WILLIAM J. PERVIN

PERSONAL

Address: 7617 Meadowhaven Drive; Dallas, Texas 75240-8014
Home Telephone: 972-385-2999
Office: 972-UTD-2719 *e-mail*: pervin@utdallas.edu *fax*: 972-UTD-2349

EDUCATION

B. S., University of Michigan, 1952 (Honors in Mathematics)
M. S., University of Michigan, 1952
Ph.D., University of Pittsburgh, 1957

POSITIONS

1973-present University of Texas at Dallas
  Professor of Computer Science and Mathematics
  Master, School of Engineering and Computer Science (1987-1994)
  Head, Computer Science Program (1982-1985)
  Director of the UT Regional Computer Center (1973-1978)

1967-1973 Drexel University
  Professor of Mathematics
  Director of the Computer Center (1970-1973)

1964-1967 University of Wisconsin-Milwaukee
  Associate Professor of Mathematics
  Chairman of the Mathematics Department (1965-1966)

1963-1964 Universität Heidelberg
  Visiting Professor of Applied Mathematics

1957-1963 Pennsylvania State University
  Assistant and Associate Professor of Mathematics

1955-1957 University of Pittsburgh
  Assistant Professor of Mathematics

1954-1955 Westinghouse; Atomic Power Division
  Senior Scientist, Physics Department

RESEARCH/CONSULTING SUPPORT

UT-System 1997-1998 (Web-based Course)
Microsoft Corp. 1997-1998 (Software Engineering/SDP)
Microsoft Corp. 1997-1998 (Java)
Cray Research, Inc. 1986&1987 (Supercomputers)
Ericsson Northamerica 1985 (Software Engineering)
Texas Instruments 1983-1985 (Data Structures)
Rockwell International 1984-1985 (Program Verification)
NSF Research Grant GP-4432 at UWM from 1965-1967
NRC of Canada grant for Lecture at Edmonton, June 1966
NSF Research Grant G-22690 at PSU from 1962-1964

ADMINISTRATIVE EXPERIENCE

As first Head of the Computer Science Program at UTD, responsible for budgeting and all other academic duties associated with such a position. Doubled faculty size during 1984-85. Elected to the Faculty Council and/or Faculty Senate at UTD for each year 1980-1995 and 1996-2000 (Secretary 1984-1988,1998-2000). Served on the Committee on Educational Policy, Committee on Admissions and Retention, University and College Curriculum Committees. Served as the first Master (Assistant Dean) of the Eric Jonsson School of Engineering and Computer Science. In this position he was responsible for a broad range of educational duties directly concerned with both the graduate and the undergraduate students. He instituted both the Telecommunications and the Software Engineering options for the Masters in CS.

The UT Regional Computer Center was a cooperative facility founded by three units of the UT System: UT-Arlington, UT-Dallas, and UT-Health Science Center at Dallas. It provided a full line of computer services to meet their academic, administrative, and research needs. In addition, service was provided to UT-Permian Basin and UT-Health Center at Tyler. It had a large IBM mainframe at the central cite and shared a remote DECsystem-10. As Director, Dr. Pervin reported to a Board of Directors consisting of the Presidents of the three units together with the Vice-Chancellor of the UT System. He was responsible for the total operation of the Center which included all budgeting and planning. Constant interaction with state agencies concerning procurements and services was required. The Director must also form close working relationships with the faculties of the schools in order to support successfully their educational and research goals.

At Drexel, the Director reports to the Academic Vice President and is responsible for all computer services to the University. A Burroughs B5500 system was used to supply all administrative data processing needs and was installed under Dr. Pervin's direction. Cooperative ties to the Uni-Coll consortium operating an IBM 370/168 were arranged since Dr. Pervin took part in the original formation of Uni-Coll and served as Chairman of its Operating Policy Advisory Committee. He also planned the new M. S. degree in Computer Science for the Mathematics Department and took part in developing a Ph. D. program there.

As Chairman of the Mathematics Department at the University of Wisconsin-Milwaukee, he was directly responsible for all budget and academic requirements for the Department. This Department was the first at the University to offer the Ph. D. degree. He also served on the all-University Natural Sciences Committee for the UW-System from 1965 to 1967.

