## **CORR 99-16**

## Introduction to Continued Fraction Expansions in Real Quadratic Function Fields

## Andreas Stein

**Abstract** Since the continued fraction expansion in real quadratic function fields is a basic tool for performing arithmetics in these fields, we provide an elementary introduction to the polynomial continued fraction expansion. Hereby, we present properties that are in complete analogy to the integer continued fraction expansion. In particular, we prove symmetries with respect to the quasi-period and show how they can be used in baby step algorithms for computing regulators and fundamental units.