CURRICULUM VITAE of ALESSANDRA SESTINI
Associate Professor of Numerical Analysis
Dipartimento di Matematica e Informatica "U. Dini"
http://www.math.unifi.it/users/sestini/
updated **February, 2021**

VITA AND ACADEMIC ACTIVITY

1965 born on April 25, 1965.

1983 school living examination, passed with mark 58/60, at Liceo classico "Galileo", Firenze, (Italy).

1988 annual CNR research grant for graduating students (announcement n. 209.01.49 of November 7, 1987).

1989 degree "magna cum laude" in Mathematics, University of Firenze (Italy).

1990 CNR annual research grant for graduated students (announcement n. 201.01.110 of March 3, 1989).

1991–1993 grant of the University of Florence to attend the PhD course in Energetics (cycle VI) at the University of Florence.

1994 PhD degree in Energetics at the University of Florence.

1993–2014 researcher in Numerical Analysis at the University of Florence.

2002–2005 member of the academic board of the PhD in Computer Science and Applications, University of Florence, Italy.

2008–2012 member of the academic board of the PhD in Computer Science and Applications, University of Florence, Italy.

2013 national scientific qualification as associate professor in Numerical Analysis.

2014–now associate professor in Numerical Analysis at the University of Florence.

2017 national scientific qualification as full professor in Numerical Analysis (since March 28, 2017).

2018–now member of the academic board of the PhD in Mathematics, Computer Science and Statistics, University of Florence, Italy.

CURRENT RESEARCH INTERESTS

Numerical methods for approximation and for graphics; Spline theory; Numerical methods for ODEs; IsoGeometric Analysis.

SCIENTIFIC PRODUCTION

Seventy seven scientific publications (see the list reported at the end) and four editions of an educational monograph.

Educational Monograph:

- L. Brugnano, C. Magherini, A. Sestini, Calcolo Numerico, Master, Università e Professioni,

    - Quarta Edizione, Firenze 2018 (154+x pp);
    - Terza Edizione, Firenze 2014 (158+x pp);
    - Seconda Edizione Ampliata e Corretta, Firenze 2010 (158+x pp);
    - Prima edizione, Firenze 2005 (138+x pp).

SCHOLARS

- Carlotta Giannelli, PhD in Computer Science and Applications, Università di Firenze, 2010.

- Duccio Mugnaini, PhD in Computer Science and Applied Mathematics, Università dell'Insubria, 2017.

RESEARCH PROJECTS AND RESPONSIBILITIES

- **scientific coordinator** of the annual GNCS 2019 project "Metodi di approssimazione locale con applicazioni all'analisi isogeometrica e alle equazioni integrali di contorno.".

- **guest editor** of the special issue SMART 2017 published in the CAM journal.

- **scientific advisor** of a post–doc annual research grant (Cesare Bracco) c/o Dip. di Matematica e Informatica U. Dini (December 2014– November 2015, December 2015– November 2016 and December 2016– October 2017).

- **scientific advisor** of a PhD student (Duccio Mugnaini) at the University of Como (November 2014–October 2017).

- **scientific coordinator** of a research bilateral project 2011–2013 Italia–Slovenia, "Advanced interpolation and approximation schemes based on Pythagorean Hodograph curves and related applications".

- **scientific coordinator** of the annual GNCS 2012 project "Metodi, algoritmi e strutture algebriche per la progettazione di moti".

- participant to the 5–year INdAM research project "Splines for accUrate NumeRics: adaptIve models for Simulation Environments (SUNRISE)" (MIUR Futuro in ricerca), December 1, 2016–now.

- participant to the annual GNCS 2020 project "Metodologie innovative per problemi di propagazione di onde in domini illimitati: aspetti teorici e computazionali" (scientific coordinator S. Falletta, Politecnico di Torino).

- participant to the two–year project "Risoluzione numerica di problemi Hamiltoniani ed applicazioni" funded from the University of Florence within the strategic line "Problemi evolutivi di tipo Hamiltoniano: analisi e modellistica matematica, risoluzione numerica ed applicazioni" October 2015 – 2018.

- participant to the annual GNCS 2017 project "Sviluppo di tecniche efficienti e accurate per metodi BEM" (scientific coordinator F. Calabrò, Univ. di Cassino).

