CURRICULUM VITAE OF ALVISE SOMMARIVA

Personal data

- born in Venice, October 11, 1968;
- resident in Venezia;
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- Orchid code: 0000-0002-8902-8063;

Degrees

- B.Sc in *Mathematics*, 1993, University of Padua, with the thesis *A numerical method for a class of fixed point equations*.
- Ph.D. in *Computational Mathematics*, 08-02-1999, University of Padua, with the thesis *Constructive and Numerical Analysis for a class of Hammerstein equations arising in transport theory*

Positions

- Research Grant *MAST III PACE* Roma III (November 20,1998-March 20,1999).
- Research Fellowship: *Numerical analysis of integral and differential models of applied sciences*, University of Padua (April 1, 1999-August 31, 2002).
- Post-Doc Fellowship: *Fast methods for integral equations*, Department of Pure and Applied Mathematics, University of Padua (September 1, 2002-August 31, 2004).
- Research Associate: School of Mathematics, University of New South Wales (Australia) (September 1, 2004-December 1, 2005).
- Lecturer (Assistant Professor) in Numerical Analysis: University of Padua (March 2006-October 2014).
- Associate Professor in Numerical Analysis: University of Padua (November 2014-).
- Full Professor Habilitation in Numerical Analysis, (period: 05/04/2018 - 05/04/2027).

Department Seminars

- Numerical approximation of fixed-points of decreasing operators, Department of Mathematics and Computer Science, University of Udine, May 1999.
- Numerical solution of a class of quadratic integral equations arising in transport theory, Department of Pure and Applied Mathematics, University of Padua, March 2000.

Referee Activity

- Applied Mathematics and Computation,
- Applied Numerical Mathematics,
- BIT,
- Calcolo,
- Computing,
- Dolomites Research Notes on Approximation

- Electronic Transactions in Numerical Analysis,
- IMA Journal Numerical Analysis,
- Journal of Computational and Applied Mathematics,
- Journal of Integral Equations and Applications,
- Numerical Algorithms,
- Numerische Mathematik,
- Optimization Letters,
- SIAM Numerical Analysis.

Contributions in Conferences

- *Numerical approximation of decreasing integral operators*, Montecatini Terme (Italy), 1998;
- *Relaxed nonlinear solvers for discrete Hammerstein equations arising in transport theory*, Venice (Italy), 1998;
- *Computing fixed points of decreasing operators by relaxed iterations* (with M.Vianello), Kiel (Germany), 1998.
- *A Nystrom-Fejer-Picard solver for nonlinear integral equations in transport theory* (with M.Vianello and E.Facchinello), Naples (Italy), 1999.
- *Chebyshev-like compression of discrete integral operators*, International Congress on Computational and Applied Mathematics, Leuven (Belgium), 2000.
- *A fast Nystrom-Broyden solver by Chebyshev compression* (with S. De Marchi and M. Vianello), Huddersfield (GB), 2001.
- *Adaptive bivariate Chebyshev approximation and efficient evaluation of integral operators* (with A. Mardegan, M. Vianello and R. Zanovello), NAcOM 2003, Cambridge (GB), May 2003, p.123-128.
- *Integration over the sphere* (with K. Atkinson), *Approximation and Harmonic Analysis*, Auckland (New Zealand), 8-11 February 2005.
- *Constructing cubature formulas from scattered data by RBF* (with M. Vianello), *Recent progress in Spline and Wavelet approximation*, Rome (I), June 14-16, 2006.
- *Computing Fekete and Lebesgue points: simplex, square, disk*, S. Margherita di Pula (I), October 9-14, 2011.
- *Fast variants of the Golub and Welsch algorithm for symmetric weight functions*, 3rd Dolomites Workshop on Constructive Approximation and Applications Alba di Canazei (Trento, Italy), September 9-14, 2012.
- *Compressed cubature over polygonal domains* (with B.J. Bauman and M. Vianello), SIMAI 2018, Roma, July 2-6, 2018.
- *Numerical Quadrature and Hyperinterpolation over Spherical Triangles/Polygons by the dCATCH Package* (with M. Dessole and M. Vianello), SIAM GS21, online, June 21-24, 2021.
- *Low cardinality Positive Interior cubature on NURBS-shaped domains* (with M. Vianello), Software for Approximation (SA2022), February 3-4, 2022.
- *Tchakaloff-like polyhedral quadrature with and without tetrahedralization* (with M. Vianello), FAATNA 20 > 22, July 4-8, 2022. ¡/li¿

Conferences/Workshops organization

- DWCAA 2006 (organizing committee)
- DRWA 2007 (organizing committee)
- DWCAA 2009 (organizing and program committee)

