Vita (March 18, 2012)

Larry L. Schumaker

I. Biographical Data

A. Education

1. B.S. Mathematics, S.D. School of Mines, June, 1961
2. M.S. Mathematics, Stanford University, June, 1962
3. PhD Mathematics, Stanford University, January, 1966

B. Present Position

1. Stevenson Professor of Mathematics, Vanderbilt University, 1988 –

C. Previous Teaching and Research Positions

1. Staff Mathematician, Hughes Aircraft Co., Summers, 1961 – 1963
2. Research Assistant, Mathematics and Computer Science, Stanford University, 1964 – 1965
3. Instructor, Computer Science Dept., Stanford University, 1966
4. Visiting Research Member, Mathematics Research Center, University of Wisconsin, 1966 – 1968
5. Assistant Professor of Mathematics, University of Texas, 1968 – 1969
6. Associate Professor of Mathematics, University of Texas, 1969 – 1974
7. Professor of Mathematics, University of Texas, 1974 – 1979
8. Professor of Mathematics, Texas A&M University, 1981 – 1988
9. Director, Center for Approximation Theory, Texas A&M University, 1981 – 1988

D. Visiting Teaching and Research Positions

1. Visiting Research Member, Mathematics Research Center, University of Wisconsin, 1973 – 1974
2. Visiting Professor, University of Munich, Germany, 1974 – 1975
3. Visiting Professor, Free University of Berlin, Germany, 1978 – 1979
4. Visiting Researcher, Hahn-Meitner Atomic Energy Laboratories, Berlin, Germany, 1978 – 1979
5. Visiting Professor of Mathematics, Texas A&M University, 1980 – 1981
6. Visiting Professor, University of Sao Paulo, Brazil, 5/1981 – 8/1981
7. Visiting Professor, University of Würzburg, W. Germany, 5/1984 – 8/1984
8. Visiting Professor, University of Würzburg, W. Germany, 5/1987 – 8/1987
9. Visiting Professor, University of Munich, W. Germany, 1988 – 1989.

E. Other Experience

1. Candidate for the United States Senate in South Dakota, 1980

F. Honors

1. Hughes Aircraft Masters Fellow
2. National Science Foundation Graduate Fellow
3. Humboldt Fellow, German Federal Republic, 1978 – 1979
4. Student Council Teaching Excellence Award, Texas A&M University, 1981
5. Centennial Outstanding Graduate Award, S.D. School of Mines & Technology, 1985
6. Humboldt Prize, Humboldt Foundation, Federal Republic of Germany, 1989.
7. John Gregory Award in Geometric Modelling, DFKI, Germany, 1999.
8. Birthday issue of Journal of Computational and Applied Mathematics, **119** (2000), 21 contributed papers, 412 pp.
9. Norwegian Academy of Sciences and Letters, 2006.

G. Biographical Listings

1. American Men of Science
2. American Men and Women of Science
3. Dictionary of International Biography
4. Men of Achievement
5. Who's Who Among American Teachers & Educators
6. Who's Who in American Education
7. Who's Who in American Universities and Colleges
8. Who's Who in the Southeast
9. Who's Who in the South and Southwest
10. Who's Who in Science and Engineering
11. Who's Who in Sciences Higher Education
12. Who's Who in Technology Today
13. Who's Who in the World
14. Who's Who

H. Professional Societies

1. Society for Industrial and Applied Mathematics
2. American Mathematical Society
3. The Mathematical Association of America
4. Humboldt Association of the U. S.

II. Professional Activity

A. Member Editorial Board of Journals

1. *Computer Aided Geometric Design*, North Holland, 1984 – .
2. *Constructive Approximation*, Springer-Verlag, 1985 – .
3. *Advances in Computational Mathematics*, J. Balzer AG, 1992 – .
4. *Mathematics of Computation*, American Math. Society, 1989 – 1992.
5. *Revista de Matemáticas Aplicadas*, Univ. of Santiago, Chile, 1991 – 1995.

B. Referee

1. A.C.M. Trans. on Graphics
2. Advances in Computational Mathematics
3. Army Research Office (Durham)
4. Air Force Office of Scientific Research
5. Binational Science Foundation
6. Canadian Mathematics Bulletin
7. Canadian Research Foundation
8. Communications in Pure and Applied Analysis
9. Computers and Mathematics
10. Computing
11. Computational and Applied Mathematics
12. Computational Geometry and Applications
13. Computer–Aided Design
14. Computer–Aided Geometric Design
15. Computer Methods in Applied Mechanics and Engineering
16. Constructive Approximation
17. Dept. of Energy
18. Experimental Mathematics
19. GACR (Grant Agency, Czech Republic)
20. I.E.E.E. Computer Graphics and Applications
21. I.E.E.E. Trans. Circuits and Systems
22. I.E.E.E. Trans. Decision and Control
23. Indiana Journal of Mathematics
24. Int. J. Numerical Methods in Engineering
25. Journal of American Statistical Association
26. Journal of Approximation Theory
27. Journal d'Analyse
28. Journal of Applicable Analysis
29. Journal of Edinburgh Mathematics Society
30. Journal of Royal Statistical Society
31. Journal of Optimization Theory and Applications
32. Mathematics of Computation
33. Math. Geology