- participant to the annual GNCS 2016 project "Approccio isogeometrico e tecniche di quadratura per il metodo agli elementi di contorno in 3D" (scientific coordinator M.L. Sampoli, Univ. di Siena).

- participant to the annual GNCS 2015 project "Analisi isogeometrica e metodi agli elementi di contorno" (scientific coordinator A. Aimi, Univ. di Parma).

- member of the INdAM unity c/o Dip. di Matematica e Informatica U. Dini, Univ. di Firenze, of the project DREAMS (MIUR Futuro in Ricerca RBFR13FBI3).

- participant to the annual GNCS 2014 project "Dall'approssimazione all'algebra lineare: metodi numerici per l'analisi isogeometrica" (scientific coordinator F. Pelosi, Univ. di Roma Tor Vergata).

- participant to the annual GNCS 2013 project "Studio di spazi con struttura di raffinamento per l'analisi isogeometrica" (scientific coordinator M.L. Sampoli, Univ. di Siena).

- participant to the 2004 PRIN project "Numerical methods and mathematical software for applications" (scientific coordinator L. Brugnano, Univ. di Firenze).

- participant to the 2003 PRIN project "Basi opportune ed algoritmi efficienti per interpolare, quasi-interpolare ed approssimare dati nel piano e nello spazio" (scientific coordinator L. Gori, Univ. di Roma La Sapienza).

- participant to the European research project "Fairshape" (scientific coordinator P. Kaklis, Univ. of Athens), (HCM-Project FAIRSHAPE (CHRX -CT94-0522), in the frame of the "Human Capital and Mobility Framework Programme".

SCIENTIFIC MEMBERSHIP

- Gruppo Nazionale per il Calcolo Scientifico (GNCS), 1995–now

- Società Italiana per la Matematica Applicata e Industriale (SIMAI), 2018–now

- Unione Matematica Italiana (UMI), 2019–now

- Florence Center for Data Science, 2019–now

- Italian technological cluster Blue Italian Growth (BIG), 2021

MEMBER of COMPETITION COMMISSIONS

- member of a public competition commission appointed by the University of Bologna (2020): researcher position (RTDA) in Numerical Analysis (MAT/08) at Dipartimento di Matematica (D.D. 5061 del 1/9/2020);

- member of a public competition commission appointed by the University of Firenze (2017): researcher position (RTDA) in Numerical Analysis (MAT/08) at Dipartimento di Matematica e Informatica (D.D. 206 del 2/3/2017);

- member of a public competition commission appointed by the University of Calabria (2008): researcher position in Numerical Analysis (MAT/08) at Facoltà di Ingegneria of that university (D.D. 2170 del 25/07/2008);

- member of a public competition commission appointed by the University of Salerno (2002): researcher position in Numerical Analysis (MAT/08) at Facoltà di Scienze Matematiche, Fisiche e Naturali (D.D. 5161 del 31/10/2002);

AWARDS

GMP 2017 best paper paper award for the paper [63] presented at the International Conference on Geometric Modeling and Processing, April 17–19, 2017, China. (http://graphics.xmu.edu.cn/gmp2017/awards.html).

TEACHING

Italian bachelor-level degree courses: Numerical Analysis, Numerical Calculus, Laboratory of Numerical Analysis
Italian master-level degree courses: Complements of Numerical Analysis, Numerical Methods for Engineers, Numerical Methods for Differential Problems, Metodi di Approssimazione
2nd level University Master degree in Data Science and Statistical Learning: Numerical Calculus and Linear Algebra, 2021 (with Prof. C. Giannelli)
PhD Course in Mathematics:

- "Rappresentazioni geometricamente e computazionalmente ottime nel CAGD", 2006–2007 (con Prof. C. Manni).

- "Rappresentazioni di superfici nelle applicazioni", 2007–2008 (con Prof. C. Manni).

IMPACT FACTORS

Scopus: H-index: 17, citations 788 (at February 5, 2021)

WoS: H-index: 15, citations 622 (at February 5, 2021)

REVIEWING ACTIVITY

- Referee for the following journals: Advances in Computational Mathematics, Applied Mathematics and Computation, Applied Numerical Mathematics, Computer Aided Geometric Design, IEEE Computer Graphics and Applications, Int. J. of Modeling and Simulation, Journal of Computational and Applied Mathematics, Numerical Algorithms, Mediterranean Journal of Mathematics, J. of Optimization Methods and Software.