- DRWA 2010 (organizing committee)
- DRWA 2011(organizing committee)
- DWCAA 2012 (organizing and program committee)
- DRWA 2013 (organizing committee)
- DRWA 2014 (organizing committee)
- DRWA 2015 (organizing committee)
- DWCAA 2016 (organizing and scientific committee)
- DRWA 2017 (organizing committee)
- DRWA 2018 (scientific committee)
- DRWA 2019 (organizing and scientific committee)
- DWCAA 2020 (organizing and scientific committee, postponed)
- DWCAA 2021 (organizing and scientific committee)
- RITA PhD seminars 2022 (organizing committee)
- ATMA2023 (organizing and scientific committee)

Scientific participation to national and internationals research projects and grants

- *Efficient approximation methods for nonlocal discrete transforms*, CPDA028291, 12 months (as participant);
- *Interpolazione ed Estrapolazione: nuovi algoritmi ed applicazioni* (Interpolation and Extrapolation: new algorithms and applications), CPDA089040, 24 months (as partecipant, 2009-2011),
- *Numerical treatment of ill-posed linear problems with applications*, CPDA104492, 12 months (as participant, 2011-2013),.
- *Multivariate approximation by polynomial and radial bases*, 12 months (as participant, 2012),.
- *Multivariate approximation with application to image reconstruction*, CPDA124755, 24 months, (as participant, 2013-2014),.
- *Approximation and Discretization Methods for PDEs on Manifolds for Environmental Modeling*, BIRD163015 (as participant, 2017-2018).
- *Conditioning issues in multivariate approximation and image reconstruction*, CPDA143275, 24 months (21.8K, as principal investigator, 2015-2017),.
- *Methods, algorithms and applications of multivariate approximation*, 12 months (19.5 k, as participant, 2018-2019),,
- *Horizon 2020 ERA-PLANET European project: GEOEssential Essential Variables workflows for resource efficiency and environmental management* (as participant),.
- *Discretization of measures, approximation of integral operators and applications*, 12 months (as participant, 2019),
- *Numerical Modelling by Tchakaloff-like Cubature*, BIRD 192932 (peer-review score 92.4/100, 14 kEuros, 6 members, as participant, 2020-2021),.
- *GNCS, Methods and software for multivariate integral models* (12 months, 2.1 kEuros, as responsible, 2021-2022)
- Grant for hiring a research associate, project title *Metodi di approssimazione su domini di tipo NURBS/Approximation methods on NURBS-shaped domains*, (12 months, 20 kEuros, as responsible, 2022)

Duties

- PhD jury, Quasi-Monte Carlo in moderate dimensions. Chebyshev lattices,

numerical integration and particle filter, Koen Poppe (supervisor: R. Cools), October 2012, KU Leuven, Belgium;
- Research fellowship committee, ISMAR, Venezia, February 2013;
- Research fellowship committee (responsible of the grant: M. Redivo Zaglia), Department of Mathematics, University of Padua, January 7, 2014;
- Responsible of Numlab, Department of Mathematics, University of Padua, 2014-2019;
- Research fellowship committee, *Krylov Methods for Bilinear forms and applications* (responsible of the grant: M. Redivo Zaglia), University of Padua, 2016;
- Member of Ph.D. selection to the Ph.D. in Computational Mathematics (University of Padua), July 2015.
- PhD jury, Comm. 141, Pozza Stefano, University of Padua, October 7, 2015.
- PhD referee, Sai Vidya Institute of Technology, Bengaluru (India), November 15, 2018.
- Research fellowship committee (responsible of the grant: M. Vianello), *Numerical modelling by Caratheodory-Tchakaloff Quadrature Compression*, Progetto Assegni SID 2018/DOR Vianello, Department of Mathematics, University of Padua, November 29, 2018;
- Research fellowship committee (responsible of the grant: F. Marcuzzi), *Metodi di gradiente prossimali per l'identificazione di sistemi*, Department of Mathematics, University of Padua, May 20, 2019 (Prot. n.607, May 3, 2019);
- PhD jury, Dr. Giada Serafini, University of Basilicata, May 28, 2019.
- Evaluation Committee (job vacancies in Mathematics for Engineering), University of Padua, July 4, 2019.
- Member of an examining board (hiring Lecturer of B-type, selection 2019RUB14), University of Padua, December-April 2020.
- Research fellowship committee (responsible of the grant: F. Marcuzzi), *Digital twins di sistemi termodinamici e meccanici controllati*, Department of Mathematics, University of Padua, October 9, 2020 (Prot. n.215, September 21, 2020);
- Member of an examining board (hiring Lecturer of A-type, selection 2021RUAPON - REACT EU, allegato 32), University of Padua, November 2021.
- Member of an examining board (hiring Lecturer of A-type, selection 424/RTDA DM1062), University of Turin, November 2021.
- Research fellowship committee (responsible of the grant: F. Marcuzzi), *Numerical linear algebra for multivariate polynomial modelling*, Department of Mathematics, University of Padua, January 28, 2022 (Decreto Rep. 9/2022, Prot. n.244, Anno 2021, Tit. III, Cl. 13, Fasc. 115, January 27, 2022);
- Research fellowship committee (as responsible of the grant) University of Padua, November 2022.