34. National Science Foundation, Conf. Board of Mathematics
35. Numerical Methods for Partial Differential Equations
36. Numerische Mathematik
37. Oxford University Press
38. Pacific Journal
39. Proceedings of the American Math. Society
40. Research Council, City Univ. Hong Kong
41. Rocky Mt. Journal
42. SIAM J. Control
43. SIAM J. Math. Analysis
44. SIAM J. Numerical Analysis
45. SIAM Publications
46. Technometrics
47. Transactions of the American Math. Society

C. Reviewer

1. Mathematical Reviews
2. Zentralblatt
3. Computer Reviews
4. Applied Mechanics Reviews

D. Graduate Courses Taught

1. Real and Abstract Analysis, Univ. of Texas, 1969
2. Advanced Numerical Analysis, Univ. of Texas, 1969
3. Approximation Theory, Univ. of Texas, 1970
4. Positive Linear Operators, Univ. of Texas, 1973
5. Spline Functions, Univ. of Munich, 1974
6. Approximation Theory, Univ. of Texas, 1976
7. Spline Functions, Free Univ. of Berlin, 1978
8. Spline Approximation, Univ. of Sao Paulo, Brazil, 1981
9. Data Fitting, Texas A&M Univ., 1981–1982
10. Numerical Analysis, Texas A&M Univ., 1982
11. Spline Functions, Texas A&M Univ., 1983–1984
12. Multivariate Spline Functions, Texas A&M Univ., 1984–1986
13. Multivariate Spline Functions, Univ. Würzburg, 1987
14. Spline Functions, Texas A&M University, 1987
15. Spline Functions, Vanderbilt University, 1989
16. Approximation Theory, Vanderbilt University, 1991
17. Spline Functions, Vanderbilt University, 1991
18. Multivariate Spline Functions, Vanderbilt University, 1992
19. Computer–Aided Geometric Design, Vanderbilt University, 1992
20. Topics in Splines, Vanderbilt University, 1993
21. Multivariate Splines, Vanderbilt University, 1995

22. Finite Elements, Vanderbilt University, 1996
23. Multivariate Approximation Theory, Vanderbilt University, 1996
24. CAGD, Vanderbilt University, 1997
25. Multivariate Splines, Vanderbilt University, 1998
26. Numerical Methods for PDE, Vanderbilt University, 2001
27. Approximation Theory, Vanderbilt University, 2002
28. Professional Development for Mathematicians, Vanderbilt University, 2002
29. Seminar in Computational Analysis, Computer-Aided Geometric Design, Vanderbilt University, 2003
30. Professional Development for Mathematicians, Vanderbilt University, Fall, 2004
31. Seminar in Computational Analysis, Radial Basis Functions, Spring 2004
32. Numerical Methods for Partial Differential Equations, Fall, 2005
33. Finite Difference Methods for Partial Differential Equations, Fall, 2006
34. Finite Element Methods for Partial Differential Equations, Spring, 2007
35. Computational Math Seminar on Splines and Applications, Fall, 2007
36. Mesh-Free Methods in Approximation, Fall, 2008
37. Finite Difference Methods for Partial Differential Equations, Spring, 2009
38. M386: Computations with Splines, Spring 2010

E. Graduate Students

1. Randolf Brasch, M.A., 1969, Univ. of Texas, Computation of Lg–splines
2. Robert Pratt, M.A., 1971, Univ. of Texas, A comparison of certain algorithms for the numerical computation of interpolating natural spline functions
3. Thomas Anderson, M.S., 1971, Univ. of Texas, On best spline approximation
4. Patricia Copley, PhD, 1974, Univ. of Texas Structure and characterization of pLg–splines
5. Tom Lyche, PhD, 1975, Univ. of Texas, Discrete polynomial splines and applications
6. M.S. Hsiang,, M.A., 1977, Univ. of Texas, A comparison of methods for fitting surfaces to scattered data
7. Kin–Chy Woo, M.A., 1978, Univ. of Texas, The effectiveness of interpolating programs
8. Chui Li Hu, M.S., 1985, Texas A&M Univ.
9. Mohammad Hasan, M. S., 1988, Texas A&M Univ.
10. Dwight Diener, PhD, 1988, Texas A&M Univ., Dimension of spaces of piecewise polynomials
11. Adel Kh. Ibrahim, PhD, 1989, Suez Canal University, On the dimension of multivariate spline spaces
12. Lu Han, MS, 1993, Vanderbilt Univ.
13. Ethan Rutter, MS, 1994, Vanderbilt Univ.
14. Greg Fasshauer, PhD, 1995, Vanderbilt Univ. (Asst. Prof., Illinois Inst. Tech.)
15. Sonya Stanley, PhD, 1996, Vanderbilt Univ. (Asst. Prof., Samford Univ.)
16. X. L. Liu, completed qualification, Vanderbilt Univ.
17. David Assaf, PhD, May, 1997, Vanderbilt Univ.
18. Tanya Morten, PhD, May, 2000, Vanderbilt Univ.