- referee of international and national research projects;

- reviewer for Mathematical Review (since 2016).

INTERNATIONAL SCIENTIFIC COLLABORATIONS

Prof. O. Davydov, Università di Giessen, Germania.
Prof. R. T. Farouki, Università della California, Davis, USA.
Dr. D. Grossman, MTU Company, Germany.
Prof. C. Y. Han, Università di Yongin, Yongin, Corea del sud.
Prof. G. Jacklič, Università di Ljubljana, Slovenia.
Dr. T. Kanduč, Università di Ljubljana, Slovenia.

Prof. M. Krajnc, Università di Ljubljana, Slovenia.

Dr. D. Mokriš, MTU Company, Germany.

Prof. C. Rabut, INSA, Toulouse, Francia.

Prof E. Žagar, Università di Ljubljana, Slovenia.

VISITINGS and
ORGANIZATION OF SCIENTIFIC EVENTS

Special Session Faatna 2020: scientific organizer of the special session "Theoretical Aspects of Isogeometric Analysis and recent applications", planned for July 7–10, 2020 Matera, postponed to 2022, Italy (together with Prof. A. Aimi, Univ. Parma and Prof. M.L. Sampoli, Univ. Siena).

Minisymposium SIMAI 2020+2021: scientific organizer of the minisymposium "Recent Developments and Applications of Computer Aided Geometric Design", planned for June 15–19, 2020 Parma, postponed to August 30 - September 3 2021, Italy (together with Prof. M.L. Sampoli, Univ. Siena).

Research Day GNCS 2019 project: scientific organizer and member of the organizing committee of the Research Day of the GNCS 2019 project "Local approximation schemes with applications to isogeometric analysis and boundary integral equations", November 28–29, 2019, Firenze, Italy.

Minisymposium AT16: scientific organizer of the minisymposium "Advances on local approximations and applications", Approximation Theory 16, May 19–22, 2019, Nashville, USA.

Minisymposium SIMAI 2018: scientific organizer of the minisymposium "Recent Advances in Quasi-Interpolation and Applications ", July 6th, within SIMAI 2018, July 2–6, 2018, Rome, Italy (together with dott. S. Remogna, Univ. Torino).

Visiting at the University of Giessen, Germany: scientific collaboration with prof. O. Davydov, April 18–22, 2018.

SMART 2017: member of the scientific and organizing committee of the International Workshop SMART 2017 (Subdivision, geometric and algebraic Methods, isogeometric Analysis and Refinability in ITaly), Gaeta, Latina, September 17– 21, 2017.

SMART 2014: member of the scientific and organizing committee of the International Workshop SMART 2014 (Subdivision, geometric and algebraic Methods, isogeometric Analysis and Refinability in Tuscany), Pontignano, Siena, September 28 – October 1, 2014.

Minisymposium IMACS 2013: scientific organizer of the minisymposium "New trends in theory and applications of PH curves and related topics", August 27th, within 19th IMACS World Congress, August 26–30, 2013, San Lorenzo de El Escorial, Spain (together with dott. Lucia Romani, Univ. Milano Bicocca).

Visiting at the University of California, Davis: scientific collaboration with prof. R.T. Farouki, July 4–19, 2013.

SIAM Conference on Geometric Design and Computing: member of the scientific commettee, Sacramento, California, November 5–8, 2001.

LECTURES AT INTERNATIONAL CONFERENCES

Two plenary talks (2019); 41 communications presented as speaker at international and national conferences (several as invited contribution at minisymposia or special sessions). Several further communications presented by coauthors also on her behalf.

SCIENTIFIC PUBLICATIONS

77. C. Bracco, C. Giannelli, D. Grossman, S. Imperatore, D. Mokriš, A. Sestini, "THB–spline approximations for turbine blade design with local B–spline approximations", in press on MACMAS 2019, Springer SEMA-SIMAI Series (2020).

76. A. Aimi, F. Calabrò, A. Falini, M.L. Sampoli, A. Sestini, "Quadrature formulas based on spline Quasi-Interpolation for hypersingular integrals arising in IgA-SGBEM", CMAME **372** (2020), 113441.

