

Curve and Surface Fitting: Saint-Malo 2002
A. Cohen, J.-L. Merrien, and L. L. Schumaker, (eds)
Nashboro Press, Brentwood, 2003

Preface	viii
Contributors	ix
Higher Order Sparse Grid Methods for Elliptic Partial Differential Equations	
<i>Stefan Achatz and Christoph Zenger</i>	1
A Scattered Data Approximation Scheme for the Multidimensional Poisson Equation Using Cardinal Radial Basis Interpolants	
<i>Giampietro Allasia</i>	11
A Fast Wavelet Algorithm for Multidimensional Signals using Polyharmonic Splines	
<i>Barbara Bacchelli, Mira Bozzini and Christophe Rabut</i>	21
Near-best Discrete Quasi-interpolants on Uniform and Nonuniform Partitions	
<i>D. Barrera, M. J. Ibáñez, and P. Sablonnière</i>	31
Cardinal Interpolation with Biharmonic Polysplines on Strips	
<i>Aurelian Bejancu, Ognjan Iv. Kounchev, and Hermann Render</i>	41
Scattered Data Interpolation with Wavelet Trees	
<i>Christophe P. Bernard, Stéphane G. Mallat, and Jean-Jacques Slotine</i>	59
Adaptive Fitting of Scattered Data by Spline-Wavelets	
<i>Daniel Castaño and Angela Kunoth</i>	65
Polynomial Reproduction and the Dyadic Eigenvalues of Bi-infinite Matrices	
<i>Mariantonia Cotronei and Thomas Sauer</i>	79
Shape Preserving Approximation with Large Sets of Scattered Data	
<i>A. Crampton, S. C. Kendall, and J. C. Mason</i>	89
Triangle-based Multi-Resolution Models for Height Fields	
<i>Leila De Floriani and Paola Magillo</i>	97
Scattered Data Coding in Digital Image Compression	
<i>Laurent Demaret and Armin Iske</i>	107
Characteristics of Dual Triangular $\sqrt{3}$ Subdivision	
<i>N. A. Dodgson, I. P. Ivriissimtzis, and M. A. Sabin</i>	119

Face-Value Subdivision Schemes on Triangulations by Repeated Averaging	
<i>Nira Dyn, David Levin, and Jo Simoens</i>	129
Approximate Moving Least-Squares Approximation: A Fast and Accurate Multivariate Approximation Method	
<i>Gregory E. Fasshauer</i>	139
Bimonotonicity Preserving Surfaces Defined by Tensor Products of C^1 Merrien Subdivision Schemes	
<i>Françoise Foucher</i>	149
Curve and Surface Meshing for Finite Elements Applications	
<i>P-L. George, P. J. Frey, P. Laug, and H. Borouchaki</i>	159
New Families of Wavelets on the Interval	
<i>Laura Gori, Laura Pezza, and Francesca Pitolli</i>	177
Classification and Construction of Bivariate Subdivision Schemes	
<i>Bin Han</i>	187
Ternary and Three-point Univariate Subdivision Schemes	
<i>M. F. Hassan and N. A. Dodgson</i>	199
Additive Sparse Grid Fitting	
<i>Markus Hegland</i>	209
Web-Spline Methods in Linear Elasticity	
<i>Klaus Hölbig, Jörg Hörner, and Andreas Kopf</i>	219
Subdivision Rules for General Meshes	
<i>I. P. Ivriissimtzis, K. Shrivastava, and H-P. Seidel</i>	229
On Interpolating Thin Plate Tension Splines	
<i>Boris I. Kvasov</i>	239
An Efficient Algorithm for Solving Linearized SVM Regression Problems	
<i>D. Lei, A. Crampton, J. C. Mason, and C. Ross</i>	249
A Family of 4-Point Dyadic Multistep Subdivision Schemes	
<i>Daniel Lemire</i>	259
Scattered Data on Homogeneous Manifolds: the Norming Set Approach	
<i>Jeremy Levesley, Carl Odell, and David L. Ragozin</i>	269
Radial Basic Functions from the Perspective of Splines	
<i>Will Light</i>	279
Smooth Ternary Subdivision of Triangle Meshes	
<i>Charles Loop</i>	295

Denoising Signals Observed on a Random Design <i>Voichița Maxim</i>	303
Texture Segmentation Using Stable Texture Features <i>Sylvain Meignen and Valérie Perrier</i>	313
Smoothness of a Nonlinear Subdivision Scheme <i>Peter Oswald</i>	323
A Multiresolution Method for Detecting Higher Order Discontinuities from Irregular Noisy Samples <i>M. Randrianarivony and G. Brunnett</i>	333
A de Boor Type Algorithm for Tension Splines <i>Mladen Rogina and Tina Bosner</i>	343
Artifacts in Recursive Subdivision Surfaces <i>Malcolm Sabin and Loïc Barthe</i>	353
Some Properties of C^1 Surfaces Defined by Tensor Products of Merrien Subdivision Schemes <i>Paul Sablonnière</i>	363
A Factored Interpolatory Subdivision Scheme for Quadrilateral Surfaces <i>Scott Schaefer and Joe Warren</i>	373
Characterization of semi-Hilbert Spaces with Application in Scattered Data Interpolation <i>Tobias Werther</i>	383
Interpolatory Subdivision Schemes Generated by Splines <i>Valery A. Zheludev, Amir Z. Averbuch, and Marina Gruzd</i> . . .	393