1163-46-758 **Tepper L. Gill*** (`tgill@howard.edu`). *An Extension of the Yosida Approximation.*
When I first came to Howard, Jim Donaldson was interested in C_o semigroups of operators and we had discussions on the approximation of unbounded linear operators by a sequence of bounded operators. It is known that if a closed densely defined linear operator A on a separable Banach space, is the generator of a C_o semigroup of contraction operators then resolvent set $\rho(A) \supset (0, \infty)$, and for each λ, with $Re(\lambda) > 0$, $A_\lambda = \lambda A(\lambda - A)^{-1}$ is bounded and $\lim\limits_{\lambda \to \infty} A_\lambda f = Af$, for $f \in D(A)$ (Yosida approximation).

Vernice Steadman replaced contraction operators by uniformly bounded ones for a restricted class of Banach spaces. I will prove that, if A a closed densely defined linear operator on a separable Banach space, there always exists bounded linear operators A_n, with $\lim\limits_{\lambda \to \infty} A_n f = Af$, for $f \in D(A)$. (Received September 12, 2020)