19. Vera Rayevskaya, PhD, Dec. 2003, Vanderbilt Univ.
20. Tatyana Sorokina, PhD, May, 2004, Vanderbilt Univ.
21. Yuliya Babenko, PhD, May, 2006, Vanderbilt Univ.
22. Lujun Wang, Vanderbilt Univ., PhD, expected, 2012, Vanderbilt Univ.

F. Conference Organization

1. International Symposium on Approximation, with G. G. Lorentz, E.W. Cheney, and H. Berens, Austin, Texas, Jan. 1973
2. International Symposium on Approximation, with G. G. Lorentz, E.W. Cheney, and C. K. Chui, Austin, Texas, Jan. 1976
3. International Symposium on Approximation, with C. K. Chui and J. Ward, Texas A&M Univ., College Station, Texas, Jan. 1983
4. NASA workshop on multivariate splines, Texas A&M Univ., College Station, Texas, Jan. 1983
5. Joint USA/China conference on Approximation Theory, with C. K. Chui, Hangzhou, China, May 1985
6. International Symposium on Approximation Theory, with C. K. Chui and J. Ward, Texas A&M Univ., College Station, Texas, Jan. 1986
7. International workshop on multivariate approximation, with C. K. Chui and F. Utreras, Santiago, Chile, Dec. 1986
8. International conference on Mathematical Methods in Computer–aided Design, with T. Lyche, Oslo, June 1988.
9. Sixth International Symposium on Approximation Theory, with C. K. Chui and J. Ward, Texas A&M Univ., College Station, Texas, Jan. 1989.
10. NATO Advanced Study Institute on Computational Curves and Surfaces, Puerto de la Cruz, Canary Islands, with W. Dahmen, M. Gasca, and C. Micchelli, July, 1989.
11. International Conference on Curves and Surfaces, Chamonix, France, with A. Le Méhauté and P. J. Laurent, June, 1990.
12. Second International Conference on Curves, Surfaces, CAGD, and Image Processing, with Tom Lyche, Biri, Norway, June, 1991.
13. International Conference Numerical Approximation Theory, with D. Braess, Oberwolfach, Germany, November, 1991.
14. 7th Texas International Symposium on Approximation Theory, with C. Chui and E. W. Cheney, Austin, Texas, Jan., 1992.
15. Syposium on Wavelets, Vanderbilt, with G. Webb, May, 1992.
16. 2nd International Conference on Curves and Surfaces, Chamonix, France, with A. Le Méhauté and P. J. Laurent, June, 1993.
17. 3rd International Conference on Mathematical Methods in Computer–Aided Design, with M. Daehlen and T. Lyche, Ulvick, Norway, June, 1994.
18. 7th Southeast Approximation Conference, with M. Neamtu, Nashville, TN, Nov., 1994.
19. 8th Texas International Symposium on Approximation Theory, with C. Chui, College Station, Texas, Jan., 1995.

20. International Conference on Scattered Data Fitting, with A. Le Méhauté and L. Traversoni, Cancun, Mexico, March, 1995.
21. Fourth SIAM Conference on Geometric Design, with R. Chang, Nashville, TN, Nov., 1995.
22. Third International Conference on Curves and Surfaces, Chamonix, France, with A. Le Méhauté and C. Rabut, June, 1996.
23. Numerische Methoden der Approximationstheorie, with D. Braess, Oberwolfach, Germany, May, 1997.
24. Fourth International Conference on Mathematical Methods in Computer Aided Geometric Design, with M. Daehlen and T. Lyche, Lillehammer, Norway, July, 1997.
25. Fourth SIAM Conference on Geometric Design, with Tony DeRose, Nashville, TN, Nov., 1997.
26. 9th International Symposium on Approximation Theory, with C. Chui, Nashville, TN, Jan., 1998.
27. CAGD and Wavelet Methods for Reconstructing Functions, with M. Bozzini (Milano), Montecatini, Italy, June 15–17, 1998.
28. Scattered Data Fitting, with A. LeMéhauté and L. Traversoni, Puerto Vallerta, Mexico, April, 1999.
29. Curves and Surfaces IV, with A. Cohen, and P. Laurent, and P. Sablonnière, St. Malo, France, July 1–7, 1999.
30. Mathematical Methods for Curves and Surfaces, Oslo, with Tom Lyche, Oslo, Norway, June, 2000.
31. 10th International Symposium on Approximation Theory, with C. Chui and J. Stoeckler, St. Louis, March, 2001.
32. Institute for Mathematics and Its Applications, Conference on Geometric Design, with Rosemary Chang, Univ. Minn., April 23–27, 2001.
33. Curves and Surfaces V, with A. Cohen, Tom Lyche, M.-L. Mazure, and J.-L. Merrien, St. Malo, France, June 27 – July 3, 2002.
34. Eleventh International Conference on Approximation Theory, with C. K. Chui and M. Neamtu, Gatlinburg, TN, May 18–22, 2004.
35. Mathematical Methods for Curves and Surfaces, with Morten Daehlen, Knut Morken, and M. L. Mazure, Tromso, Norway, July 1–6, 2004.
36. CAGD Workshop, Bergen-Kirkenes, Norway, June 24–30, 2004.
37. Curves and Surfaces, with Tom Lyche, J. L. Merrien, and A. Cohen, Avignon, France, June 29–July 5, 2006.
38. Approximation Theory XII, with M. Neamtu, San Antonio Texas, March 5–8, 2007.
39. Seventh International Conference on Mathematical Methods for Curves and Surfaces, Tonsberg, Norway, June 26–July 1, 2008.
40. Approximation Theory XIII, with M. Neamtu, San Antonio Texas, March 6–10, 2010.
41. Seventh International Conference on Curves and Surfaces, with J-D. Boissonnat, P. Chenin, A. Cohen, C. Gout, T. Lyche, and M-L. Mazure, Avignon, France, June 24–June 30, 2010.
42. Mathematical Methods for Curves and Surfaces, Oslo, with Tom Lyche et. al., Oslo, Norway, June, 2012.