AVOCATION

Principal French Horn in the Richardson Symphony Orchestra, Richland Early Brass, Richardson Community Band, Irving Philharmonic, Garland Symphony, Mid-cities Symphony. In Philadelphia area: Main Line Symphony, Chestnut Hill Symphony, Stenton Hills Symphony, Symphony Club of Philadelphia. Member of Local 72-147, A. F. of M. Music Critic: *Richardson News*

MEMBERSHIPS

IEEE (Senior Member) and IEEE-Computer Society (Vice-Chair, Dallas Section 1990-1991, Chair, 1991-1994, Treasurer, 1994-1996, Secretary, 1997-2000, Outstanding Service Award 1995 and 2000); Mathematical Association of America (Chairman, Philadelphia Section 1972-1973); Association for Computing Machinery; American Mathematical Society; Society for Industrial and Applied Mathematics; AAAS; AAUP; ΣΞ;ΦΚΦ;ΠΜΕ

ADDRESSES

"Regular Topologies and Posets," Canadian Mathematical Congress, June 1966 at Edmonton, Alberta

"Algebraic Topology for Undergraduates," Philadelphia Section, Mathematical Association of America, November 1967 at Newark, Delaware

"Normal Semifield Metrics," Annual Meeting, American Mathematical Society, January 1969 at New Orleans

Visiting Lecturer, Mathematical Association of America, 1969-70

"Integration on Topological Semifields," American Mathematical Society, March 1970 at New York City (also, Chairman, General Session II)

"Separation Axioms and Semifield Metrics," Annual Meeting, American Mathematical Society, January 1976 at San Antonio (also, Chairman, General Topology Session I)

REFEREEING ACTIVITY

Referee: Proceedings of the American Mathematical Society; Bulletin of the Canadian Mathematical Society; American Mathematical Monthly; Journal of the Australian Mathematical Society; Duke Mathematical Journal; Pacific Journal of Mathematics; Manuscripta Mathematica; and other journals. Reviewer for Mathematical Reviews.

TEACHING EXPERIENCE

Computer Science: Programming Languages, Functional Programming, Databases, Operating Systems, Systems Programming, System Simulation (also in School of Management), Nonnumerical Computing, Mathematical Aspects of Computing, Data Structures, Assembly Language, C++, Java, *etc.*

Mathematics: Numerical Analysis, Real and Complex Variables, Linear and Abstract Algebra, Ordinary and Partial Differential Equations, General and Algebraic Topology, Geometry, *etc.*

EE: Systems & Signals, Advanced Engineering Mathematics

DISSERTATIONS DIRECTED

J. L. Sieber, Pennsylvania State University, 1963
M. Kleiber, University of Wisconsin-Milwaukee, 1968
E. B. Weidman, University of Texas at Dallas, 1992

WORK IN PROGRESS

Research and consulting on Software Engineering topics. Also working to evaluate various methods of improving Computer Science Education. This includes using Java programs to augment classroom instruction and experimenting of the use of Java as a first language. In addition, research work on Digital Signal Processing is in progress while giving experimental classes on DSP to CS students.

PUBLICATIONS

Book

Foundations of General Topology, Academic Press, New York, 1964
[Reviews: MR 27 #2759; AMM 73,326; CMB 8,540]

Translations Edited

Z. P. Mamuzic, *Uvod u Opstu Topologiju*, Belgrade, Mathematica Biblioteka=Noorhoff, 1963
H.-J. Kowalsky, *Topologische Raume*, Basel, Birkhauser Verlag = Academic Press, 1965
A. V. Pogorelov, *Lektzii po Osnovaniyam Geometrii*, Charkov = Noorhoff, 1967

Refereed Journal Articles

1. Connected mappings of Hausdorff spaces, Proceedings of the American Mathematical Society, vol. 9 (1958), pp. 488-496. (w/Levine) [MR 20 #1970;Zbl 89,175]

2. Uniformization of neighborhood axioms, *Mathematische Annalen*, vol. 147 (1962), pp. 313-315. [MR 25 #3506a;Zbl 101,404]

3. Quasi-uniformization of neighborhood axioms, *Mathematische Annalen*, vol. 147 (1962), pp. 316-317. [MR 25 #3506b;Zbl 101,405]

4. Quasi-proximities for topological spaces, *Mathematische Annalen*, vol. 150 (1963), pp. 325-326. [MR 27 #1917;Zbl 112,375]

5. Separation axioms for syntopogenous spaces, Proceedings of the Royal Nederlands Academy of Sciences, Series A, vol. 66 (1963), pp. 755-760. (w/Sieber) [MR 28 #3399;Zbl 116,143]

6. On uniform connectedness, Proceedings of the American Mathematical Society, vol. 15 (1964), pp. 446-449. (w/Mrowka) [MR 28 #4515;Zbl 126,183]

7. On separation and proximity spaces, American Mathematical Monthly, vol. 71 (1964), pp. 158-161. [MR 27 #2767;Zbl 117,398]

