1131-11-186 **Yingkun Li*** (li@mathematik.tu-darmstadt.de), Fachbereich Mathematik, TU Darmstadt, Schlossgartenstrasse 7, 64289 Darmstadt, Germany, and **Pierre Charollois** (pierre.charollois@imj-prg.fr), Equipe de théorie des nombres, Case 247 - 4, place Jussieu, 75252 Paris, France. *Harmonic Maass forms associated to real quadratic fields.*

It is well-known that definite quadratic forms give rise to theta series, which are holomorphic modular forms. In 1926, Hecke attached weight one holomorphic theta series to indefinite quadratic forms of signature (1, 1). This ingenious construction reminds one of the Rankin-Selberg unfolding method, yet predates it by a decade. In 2003, Bruinier and Funke introduced the notion of harmonic Maass forms, which have poles and map to classical holomorphic modular forms under a suitable differential operator. In this talk, we will construct harmonic Maass forms that map to Hecke's indefinite theta series, and study their Fourier coefficients. (Received July 14, 2017)