G. Special Session Organizer

1. AMS Sectional Meeting, Chattanooga, TN, Sphere-based mathematics, with Ed Saff, Oct. 5–6, 2001.
2. SIAM 50th Anniversary Meeting, Philadelphia, Minisymposium on Applications of Splines, July 8–12, 2002.
3. Foundations of Computational Mathematics, Univ. of Minn., Workshop on Geometric Modelling and Animation, with Malcom Sabin and Wim Sweldens, August 5–14, 2002.
4. Foundations of Computational Mathematics Workshop on Geometric Design, with Tom Lyche, Santander, Spain, June 30 – July 3, 2005.

H. Other Conference Committees

1. Computer Graphics International '98, Hannover, Germany, June 22-26, 1998.
2. Conference on Mathematics of Surfaces, Cambridge, England, Sept. 3–6, 2000.

I. Public Service

1. Special Committee of South Dakota Board of Regents to develop EPSCOR funding for the state of S.D.

K. Lectures at Conferences

1. ONR Workshop on Numerical Analysis, Cornell, 1968, Spline Functions and Applications
2. Conference on Approximation, Mathematics Research Center, Univ. of Wisconsin, 1968, a) Approximation by splines, b) Computation by splines
3. Symposium on Approximation, Mathematics Research Center, Univ. of Wisconsin, 1969, Splines via optimal control
4. International conference on constructive function theory, Varna, Bulgaria, 1970, A rational approximation problem in filter design
5. Symposium on Numerical Mathematics, Oberwolfach, Germany 1970, Local support bases for g–splines
6. NSF Regional conference on Approximation, Northwestern Univ., 1971, Some multidimensional spline approximation methods
7. Conference on approximation, Michigan State Univ., 1972, Direct and inverse theorems for multidimensional spline approximation
8. Symposium on Approximation, Univ. of Alberta, Edmonton, 1972, Convergence of cubic interpolating splines
9. International symposium on approximation theory, Univ. of Texas, 1973, Constructive aspects of discrete polynomial spline functions
10. Short course at Georgia Tech., 1973, 7 hours of lectures on spline functions and applications

11. Symposium on Numerical Methods in Approximation Theory, Oberwolfach, Germany, 1973, Spline solution of initial– and boundary–value problems for linear ordinary differential equations
12. Special year in Analysis, Northwestern Univ., 1973, The constructive approach to spline functions
13. Symposium on linear operators and approximation, Oberwolfach, Germany, 1974, Local spline approximation methods
14. Short course at Georgia Tech., 1974, 12 hours of lectures on spline functions and applications
15. Joint Hungarian–USA conference on approximation theory, Univ. of Wisconsin, 1974, N-widths and optimal spline approximation
16. International conference on spline approximation, Univ. of Karlsruhe, Germany, 1975, On the constructive approach to generalized splines
17. Symposium on numerical methods in approximation theory, Oberwolfach, Germany, 1975, Integration of B–splines
18. Symposium on approximation theory, Univ. of Texas, 1976, Fitting surfaces to scattered data
19. Semester on approximation theory, Stefan Banach Mathematical Center, Polish Academy of Sciences, Warsaw, 1975, a) Direct approximation methods, b) spline fitting data
20. Conference on approximation theory, Univ. of Brussels, 1976, Fitting surfaces to scattered data
21. Conference on approximation, Univ. of Bonn, Germany, 1976, Two stage methods for fitting surfaces
22. Special Session of Approximation Theory, American Mathematical Society summer meeting, Seattle, 1977, On the Budan–Fourier theorem for splines
23. Workshop on very large data bases, Tokyo, Japan, 1977, Computer–aided design of 3–D objects using spline functions
24. Symposium on approximation theory, Univ. of Siegen, Germany, 1979, Best L^2–approximation by splines
25. Conference on constructive function theory in several variables, Oberwolfach, Germany, 1979, On spaces of multi–dimensional piecewise polynomials
26. MAA Texas Section, San Antonio, 1981, Fitting surfaces to scattered data
27. Latin American Conference on Ordinary Differential Equations, Univ. of Sao Paulo, Brazil, 1981, Optimal spline solutions of systems of ordinary differential equations
28. Conference on Approximation theory, Oberwolfach, Germany, 1981, On hyperbolic splines
29. Conference on Multivariate Function Theory, Oberwolfach, 1982, On the dimension of spaces of piecewise polynomials
30. Second Edmonton Conference on Approximation theory, 1982, On spaces of piecewise polynomials with boundary conditions
31. SIAM Meeting, Stanford, Special session on surfaces, 1982, Spaces of piecewise polynomials