75. A. Falini, T. Kanduč, M.L. Sampoli, A. Sestini, "Cubature Rules Based on Bivariate Spline Quasi-Interpolation for Weakly Singular Integrals", G. E. Fasshauer et al. (eds.), Approximation Theory XVI, Springer Proceedings in Mathematics & Statistics 336, 73–86 (2021), Nashville, TN, USA, ISBN: 978–3–030–57464–2.

74. C. Bracco, O. Davydov, C. Giannelli, A. Sestini, "Fault and gradient–fault detection and reconstruction from scattered data" , CAGD **75**, (2019), no. 101786.

73. A. Falini, C. Giannelli, T. Kanduč, M.L. Sampoli, A. Sestini, "An adaptive IgA-BEM with hierarchical B-splines based on quasi–interpolation quadrature schemes", International Journal for Numerical Methods in Engineering (2019) **117**, 1038–1058.

72. R.T. Farouki, C. Giannelli, A. Sestini, "Rational minimal-twist motions on curves with rotation-minimizing Euler-Rodrigues frames" , Journal of Computational and Applied Mathematics **352** (2019), 240–254.

71. C. Bracco, O. Davydov, C. Giannelli, A. Sestini, "An application of numerical differentiation formulas to discontinuity curve detection from irregularly sampled data", Rendiconti del Seminario Matematico dell'Università e del Politecnico di Torino **76**, No. 2 (2018), 69–76.

70. R.T. Farouki, C. Giannelli, A. Sestini, "New developments in theory, algorithms and applications for Pythagorean–hodograph curves", *Advanced Methods for Geometric Modeling and Numerical Simulation*, C. Giannelli and H. Speleers eds, Advanced Methods for Geometric Modeling and Numerical Simulation, Springer INdAM Series, (2019) 123–172.

69. R.T. Farouki, C. Giannelli, A. Sestini, "Rational minimal-twist motions on curves with rotation-minimizing Euler-Rodrigues frames" , Journal of Computational and Applied Mathematics **352** (2019), 240–254.

68. A. Falini, C. Giannelli, T. Kanduč, M.L. Sampoli, A. Sestini, "An adaptive IgA-BEM with hierarchical B-splines based on quasi–interpolation quadrature schemes", International Journal for Numerical Methods in Engineering (2019) **117**, 1038–1058.

67. F. Mazzia, A. Sestini, "On a class of Conjugate Symplectic Hermite-Obreshkov one-step methods with continuous spline extension", Axioms **7** (2018), 58, 1–18.

66. C. Bracco, C. Giannelli, D. Grossman, A. Sestini, "Adaptive fitting with THB splines: error analysis and industrial applications", CAGD **62** (2018), 239–252.

65. F. Calabrò, A. Falini, M.L. Sampoli, A. Sestini, "Efficient quadrature rules based on spline quasi–interpolation for application to IGA-BEMs", in press in JCAM (2018) (available online),
DOI: 10.1016/j.cam.2018.02.005.

64. A. Aimi, F. Calabrò, M. Diligenti, M.L. Sampoli, G. Sangalli, A. Sestini, "New efficient assembly in Isogeometric Analysis for Symmetric Galerkin Boundary Element Method", CMAME **331**, 327–342 (2018).

63. C. Bracco, C. Giannelli and A. Sestini, "Adaptive scattered data fitting by extension of local polynomials to hierarchical splines", CAGD **52–53**, 90–105 (2017).

62. R.T. Farouki, C. Giannelli, D. Mugnaini and A. Sestini, "Path planning with Pythagorean-hodograph curves for unmanned or autonomous vehicles", in stampa su Journal of Aerospace Engineering, 2017,
DOI: 10.1177/0954410017690550.

61. M. Donatelli, C. Giannelli, D. Mugnaini and A. Sestini, "Curvature continuous path planning and path finding based on PH splines with tension", CAD **88**, 14–30 (2017).

60. R. T. Farouki, G. Gentili, C. Giannelli, A. Sestini, and C. Stoppato, "A comprehensive characterization of the set of polynomial curves with rational rotation minimizing frames", Adv. Comput. Math. **43**, 1–24 (2017).