Memberships

- Member of Commissione Istruttoria per l'Attribuzione degli Impegni Didattici, Department of Mathematics, University of Padua, 2009-2010- 2011;
- Member of Commissione Comunicazione, Department of Mathematics, University of Padua, 2019-;
- Member of Commissione Scientifica di Area, Department of Mathematics, University of Padua, 2019-;

- Member of Rete ITaliana di Approssimazione / Research ITalian network on Approximation (RITA) 2016-; National coordinator of RITA since March 1, 2022;
- Member of GNCS.
- Member of CAA: Padua-Verona research group on Constructive Approximation and Applications.
- Editor of Dolomites Research Notes on Approximation, March 2017-.
- Member of Ph.D. Committee (Dept. of Mathematics, Univ. of Padua), 2019-2020.
- Member of Teoria Dell'Approssimazione e Applicazioni (TAA) (Gruppo UMI).

Editorial duties

- Editor of *Dolomites Research Notes on Approximation*, March 2017-.
- Editor of the volume *5-th Dolomites Workshop on Constructive Approximation and Applications*. Special Issue dedicated to Robert Schaback on the occasion of his 75th birthday, Dolomites Research Notes on Approximation, Volume 15, issue 3, October 2022, DOI: 10.14658/pupj-drna-2022-3-1, ISSN Number: 2035-6803.

Prizes and honors

- *Quadrature-based polynomial optimization* with A. Martinez, F. Piazzon and M. Vianello, Optim. Lett. 14 (2020), pp.1027-1036, co-winner of the OPTL Best Paper Awards for 2020.
- Mural for 100th anniversary of the Polish Mathematical Society at the Jagiellonian University, In the mural are painted the Approximate Fekete and Discrete Leja Points for polynomial interpolation of degree 6 on a 270 degree circular sector, computed by the methods developed in the paper *Computing multivariate Fekete and Leja points by numerical linear algebra*, with L. Bos, S. De Marchi and M. Vianello, SIAM J. Numer. Anal. 48 (2010), pp.1984-1999.

Teaching experience

- *Mathematical Analysis II* (with L. Finesso), Degree in Electronical Engineering, University of Padua (1999)
- *Numerical Analysis and Computer Programming* (with M. Vianello), Degree in Chemistry and Industrial Chemistry, University of Padua (1999).
- *Computer Programming I* (with S. Dulli), Degree in Statistics and Computer Science, University of Padua (1999).
- *Introduction to Matlab* (with R. Zanovello), Degree in Statistics, University of Padua (2000-2001).
- *Numerical Analysis* (with R. Vermiglio), Degree in Mathematics, University of Udine (2002).
- *Integral Equations* (with M. Lanza), Ph. D. Students in Pure and Applied Mathematics, University of Padua (2004).
- *Introduction to Numerical Analysis* (with M. Vianello), Teaching Mathematics, University of Padua (2006).
- *Numerical Analysis* (with F. Marcuzzi and M. Vianello), Degree in Computer Science, University of Padua (Apr.2007-June 2007, 16h).
- *Numerical Analysis II* (with M. Vianello), Degree in Computer Science, University of Padua (2006, 14h).

