BIOGRAPHICAL SKETCH of Larry L. Schumaker

Vitae

B.S. Mathematics, S.D. School of Mines, June, 1961
M.S. Mathematics, Stanford University, June, 1962
PhD Mathematics, Stanford University, January, 1966
Visiting Member, Math Research Center, Univ. Wisconsin, 1966–1968
Faculty of University of Texas, 1968–1980
Faculty of Texas A& M University, 1980–1988
Stevenson Professor of Mathematics, Vanderbilt University, 1988 —

Honors: Hughes Aircraft Masters Fellow; National Science Foundation Graduate Fellow; Alexander von Humboldt Fellow, German Federal Republic, 1978 - 1979; Centennial Outstanding Graduate Award, S.D. School of Mines & Technology, 1985; Humboldt Prize, Alexander von Humboldt Foundation, Federal Republic of Germany, 1989. John Gregory Award, 1999.

Member Editorial Board of Journals: Computer Aided Geometric Design; Constructive Approximation; Advances in Computational Mathematics.

Recent Conference Organization:

1. Curves and Surfaces, with Tom Lyche, J. L. Merrien, and A. Cohen, Avignon, France, June 29 – July 5, 2006.
2. Approximation Theory XII, with M. Neamtu, San Antonio Texas, March 5 – 8, 2007.
3. Seventh International Conference on Mathematical Methods for Curves and Surfaces, Tonsberg, Norway, June 26 – July 1, 2008.

Recent books edited

1. *Curve and Surface Design: Avignon 2006*, edited with Patrick Chenin and Tom Lyche, Nashboro Press, 2007, 293 pp.
2. *Curve and Surface Fitting: Avignon 2006*, edited with Albert Cohen and Jean-Louis Merrien, Nashboro Press, 2007, 295 pp.
3. *Approximation Theory XII: San Antonio 2007*, with Marion Neamtu, Nashboro Press, 2008, 443 pp.

Monographs

1. *Spline Functions, Basic Theory*, Wiley (New York), 1980, 553 pp.
2. *Spline Functions on Triangulations*, with M.-J. Lai, Cambridge University Press, 2007, 592 pp.

List of 10 Recent Publications

1. Trivariate C^r polynomial macro-elements, with Ming-Jun Lai, Constr. Approx.**26** (2007), 11–28.
2. Scattered data fitting on surfaces using projected Powell-Sabin splines, with Oleg Davydov, in *Mathematics of Surfaces 2007*, R. Martin, M. Sabin, and J. Winkler (eds.), Springer, 2007, 138–153.

3. Interpolation and scattered data fitting on manifolds using projected Powell-Sabin splines, with Oleg Davydov, IMA J. Numer. Anal., 2007, DOI: 0: drm033v1-drm033.
4. A local Lagrange interpolation method based on C^1 cubic splines on Freudenthal partitions, with G. Hecklin, G. Nürnberger, and F. Zeilfelder, Math. Comp., DOI: 10.1090/S0025-5718-07-02056-X.
5. Bounds on the dimension of trivariate spline spaces, with Peter Alfeld, Advances in Comp. Math. **29** (2008), 315–335.
6. Computing bivariate splines in scattered data fitting and the finite-element method, Numerical Algorithms **48** (2008), 237–260.
7. Local Lagrange interpolation with cubic C^1 splines on tetrahedral partitions, with G. Hecklin, G. Nürnberger, and F. Zeilfelder, J. Approx. Theory, DOI:10.1016/ j.jat.2008.01.012.
8. A C^1 quadratic trivariate macro-element space defined over arbitrary tetrahedral partitions, with Tatyana Sorokina and Andrew J. Worsey, J. Approx. Theory, DOI: 10.1016/j.jat.2008.04.014
9. A domain decomposition method for computing bivariate spline fits of scattered data, with M.-J. Lai, SIAM J. Numer. Anal., to appear
10. Two condensed macro-elements with full approximation power, with P. Alfeld and T. Sorokina, Advances in Comp. Math., to appear.

Recent Collaborators

1. Peter Alfeld (Univ. of Utah)
2. Oleg Davydov (Univ. of Strathclyde)
3. Frank Deutsch (Penn. State Univ.)
4. Manfred von Golitschek (Univ. of Würzburg)
5. Ming-Jun Lai (Univ. Georgia)
6. Mike Neamtu (Vanderbilt Univ.)
7. Günther Nürnberger (Univ. Mannheim)
8. Tatyana Sorokina (Towson Univ.)
9. Frank Zeilfelder (Univ. Mannheim)
10. Andrew Worsey (Middle Tennessee State Univ.)
11. Zvi Ziegler (Technion)

Recent Advisees:

1. Greg Fasshauer (Illinois Inst. Tech.), PhD, Vanderbilt, 1995
2. Sonya Stanley (Samford Univ.), PhD, Vanderbilt, 1996
3. David Assaf (Bentley Assoc.), PhD, Vanderbilt, 1997
4. Tanya Morton (Math Works, Cambridge), PhD, Vanderbilt, 2000
5. Vera Rayevskaya (Univ. of Northern Iowa), PhD, Vanderbilt, 2003
6. Tatyana Sorokina (Towson Univ.) PhD, Vanderbilt, 2004
7. Yulyia Babenko (Sam Houston Univ.) PhD, Vanderbilt Univ., 2006