59. C. Bracco, C. Giannelli and A. Sestini, "Coefficient–Based Spline Data Reduction by Hierarchical Spaces", Lecture Notes in Computer Science 10521, 23–41, Springer International Publishing AG (2017).

58. A. Aimi, M. Diligenti, M.L. Sampoli and A. Sestini, "Non-polynomial spline alternatives in Isogeometric Symmetric Galerkin BEM", Applied Numerical Mathematics **116**, 10–23 (2017).

57. C. Giannelli, D. Mugnaini, A. Sestini, "Path planning with obstacle avoidance by G^1 PH quintic splines", CAD **75–76** (2016), 47–60.

56. C. Bracco, C. Giannelli, F. Mazzia, A. Sestini, "Bivariate hierarchical Hermite spline quasi-interpolation", BIT Numerical Mathematics **56**, 1165–1188 (2016).

55. A. Aimi, M. Diligenti, M.L. Sampoli, A. Sestini, "Isogeometric Analysis and Symmetric Galerkin BEM: a 2D Numerical Study", Applied Mathematics of Computation **272** (2016) 173–186.

54. R. T. Farouki, G. Gentili, C. Giannelli, A. Sestini, and C. Stoppato, "Solution of a quadratic quaternion equation with mixed coefficients", Journal of Symbolic Computation **74**, 140–151 (2016).

53. R. T. Farouki, F. Pelosi, M.L. Sampoli, A. Sestini, "Tensor–product surface patches with Pythagorean–hodograph isoparametric curves", IMA J. of Numerical Analysis **36** (2016), 1389–1409.

52. R. T. Farouki, C. Giannelli, A. Sestini, "Local modification of Pythagorean–hodograph quintic B–spline curves using the B–spline form", Advances in Computational Mathematics **42** (2016), 199–225.

51. R. T. Farouki, C. Giannelli, A. Sestini, "Identification and reverse engineering of Pythagorean–hodograph curves", Computer Aided Geometric Design **34** (2015), 21–36.

50. C. Manni, F. Mazzia, A. Sestini and H. Speleers, "BS2 methods for semi-linear second order boundary value problems", Applied Mathematics and Computation **255** (2015), 147–156.

49. R.T. Farouki, C. Manni, M.L. Sampoli and A. Sestini, "Shape–preserving interpolation of spatial data by Pythagorean–hodograph Quintic Spline Curves", IMA J. Numerical Analysis **35** (2015), 478–498.

48. A. Sestini, K. Ferjančič, C. Manni and M.L. Sampoli, "A fully data–dependent criterion for free angle selection in spatial PH cubic biarc

Hermite interpolation", Computer Aided Geometric Design **31** (2014), 398–411.

47. M. Krajnc, M.L. Sampoli, A. Sestini and E. Žagar, "C^1 interpolation by rational biarcs with rational rotation minimizing directed frames", Computer Aided Geometric Design **31** (2014), 427–440.

46. M.L. Sampoli, A. Sestini, G. Jaklič and E. Žagar, "A Theoretical Analysis of an Improved Rational Spline Scheme for Spherical Camera Motions", Lecture Notes in Computer Science **8177**, 442–455, Springer–Verlag Berlin Heidelberg (2014). ISBN: 978-364254381-4.

45. R.T. Farouki, C. Giannelli, M.L. Sampoli and A. Sestini, "Rotation–Minimizing Osculating Frames", Computer Aided Geometric Design **31** (2014), 27–42.

44. A. Sestini, L. Landolfi and C. Manni , " On the approximation order of a space datadependent PH quintic Hermite interpolation scheme ", Computer Aided Geometric Design **30** (2013), 148–158.

43. R. T. Farouki, C. Giannelli and A. Sestini," An Interpolation Scheme for Designing Rational Rotation–Minimizing Camera Motions ", Advances in Computational Mathematics **38** (2013), 63–82.

42. G. Jaklič, M.L. Sampoli, A. Sestini and E. Žagar, "C^1 Rational Interpolation of Spherical Motions with Rational Rotation–minimizing Directed Frames", Computer Aided Geometric Design **30** (2013), 159–173.

