

# CURRICULUM VITAE

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RANK: Professor of Mathematics

DATE HIRED: Sept., 1971

DEPARTMENT CHAIRMAN: Jan. 1986 - July 1989, July 1997 - June 2001

GRADUATE PROGRAM DIRECTOR: 1986 - 1993, 1995 - 97

RESEARCH AREAS: Functional Analysis, Harmonic Analysis, Analysis on Groups and Semigroups, Probability.

## PH.D. THESES DIRECTED

1. Bao. T. Lerner, *C\*-algebra Compactifications of Semidirect Products of Semitopological Semigroups* (1979).
2. Tyler H. Haynes, *Invariant Means on Semitopological Transformation Semigroups* (1983).
3. Ramaiah D. Pandian, *Relatively Almost Periodic and Distal Semigroup Compactifications and Related Fixed Point Theorems* (1983).
4. Thomas L. Mifflin, *Almost Periodic Selections* (1984).
5. Hassan Sedaghat, *New Constructions in Semigroup Compactification Theory* (1990).

## READER FOR PH.D. THESES:

1. Dennis E. Davenport, *The algebraic properties of closed semigroups of ultrafilters on a discrete semigroup*, Howard University, 1987.
2. Hanson M. Umoh, *The ideal of products in  $\beta S \setminus S$* , Howard University, 1987.
3. Amha Tume Lisan, *The ideal structure of the space of ultrafilters on a discrete semigroup*, Howard University, 1988.
4. Patty J. Anthony, *Ideals in the Stone-Čech compactification of noncommutative semigroups*, Howard University, 1994.
5. Gregory L. Smith, *Partition regularity of sums of products of natural numbers*, Howard University, 1994.
6. Sita Ramamurti, George Washington University, 1995.
7. Elaine Terry, *Finite Sums and Products in Ramsey Theory*, Howard University, 1997.
8. Tom Fitzkee, *Weakly Mixing Tiling Flows Arising from Interval Exchange Transformations*, George Washington University, 1998.
9. Shea Burns *Disjoint Smallest Ideals in the Stone-Čech compactification of a semigroup*, Howard University, 2000.
10. Clifford Hansen *Dynamics of Multi-dimensional Substitutions*, GWU, January 2000.
11. William Collier *Applications of Variational Principles to Modeling Partially Inflated Balloon*, GWU, January 2000.

## BOOKS PUBLISHED

- *Compact Right Topological Semigroups and Generalizations of Almost Periodicity*, Lecture Notes in Mathematics 663, Springer-Verlag, N.Y. (1978) (243 pages). (with J.F. Berglund and P. Milnes).
- *Analysis on Semigroups: Function Spaces, Compactifications, Representations*, John Wiley and Sons, N.Y. (1989) (334 pages). (with J.F. Berglund and P. Milnes).

- *Option Valuation: An Introduction to Financial Mathematics*, Chapman & Hall/CRC Financial Mathematics Series, N.Y. (2011) (252 pages).
- *A Course in Real Analysis*, Chapman Hall/CRC, N.Y., (2015) (600 pages).

## REFEREED JOURNAL ARTICLES

1. *Demicontinuity and hemicontinuity in Frechet space*, Proc. Amer. Math. Soc. **38** (1973), 89–91.
2. *Arcs defined by one–parameter semigroups of operators*, Proc. Amer. Math. Soc. **44** (1974), 113–120 (with C. T. Taam).
3. *Tensor products and almost periodicity*, Proc. Amer. Math. Soc. **43** (1974), 99–105.
4. *Tensor products of spaces of almost periodic functions*, Duke Math. J. **41** (1974), 661–666.
5. *Almost periodic compactifications of transformation semigroups*, Pacific J. Math **57** (1975), 207–216.
6. *Some general results on fixed points and invariant means*, Semigroup Forum **11** (1975), 153–164.
7. *Universal mapping properties of semigroup compactifications*, Semigroup Forum **15** (1978), 375–386 (with J.F. Berglund and P. Milnes).
8. *Almost periodic functions on semidirect products of transformation semigroups*, Pacific J. of Math. **79** (1978), 117–128.
9. *The Maak compactification of a dense subsemigroup*, Semigroup Forum **17** (1979), 261–265.
10. *Amenability of function spaces on thick subsemigroups*, Proc. Amer. Math. Soc. **75** (1979), 37–41.
11.  *$C^*$ –algebras of functions on direct products of semigroups*, Rocky Mtn. J. Math. **10** (1980), 589–597.
12. *Topological left amenability of semidirect products*, Canad. Math. Bull. **24** (1981), 79–85.
13. *Semigroup compactifications of semidirect products*, Trans. Amer. Math. Soc. **265** (1981), 393–404 (with B. T. Lerner).
14. *Amenability induced by amenable homomorphic images*, Semigroup Forum **24** (1982), 11–23.
15. *Distal compactifications of semigroups*, Trans. Amer. Math. Soc. **274** (1982), 379–397.

16. *Extensions of continuous functions on dense semigroups*, Illinois J. Math. **27** (1983), 421–435.
17. *Existence and structure theorems for semigroup compactifications*, Semigroup Forum **28** (1984) 109–122 (with D. Pandian).
18. *Weakly almost periodic representations of semigroups by Markov operators*, Semigroup Forum **35** (1987) 195–205.
19. *On extending continuous functions on dense subsemigroups*, Semigroup Forum **43** (1991) 25–32 (with H. Sedaghat).
20. *Direct sums of spaces of functions on semigroups*, Semigroup Forum **49** (1994) 115–123.
21. *Compactifications of  $N$ -fold and infinite semidirect products of semigroups*, Semigroup Forum **51** (1995) 31–45
22. *Compactifications of operator semigroups*, Trans. Amer. Math. Soc. **348** (1996) 1051–1073.
23. *Almost periodic compactifications of product flows*, Semigroup Forum, **58**, (1999), 298 – 312.
24. *Distal compactifications of group extensions* (with P. Milnes), Rocky Mountain Journal of Mathematics, **29** (1999), 209 – 227.
25. *Analysis on a discrete 6-dimensional nilpotent group* (with P. Milnes), J. Sci. Univ. Tehran **3** (1999), 95 – 113.
26. *Almost periodic compactifications of group extensions* (with P. Milnes.) Czech. Math. J. **52** (**127**) (2002), 237 – 254.
27. *Almost periodic compactifications of semidirect product flows*, Semigroup Forum, **66**, (2003), 328 – 336.
28. *Almost Periodic Events Generated By Random Flows*, Semigroup Forum, **88**, (2014), 177–194.
29. *Compactifications of Zappa Products* (with P. Milnes.), Rocky Mountain J. of Math. **44**, Number 6, 2014, 1903 – 1921.