1108-68-537 **Anna C. Gilbert**, **Yi Li**, **Ely Porat** and **Martin J. Strauss*** (martinjs@umich.edu), Univ. Michigan/Department of Math, 2074 East Hall, 530 Church Street, Ann Arbor, MI 48109-1043.
Closing in on Optimal Sparse Recovery.

An approximate sparse recovery system consists of a matrix, Φ, and a recovery algorithm, R. Given a vector, x, the system approximates x from linear measurements Φx as $R(\Phi x)$, which must satisfy

$$\|R(\Phi x) - x\| \leq (1+\varepsilon)\|x_{\text{opt}} - x\|,$$

where x_{opt} is the best possible k-term approximation to x. Among the figures of merit are the number of rows in Φ, the runtime of R, the choice of norms, and whether x can depend on (random) Φ. We survey results in this area up to recent work. (Received January 20, 2015)