32. International Conference on Surface Fitting, Lake Garda, Italy, 1983, Five hours of lectures on multivariate splines
33. Conference on Numerical Analysis, Univ. of Dundee, Scotland, 1983, Computing the zeros of splines
34. SIAM Conference on Computer–Aided Design, RPI, Troy, N.Y., 1983 Methods of scattered data fitting
35. NATO Advanced Study Institute Conference on Approximation Theory, Memorial Univ., St. John's Newfoundland, 1983, Spaces of bivariate splines
36. SIAM Section meeting, Texas A&M Univ., 1984, Spline Functions and Applications
37. Conference on Delay Equations and Approximation, Univ. Mannheim, Germany, 1984, Tensor–product natural spline interpolation
38. Conference on Computer–Aided Design, Oberwolfach, Germany, 1984, Rates of converenge of control polygons
39. Joint USA/China Conference on Approximation Theory, Hangzhou, China, 1985, Dimension of piecewise cubic and quartics on arbitrary partitions
40. IMSA Conference on Fitting of Data, Royal Military College, Shrivenham, England, 1985, Use of triangle–based methods in multi– stage schemes for fitting scattered data
41. Haar Memorial Conference on Approximation Theory, Hungarian Academy of Sciences, Budapest, 1985, Tensor product schemes of abstract smoothing splines
42. International Workshop on Multivariate Approximation, Santiago, Chile, 1986, Triangulation algorithms
43. Southeastern Conference on Approximation Theory, Columbia, S. C., 1987, Generalized Cross–validation for tensor splines
44. Mathematics of Finite Elements Conference, Brunel University, 1987, Multivariate splines and finite elements
45. Special Session on Total Positivity, AMS Annual Meeting, Atlanta, 1988, Best approximation by generalized splines
46. Conference on Multivariate Approximation Theory, Oberwolfach, Germany, 1988, Penalized least squares
47. Joint U.S. Israel Conference on Approximation Theory, Jerusalem, Israel, 1988, Recent results on multivariate splines
48. Conference on Computer–aided Geometric Design, Jerusalem, Israel, 1988, Multivariate splines and CAGD
49. Conference on Numerical Methods for Data Fitting, Shrivenham, England, 1988, Data fitting using penalized least squares methods
50. Conference on Numerical Linear Algebra and Approximation Theory, Kent State University, 1989, On multivariate splines
51. Conference on Computer–aided Geometric Design, Oberwolfach, Germany, 1989, Data dependent C^1 piecewise cubic surface fitting
52. NATO Workshop on Curves and Surfaces, Teneriffe, 1989, Reconstruction of 3D objects from cross sections
53. SPIE Conference, Santa Clara, Ca., Feb. 1990, Short course on splines and algorithms
54. SPIE Conference, Santa Clara, Ca., Feb. 1990, Applications of splines in surface reconstruction