8. Equinormal proximity spaces, Proceedings of the Royal Nederlands Academy of Sciences, Series A, vol. 67 (1964), pp. 152-154. [MR 28 #4514;Zbl 136,435]

9. Connectedness in syntopogenous spaces, Proceedings of the American Mathematical Society, vol. 15 (1964), pp. 590-595. (w/Sieber) [MR 29 #4020;Zbl 134,417]

10. On the cardinality of closed sets, Proceedings of the Royal Nederlands Academy of Sciences, Series A, vol. 67 (1964), pp. 611-612. (w/Mrowka) [MR 30 #556;Zbl 146,184]

11. On semi-locally connected spaces, Proceedings of the Royal Nederlands Academy of Sciences, Series A, vol. 67 (1964), pp. 613-614. (w/Mrowka) [MR 30 #557;Zbl 123,159]

12. Additional separation axioms for syntopogenous spaces, Proceedings of the Royal Nederlands Academy of Sciences, Series A, vol. 68 (1965), pp. 119-121. (w/Sieber) [MR 30 #2448;Zbl 136,435]

13. Completeness in quasi-uniform spaces, *Mathematische Annalen*, vol. 158 (1965), pp. 79-81. (w/Sieber) [MR 30 #2449;Zbl 141,396]

14. Another definition of completeness in syntopogenous spaces, Proceedings of the Royal Nederlands Academy of Sciences, Series A, vol. 69 (1966), pp. 384-386. (w/Sieber) [MR 33 #6575;Zbl 141,396]

15. Regular topologies and posets, Proceedings of the American Mathematical Society, vol. 17 (1966), pp. 903-905. (w/Biesterfeldt) [MR 34 #8368;Zbl 145,193]

16. On the connected-open topology, Proceedings of the Royal Nederlands Academy of Sciences, Series A, vol. 70 (1967), pp. 126-127. [MR 35 #960;Zbl 147,728]

17. Connectedness in bitopological spaces, Proceedings of the Royal Nederlands Academy of Sciences, Series A, vol. 70 (1967), pp. 369-372. [MR 36 #2105;Zbl 148,166]

18. Uniformization of convergence spaces, *Mathematische Annalen*, vol. 177 (1968), pp. 43-48. (w/Biesterfeldt) [MR 37 #6905;Zbl 155,504]

19. A Hahn-Banach theorem for semifields, Journal of the Australian Mathematical Society, vol. 10 (1969), pp. 20-22. (w/Kleiber) [MR 40 #675;Zbl 176,425]

20. Semifield metric spaces, Bulletin of the Australian Mathematical Society, vol. 1 (1969), pp. 127-136. (w/Kleiber) [MR 40 #1990;Zbl 174,258]

21. A generalized Banach-Mazur theorem, Bulletin of the Australian Mathematical Society, vol. 1 (1969), pp. 169-173. (w/Kleiber) [MR 41 #6161;Zbl 175,135]

22. Binary digital arithmetic, Mathematics Magazine, vol. 43 (1970), pp. 41-42.

23. A Hahn-Banach theorem for complex semifields, Bulletin of the Australian Mathematical Society, vol. 2 (1970), pp. 129-133. (w/Anton) [Zbl 179,454]

24. Integration on topological semifields, Pacific Journal of Mathematics, vol. 37 (1971), pp. 567-574. (w/Anton) [MR 46 #4154;Zbl 195,34]

25. Separation axioms and metric-like functions, Pacific Journal of Mathematics, vol. 65 (1976), pp. 299-306. (w/Anton)

26. On the separation axioms for bitopological spaces, Annales of the Social Sciences Society of Brussels, vol. 91 (1977), pp. 195-199. (w/Anton)

27. Inference rules for multivalued dependencies, SIGCSE Bulletin of ACM, vol. 19, no. 3 (1987), pp. 4-7.

28. Verification of Ada I/O Statements, SIGCSE Bulletin of ACM, vol. 21, no. 2 (1989), pp. 57-60.

Technical Papers

1. Flux from homogeneous cylinders and spheres containing uniform source distributions, Westinghouse Atomic Power Division Technical Note 510, May 1955, 37pp.

2. Gauss-Jacobi mechanical quadratures, Westinghouse Atomic Power Division (Large Ship Reactors - Physics) Note 38, September 1955, 28pp.

3. Program Verification, Rockwell International, Technical Memorandum, May 1985, 43pp.

Conference Proceeding

Explicit Dynamic Mutual Exclusion Algorithm, Proceedings Third IEEE Symposium on Parallel and Distributed Processing, 1991, pp. 142-149. (w/Weidman,Page)