1043-49-196   **Jonathan M Borwein*** (`jon.borwein@gmail.com`), Dr Jonathan Borwein, 18 Swan St, Cooks Hill NSW, 2300, Australia. *Convex Functions: Characterizations, Constructions and Counterexamples.*

Convex functions—along with smooth functions—provide the wellspring for much of variational analysis. In this talk I shall look at several open problems in variational analysis, at the convex structure underlying them, and at the convex tools available to make progress with them. (Received August 26, 2008)