55. International Conference on Mathematics of Finite Elements, Brunel University, Brunel, England, April, 1990, Recent results on multivariate splines
56. Conference on Curves and Surfaces, Chamonix, France, June, 1990, Data Dependent Triangulation Methods
57. Conference on Algebraic Methods in Spline Theory, Oberwolfach, Germany, October, 1990. Dimensions of multivariate spline spaces.
58. NSF/CBMS Regional Conference on Curves and Surfaces, Kent State, December, 1990. Applications of Simulated Annealing Methods for Computing Best Triangulations
59. Gedenkolloquium für Lothar Collatz, University of Hamburg, Germany, July, 1991. Splines, wavelets, and their applications.
60. SPIE Conference, Boston, November, 1991. Wavelets and their applications in signal processing and image compression.
61. Conference on Computer Aided Geometric Design, Oberwolfach, Germany, June, 1992. Use of simulated annealing to compute optimal triangulations.
62. Workshop on Computational Geometry, University of Torino, Italy, June, 1992. Applications of triangulations in computational geometry.
63. Conference on Curves, Surfaces and Massive Computation, Oberwolfach, Germany, Feb., 1993. Data dependent triangulations in surface fitting.
64. Conference on Constrained Approximation, Stowe, Vt., May, 1993. Fitting monotone surfaces to scattered data.
65. Workshop on Computer–Aided Design, Wolfenbuettel, Germany, June, 1993. A Sibson element for shape controlled surface fitting.
66. SIAM Conference on Simulated Annealing, San Francisco, Aust., 1993. Use of simulated annealing to compute optimal triangulations.
67. AMS Anniversary Meeting for Mathematics of Computation, Vancouver, Aug., 1993. Applications of multivariate splines.
68. International Symposium on Wavelets, Taormina, Italy, October, 1993. Tchebycheffian spline wavelets.
69. SIAM conference on CAGD, Tempe, Arizona, November, 1993. a) Recent advances in dimension theory, b) data–dependent triangulations
70. Southeast Approximation Conference, Vanderbilt, November, 1994. Splines on the sphere.
71. Workshop on Proximity Graphs, Mississippi State Univ., Dec. 1994. Quadrangulations and applications.
72. International Conference on Scattered Data Fitting, Cancun, Mexico, March, 1995. Hybrid Bezier patches on sphere-like surfaces.
73. International Conference on Free Form Curves and Surfaces, Oberwolfach, Germany, June, 1995. Splines on the sphere.
74. Third International Conference on Curves and Surfaces, Chamonix, France, July, 1996. Wavelets on the sphere.
75. AMS, Memphis, March, 1997. Shape properties of CBB Curves.
76. SE Approximation Conference, Athens, Ga, April, 1997. Design of cams using trigonometric splines.

77. CAGD, Crete, Greece, June, 1997. Design of cams using trigonometric splines.
78. CAGD, Lillehammer, Norway, June, 1997. Scattered data fitting on the sphere.
79. Multiresolution methods in computer graphics, Dagstuhl, Germany, June, 1998. Local bases for bivariate spline spaces.
80. Wavelets and CAGD, Montecatini, Italy, June, 1998. Local bases for bivariate spline spaces.
81. Surface Approximation and Visualisation, Canterbury, New Zealand, Feb., 1999. Recent advances in macro-element methods for fitting scattered data.
82. Analysis, Matrix Theory, and Scientific Computation, Kent, Ohio, March, 1999. Recent advances in macro-element methods for fitting scattered data.
83. Mathematical Methods in Geodesy, Oberwolfach Germany, March, 1999. Splines on spherical triangulations.
84. Scattered Data Fitting, Puerto Vallerta, Mexico, April, 1999. Macro elements.
85. Geometric Modeling, Dagstuhl, Germany, May, 1999. Macro element methods.
86. Curves and Surfaces, St. Malo, France, July, 1999. Approximation power of spherical splines.
87. Workshop on Approximation Theory, Foundations of Computational Mathematics, Oxford, England, July, 1999. Stable bases via macro elements.
88. SIAM Conference on Computer-Aided Geometric Design, Nov. 1999. Invited Plenary Lecture. Recent advances in macro element methods.
89. International Conference on Approximation and Computation, Charleston, SC, May 12-17, 2001. Stable bases for spline spaces.
90. Algorithms for Approximation IV, Huddersfield, England, July, 2001. Recent advances in macro elements.
91. Multivariate Approximation and Interpolation with Applications in CAGD, Almunécar, Spain, Sept. 10–14, 2001. Stable bases for splines spaces.
92. Tenth Southeast Approximation Conference, Athens, Georgia, March 23–24, 2002. Surface compression using bivariate splines.
93. Geometric Modelling, Dagstuhl Germany, May 12 – 17, 2002. Trivariate spline interpolation.
94. SIAM 50th Anniversary Meeting, Philadelphia, Invited semi-plenary lecture, July 8–12, 2002. The impact of splines on Applied Mathematics,
95. Foundations of Computational Math, Workshop on Approximation Theory, Univ. of Minnesota Institute for Mathematics and its Applications, August 8 – 10, 2002. C^1 quintic splines on type-4 tetrahedral partitions.
96. Geometric Data Processing, Oberwolfach, Germany, October 19–25, 2002.
97. Constructive Mathematics, Dagstuhl, Germany, May 26–30, 2003.
98. Workshop on Geodesy, Ohio State University, June 18–19, 2003. Modelling the earth's gravitational field with splines.
99. Geometric Modeling and Differential Geometry, Sept. 29 – Oct. 3, 2003, Erbach, Germany
100. Multivariate Approximation and Interpolation, Oct. 13 – 17, 2004, Hohenheim, Germany
101. Wavelets and Splines, May 16 – 19, 2005, Athens, Georgia

