1019-60-151 **Marek Biskup*** (biskup@math.ucla.edu), Department of Mathematics, UCLA, Los Angeles, CA 90095-1555. *Random walks in reversible random environments: some solutions and open problems.* Preliminary report.

I will give a status report on the research of various problems concerning random walks on $\mathbb{Z}^d$ driven by a sample configuration of i.i.d. random conductances. The conductance distribution is bounded from above but no restriction—except that the bonds with positive conductances percolate—is posed on the tail at zero. The problems of interest include the conditions for anomalous (quenched) heat-kernel decay, functional central limit theorem, large-scale behavior of the so called corrector as well as the asymptotic shape of the Morris-Peres evolving-set process corresponding to these random walks. The material of the talk is based on discussions with Noam Berger, Chris Hoffman, Gady Kozma and Tim Prescott. (Received August 13, 2006)