.