102. Geometric Modelling, May 29 – June 3, 2005, Dagstuhl, Germany
103. Foundations of Computational Mathematics, June 30 – July 7, 2005, Santander, Spain
104. Multivariate Approximation, Sept. 25 – 30, 2005, Bommerholz, Germany
105. Mathematics Association of America, MAA Distinguished Lecture Series, Carriage House Conference Center, Washington, DC, Jan. 25, 2007
106. Multivariate Approximation: Theory and Applications, Cancun, Mexico, April 26 – May 1, 2007.
107. 10th SIAM Conference on Geometric Design and Computing, San Antonio, Nov. 4 - 8, 2007.
108. Workshop on Algebraic Geometry and Approximation Theory, Towson Univ., April 11 - 13, 2008
109. Geometric Modelling, Dagstuhl, Germany, May 25 – 30, 2008.
110. Multivariate Approximation, Bommerholz, Germany, Sept. 21 – 26, 2008.
111. A. R. Mitchell Lecture: Computing bivariate splines in data fitting and the FEM method, 23rd Biennial Conference on Numerical Analysis, Glasgow, Scotland, June 23 – 26, 2009.
112. Multivariate approximation and interpolation with applications, Edinburgh, Scotland, Sept. 6–10, 2010.
113. Applied Math and Scientific Computing, Invited plenary lecture. Trogir, Croatia, June 13–17, 2011.
114. International Conference on Multivariate Approximation, Hagen, Germany, Sept. 24–27, 2011.
115. New Trends in Approximation Theory, Invited lecture, Ein Gedi, Israel, Jan. 4 – 7, 2012.

L. Colloquium Lectures:

1966

1. Univ. of Hamburg, Germany
2. Math. Research Institute, Trier, Germany

1968

3. Michigan State Univ.
4. Indiana Univ.
5. Oregon State Univ.
6. Carnegie Mellon Univ.
7. Case–Western Reserve Univ.

1970

8. Northwestern Univ.
9. Stanford Univ.
10. California Inst. of Tech.
11. Tech. Univ. of Hannover, Germany
12. Tech. Univ. of Aachen, Germany

13. Univ. of Tubingen, Germany
14. Univ. of Freiburg, Germany
15. Univ. of Bochum, Germany
16. Univ. of Bonn, Germany
17. Univ. of Munich, Germany
18. Univ. of Karlsruhe, Germany
19. Univ. of Stuttgart, Germany
20. Univ. of Göttingen, Germany
21. Technische Univ. Berlin, Germany
22. Univ. of Erlangen, Germany

1971

23. Rice Univ.
24. Los Alamos Scientific Labs.
25. Sandia Scientific Labs.

1972

26. Colorado College
27. Colorado State Univ.
28. Univ. of Maryland, College Park
29. Univ. of Maryland, Baltimore

1973

30. Univ. of Minnesota
31. Arizona State Univ.
32. Univ. of California, La Jolla
33. Univ. of Southern California
34. Univ. of Utah
35. Penn. State Univ.
36. Kent State Univ.
37. Univ. of Bonn, Germany
38. Univ. of Grenoble, France
39. National Physical Labs., Teddington, England

1974

40. Math. Research Center, Madison, Wis.
41. Vanderbilt Univ., Nashville
42. Univ. of Florida, Gainesville

1975

43. Tech. Univ. of Aachen, Germany
44. Ruhr Univ., Bochum, Germany
45. Rhein–Westf. Univ., Münster, Germany
46. Hungarian Academy of Sciences, Budapest
47. Univ. of Stuttgart, Germany
48. Eidgenössische Tech. Univ., Zürich, Switzerland
49. Free Univ. of Berlin, Germany
50. Hahn-Meitner Atomic Labs., Berlin
51. Univ. of Hamburg, Germany
52. Univ. of Munich, Germany
53. Texas A&M Univ.

1976

54. Univ. of Duisburg, Germany
55. Oxford Univ., England
56. Univ. of Antwerp, Belgium
57. Univ. of Hamburg, Germany
58. Germany Military Academy, Hamburg, Germany
59. Univ. of Bonn, Germany
60. Air Force Inst. of Tech., Dayton
61. Inst. for Comp. Mechanics, Univ. of Texas

1977

62. FuJen Univ., Taipei, Taiwan
63. Science Univ. of Malaysia, Penang

1978

64. Univ. of Karlsruhe, Germany
65. Univ. of Erlangen, Germany
66. Univ. of Würzburg
67. Univ. of Osnabrück, Germany
68. Chalmers Inst. of Technology, Göteborg, Sweden
69. Univ. of Oslo, Norway
70. Tech. Univ. of Athens, Greece
71. Univ. of Kaiserslautern, Germany
72. Univ. of Hamburg, Germany

1979

73. Rice Univ.
74. S.D. School of Mines and Technology
75. Math. Research Center, Univ. of Wisconsin
76. Univ. of South Carolina
77. National Bureau of Standards, Washington
78. John Hopkins Univ.
79. IBM T.J. Watson Research Center, N.Y.
80. Univ. of Tel Aviv, Israel
81. Technion, Haifa, Israel
82. Univ. of Munich, Germany
83. Free Univ. of Berlin, Germany