41. M.L. Sampoli and A. Sestini, " Rational Rotation–minimizing Polar oriented Rigid Body Motions", proceedings of the 21th Int. Workshop on Robotics in Alpe–Adria–Danube Region (2012), 284–291, Edizioni Scientifiche e artistiche, Italy, ISBN: 978–88–95430–45–4.

40. F. Mazzia and A. Sestini, "Quadrature Formulas descending from BS Hermite Spline Quasi Interpolation", Journal of Computational and Applied Mathematics **236** (2012), 4105–4118.

39. R. T. Farouki, C. Giannelli, C. Manni and A. Sestini, "Design of Rational Rotation–Minimizing Rigid Body Motions by Hermite Interpolation", Mathematics of Computation **81** No. 278 (2012), 879–903.

38. L. Brugnano and A. Sestini, " Iterative Solution of Piecewise Linear Systems for the Numerical Solution of Obstacle Porblems", Journal of Numerical Analysis, Industrial and Applied Mathematics **6** (2011), 67–82.

37. R. T. Farouki, C. Giannelli, and A. Sestini, " Geometric Design using Space Curves with Rational Rotation–Minimizing Frames ", in (M. Daehlen et al. eds.), Lecture Notes in Computer Science **5862**, 194–208, Springer, (2010). ISBN: 978-364211619-3.

36. L. Brugnano and A. Sestini, " A new approach based on Piecewise Linear Systems for the Numerical Solution of Obstacle Problems ", AIP Conf. Proc. **1168** (2009), 746–749.

35. F. Mazzia, A. Sestini, " The BS Class of Hermite Spline Quasi interpolants on Nonuniform Knot Distributions ", BIT Numer. Math. **49** (2009), 611–628.

34. R. T. Farouki, C. Giannelli, C. Manni and A. Sestini, " Quintic Space Curves with Rational Rotation–minimizing Frames ", Computer Aided Geometric Design **26** (2009), 580–592.

33. R. T. Farouki, C. Giannelli and A. Sestini," Helical Polynomial Curves and Double Pythagorean Hodographs I. Quaternion and Hopf Map Representations ", Journal of Symbolic Computation **44**, 161-179, (2009).

32. R. T. Farouki, C. Giannelli and A. Sestini," Helical Polynomial Curves and Double Pythagorean Hodographs II. Enumeration of Low–degree Curves ", Journal of Symbolic Computation **44**, 307-332, (2009).

31. F. Mazzia, A. Sestini and D. Trigiante," The Continuous Extension of the BS Linear Multistep Methods on Non–uniform Meshes ", Applied Numerical Mathematics **59**, 723-738, (2009).

30. F. Mazzia, A. Sestini and D. Trigiante, " BS methods: a new class of spline collocation BVMs ", AIP Conf. Proc. **1048**, 892-895,(2008).

29. L. Aceto, A. Sestini, " Numerical Aspects of the Coefficient Computation for LMMs ", Journal of Numerical Analysis, Industrial and Applied Mathematics **3**, 181–191 (2008). ISSN: 1790:8140.

28. R. T. Farouki, C. Giannelli, C. Manni and A. Sestini, " Identification of Spatial PH Quintic Hermite Interpolants with Near–optimal Shape Measures ", Computer Aided Geometric Design **25**, 274–297, (2008).

27. L. Aceto and A. Sestini, " On the Numerical Computation of the LMM's Coefficients ", *Numerical Analysis and Applied Mathematics*, (Editors: E. Simos, G. Psihoyios and C. Tsitouras), AIP Conf. Proc. **936**, American Institute of Physics Inc., 596-599, (2007).

26. F. Mazzia, A. Sestini and D. Trigiante, " High Order Continuous Approximation for the Top Order Methods ", *Numerical Analysis and Applied Mathematics*, (Editors: E. Simos, G. Psihoyios and C. Tsitouras), AIP Conf. Proc. 936, American Institute of Physics Inc.,, 611–613, (2007).

25. F. Mazzia, A. Sestini and D. Trigiante, "BS Linear Multistep Methods on Non–uniform Meshes", Journal of Numerical Analysis, Industrial and Applied Mathematics **1**, 131–144, (2006).

24. F. Mazzia, A. Sestini and D. Trigiante, "B-spline Linear Multistep Methods and their Continuous Extensions", Siam J. of Numerical Analysis **44**, No. 5, 1954–1973, (2006).

