1167-35-55   **Krutika Tawri** (`ktawri@iu.edu`) and **Roger M Temam*** (`temam@iu.edu`). *Hilbertian approximations of monotone operators.*

Motivated by a forthcoming article on stochastic partial differential equations with a Lévy noise and a monotone nonlinear operator [NTT21], we are interested in approximating a monotone operator of the Ladyzhenskaya type which operates on a Banach space by a family of monotone operators which operate on a Hilbert space. A few examples are given including the so-called Ladyzhenskaya operator appearing in fluid mechanics; and other operators of polynomial type with an arbitrarily high degree appearing for instance in population dynamics and other areas of biology. Based on a joint work to appear with Krutika Tawri [TT21]

References [TT21} Krutika Tawri and Roger Temam, Hilbertian approximations of monotone operators, Pure and Applied Functional Analysis, special issue in memory of Ciprian Foias, to appear. [NTT21] Phuong Nguyen, Krutika Tawri and Roger Temam, Nonlinear stochastic parabolic partial differential equations with a monotone operator of the Ladyzhenskaya-Smagorinsky type driven by a Lévy noise , to appear. (Received February 11, 2021)