1981

84. Texas A&M Univ.
85. Univ. of Sao Paulo, Brazil
86. Lab. de Computacao Cientifica, Rio de Janeiro
87. Univ. of South Carolina
88. Univ. of Munich, Germany
89. Univ. of Erlangen, Germany
90. Univ. of Tübingen, Germany

1982

91. Georgia Tech.
92. Univ. of Augsburg, Germany
93. Rice Univ.
94. Univ. of South Florida

1983

95. Univ. of Munich, Germany
96. Univ. of Augsburg, Germany
97. Free Univ. of Berlin, Germany
98. Hahn–Meitner Inst., Berlin
99. Univ. of Florence, Italy
100. Instituto di Calcolo, Rome, Italy
101. Cambridge Univ., England
102. Univ. of Bonn, Germany
103. Univ. of Bielefeld, Germany
104. Univ. of Erlangen, Germany
105. Katholische Univ. Eichstätt, Germany
106. Univ. of Duisburg, Germany
107. Univ. of Hamburg, Germany

1984

108. Colorado State Univ.
109. Univ. of Lancaster, England
110. National Physical Labs., London, England
111. Suez Canal Univ., Ismailia, Egypt
112. Univ. of Oslo, Norway
113. Univ. of Amsterdam, The Netherlands
114. Univ. of Twente, Enschede, The Netherlands
115. Univ. of Delft, The Netherlands
116. Univ. of Bonn, Germany
117. Univ. of Darmstadt, Germany

1985

118. Univ. of Utah
119. Normal Univ., Peking, China
120. Technical Univ., Hannover, Germany
121. Univ. of Göttingen, Germany
122. Hahn–Meitner Inst., Berlin, Germany
123. Technical Univ. of Berlin, Germany
124. Univ. of Siegen, Germany
125. Univ. of Mannheim, Germany
126. Univ. of Linz, Austria

1986

127. Mathematics Research Center, Univ. Wisconsin

1987

128. Arizona State Univ.
129. Naval Postgraduate School
130. Univ. of Utah
131. Univ. of Bielefeld, W. Germany
132. Catholic Univ. of Eichstätt, W. Germany

1988

133. Vanderbilt Univ.
134. Univ. of Utah
135. Free University of Berlin, W. Germany
136. University of Hamburg, W. Germany
137. Technical University Darmstadt, W. Germany
138. University of Erlangen, W. Germany
139. University of Munich, W. Germany
140. Purdue University
141. University of Wisconsin
142. General Motors Research Laboratories
143. University of Utah

1989

144. Memphis State University
145. University of Twente, Enschede, The Netherlands

1990

146. Catholic University Eichstaett, Germany
147. Ludwig Maximilians University, Munich, Germany
148. University of Bonn, Germany
149. University of Göttingen, Germany
150. University of Dormund, Germany
151. University of Oldenbourg, Germany

1991

152. North Dakota State University
153. University of Utah
154. University of Göttingen, Germany
155. University of Oslo, Norway
156. Technical University of Dresden, Germany
157. Free University of Berlin, Germany
158. Technical University of Rostock, Germany
159. University of Stuttgart, Germany

1992

160. General Motors Research Labs

1993

161. General Motors Research Labs
162. Univ. of Waterloo, Canada
163. Univ. of Milan, Italy

1994

164. Univ. of Utah
165. Tech. Univ. Munich, Germany
166. Univ. Wurzburg, Germany
167. Center for Industrial Research, Oslo, Norway
168. Miss. State Univ.

1995

169. Tech. Univ., Vienna, Austria
170. Univ. Georgia

1996

171. Univ. of Erlangen, Germany
172. Tech. Univ. Hannover, Germany

1997

173. Univ. of Nantes, France
174. Univ. of Rennes, France

1998

175. Univ. of Bonn, Germany
176. Univ. of Kaiserslautern, Germany
177. Univ. of Bologna, Italy
178. Univ. of Toulouse, France

1999

179. Australian National Univ., Canberra, Australia
180. Latrobe Univ., Bendigo, Australia
181. Univ. of Mannheim, Germany
182. Univ. of Giessen, Germany

2002

183. Illinois Institute of Technology
184. Univ. of Würzburg
185. Univ. of Mannheim
186. Signature Biosystems, San Francisco

2003

187. Univ. of Mannheim, Germany

2004

188. Univ. of Mannheim, Germany

2005

189. Univ. of Mannheim, Germany

2006

190. Univ. of Oslo, Norway
191. Univ. of Strathclyde, Glasgow, Scotland

2007

192. Boeing, Seattle

2008

193. Towson Univ., Md.
194. Institute for Biomathematics, Helmholtz Zentrum, Munich, Germany
195. Univ. of Wurzburg, Wurzburg, Germany

2010

196. Illinois Institute of Technology

2011

197. Institute for Biomathematics, Helmholtz Zentrum, Munich, Germany
198. Zuse Institut Berlin, Berlin, Germany

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