23. O. Davydov, R. Morandi and Sestini A., "Local Hybrid Approximations for Scattered Data Fitting with Bivariate Splines", Computer Aided Geometric Design **23**, 703–721, (2006).

22. O. Davydov, A. Sestini and Morandi R., "Local RBF Approximation for Scattered Data Fitting with Bivariate Splines ", Trends and Applications in Constructive Approximation, M. G. de Bruin, D. H. Mache and J. Szabados eds., International Series of Numerical Mathematics **151**, 91–102, (2005).

21. F. Mazzia, A. Sestini and Trigiante D., " Smooth Spline Collocation for BVPs", ICNAAM 2005 Proceedings, T. E. Simos, G. Psihoyios, Ch. Tsitouras eds., WILEY–VCH, 650–653, (2005).

20. F. Pelosi, R.T. Farouki, C. Manni and Sestini A., "Geometric Hermite Interpolation by Spatial Pythagorean Hodograph Cubics ", Advances in Computational Mathematics **22**, 325–352, (2005).

19. O. Davydov, R. Morandi and Sestini A., "Scattered Data Approximation with a Hybrid Scheme", Rendiconti del Seminario Matematico, Università e Politecnico di Torino **61**, No. 3, 333–341, (2003).

18. R. T. Farouki, C. Manni and Sestini A., "Spatial C^2 PH Quintic Splines", in Curve and Surface Design: Saint-Malo 2002, T. Lyche, M. L. Mazure and L. L. Schumaker eds., 147–156, (2003). ISBN: 0972848207.

17. R. T. Farouki, C. Manni and Sestini A., " Shape–Preserving Interpolation by G^1 and G^2 PH Quintic Splines ", IMA Journal of Numerical Analysis **23**, 175–195, (2003).

16. R. T. Farouki, C. Y. Han, C. Manni and Sestini A., "Characterization and Construction of Helical Pythagorean–Hodograph Quintic Space Curves", Journal of Computational and Applied Mathematics **162**, 365–392, (2003).

15. R. Morandi and Sestini A., " Geometric Knot Selection for Radial Scattered Data Approximation ", in Algorithms for Approximation IV, J. Levesley, I. J. Anderson and J. C. Mason (eds), 244–251, (2002). ISBN: 1862180407.

14. C. Conti, R. Morandi, C. Rabut and Sestini A., "Cubic Spline Data Reduction, Choosing the Knots from a Third Derivative Criterion", Numerical Algorithms **28**, 45–61 (2001).

13. P. Costantini, R. T. Farouki, C. Manni and Sestini A., "Computation of Optimal Composite Re–Parameterizations", Computer Aided Geometric Design **18**, 875–897 (2001).

12. R. T. Farouki, B. T. Kuspa, C. Manni and Sestini A., " Efficient solution of the complex quadratic tridiagonal system for C^2 PH quintic splines ", Numerical Algorithms **27**, 35–60 (2001).

11. R. T. Farouki, C. Manni and Sestini A. " Real–time CNC interpolators for Bézier conics ", Computer Aided Geometric Design **18**, 639–655, (2001).

10. R. Morandi and Sestini A., "Data Reduction in Surface Approximation", in Mathematical Methods for Curves and Surfaces, T. Lyche and L. L. Schumaker (eds), 315–324, (2001).

9. C. Conti, R. Morandi, and Sestini A., "Interproximating Curves by means of Mixed Splines", Advances in Theory of Computational Mathematics 3, D. Trigiante (ed), Nova Science, 143–151, (2000). ISBN: 156072885X.

8. R. Morandi, D. Scaramelli and Sestini A., "A Geometric Approach for Knot Selection in Convexity-Preserving Spline Approximation", in Curve and Surface Design, P. J. Laurent, P. Sablonnière, L.L. Schumaker (eds), 287–296, (2000). ISBN: 0826513565.

7. Sestini A., "Univalency Conditions for the Control Point Form Method", Calcolo **35**, 37–51, (1998).

6. R. Morandi, Sestini A., "C^2 Local Convexity-Preserving Interpolation through the Control Point Form Method", The Visual Computer **15**, 483–493, (1999).

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