- *Numerical Analysis* (with M. Vianello), Degree in Mathematics, University of Padua (Nov. 2006-Dec.2006, 12h).
- *Numerical Analysis and Computer Programming (Mod. B)*, Degree in Science of Materials, University of Padua, (Dec. 2006-Feb.2007, as principal investigator, 24h+2h);
- *Numerical Analysis* (M. Vianello), Degree in Computer Science, University of Padua (Apr 2007-June 2007, 16h).
- *Numerical Analysis II* (M. Vianello), Degree in Mathematics, University of Padua (Feb 2007-March 2007, 14h).
- *Numerical Analysis II* (with M. Vianello and R. Zanovello, 12h), Degree in Mathematics, University of Padua (Febr.2008-Mar.2008, 14h).
- *Numerical Analysis* (M. Vianello), Degree in Computer Science, University of Padua (Apr 2008-June 2008, 16h).
- *Numerical Analysis* (with M. Venturin and M.Vianello), Degree in Mathematics, Astronomy, Earth Sciences, University of Padua (Nov. 2008-Dec.2008, 12h+4h).
- *Numerical Analysis II* (with M.Vianello), Degree in Mathematics and Degree in Computer Science, University of Padua (Jan. 2009, 12h).
- *Numerical Analysis* (with M.Vianello), Degree in Mathematics, University of Padua (Apr.2010June 2010, 14h+2h).
- *Numerical Analysis II* (with M.Vianello), Degree in Mathematics and Degree in Computer Science, University of Padua (Apr. 2012-June 2012, 10h).
- *Numerical Analysis I* Degree in Astronomy, University of Padua (Oct.2011-Jan.2012, as responsible, 64h+2h).
- *Numerical Analysis I* (with M.Vianello), Degree in Mathematics, University of Padua (Nov.2012-Jan.2013, 16h).
- *Numerical Analysis II* (with M.Vianello), Degree in Mathematics, University of Padua (Mar.2013-Jun.2013, 40h).
- *Numerical Analysis and Computer Programming* Degree in Astronomy, University of Padua (Oct.2013-Jan.2014, 24h).
- *Numerical Analysis II*, Degree in Mathematics, University of Padua (Mar.2014-Jun.2014, as responsible, 64 h).
- *Calculus* (with A. Benvegnu'), Degree in Statistics, University of Padua (Oct.2014-Jan.2014, as responsible, 54 h).
- *Numerical Analysis I* (with M. Redivo Zaglia), Degree in Computer Science, University of Padua (Mar.2015-Jun.2015, 8h).
- *Numerical Analysis II*, Degree in Mathematics, University of Padua (Mar.2015-Jun.2015, as responsible, 64 h).
- *Calculus* (with A. Cesaroni), Degree in Statistics, University of Padua (Oct.2015-Jan.2016, 53h).
- *Numerical Analysis II*, Degree in Mathematics, University of Padua (Mar.2016-Jun.2016, as responsible, 64 h).
- *Numerical Analysis I* (with M. Redivo Zaglia, S. Pozza), Degree in Computer Science, University of Padua (Mar.2016-Jun.2016. 8h).
- *Calculus* (with A. Cesaroni), Degree in Statistics, University of Padua (Oct.2016-Jan.2017, 40h).
- *Numerical Analysis II*, Degree in Mathematics, University of Padua (Mar.2017-Jun.2017, as responsible, 64 h).
- *Numerical Analysis I* (with M. Redivo Zaglia), Degree in Computer Science,

University of Padua (Mar.2017-Jun.2017, 16h).
- *Calculus* (with A. Cesaroni), Degree in Statistics, University of Padua (Oct.2017-Jan.2018, 40h).
- *Numerical Analysis II*, Degree in Mathematics, University of Padua (Mar.2018-Jun.2018, as responsible, 64 h).
- *Numerical Analysis I* (with M. Redivo Zaglia), Degree in Computer Science, University of Padua (Mar.2018-Jun.2018, 16h).
- *Numerical Analysis II*, Degree in Mathematics, University of Padua (Mar.2019-Jun.2019, as responsible, 64 h).
- *Numerical Analysis I* (with D. Poggiali), Degree in Engineering, University of Padua (Mar.2019-Jun.2019, as responsible, 64h).
- *Numerical Analysis II*, Degree in Mathematics, University of Padua (Mar.2020-Jun.2020, as responsible, 64 h).
- *Numerical Analysis I* (with G. Sarego), Degree in Engineering, University of Padua (Mar.2020-Jun.2020, as responsible, 56h).
- *Numerical Analysis II*, Degree in Mathematics, University of Padua (Mar.2021-Jun.2021, as responsible, 64 h).
- *Numerical Analysis I* (with F. Piazzon), Degree in Engineering, University of Padua (Mar.2021-Jun.2021, as responsible, 56h).
- *Numerical Analysis II*, Degree in Mathematics, University of Padua (Mar.2022-Jun.2022, as responsible, 64 h).
- *Numerical Analysis I* (with F. Marchetti), Degree in Engineering, University of Padua (Mar.2022-Jun.2022, as responsible, 56h).

Supervisory experience

- E. Facchinello, *Analysis and implementation of a numerical solver for nonlinear integral equations of transport theory* (with M. Vianello).
- A. Martignago, *Fast methods for integral equations of the second kind via Chebyshev compression* (with M. Vianello). [A.A. 1999-2000]
- A. Mardegan, *Bivariate Chebyshev series and approximation of integral operators* (with M. Vianello).
- A. Punzi, *Una formula di cubatura RBF per dati scattered su settori circolari* (with M. Vianello). [A.A. 2005-2006]
- G. Da Fies, *A RBF cubature rule for scattered data on domains with spline boundary* (with M. Vianello). [A.A. 2006-2007]
- S. Bressan, *Rappresentazione dei reali nel calcolatore e calcolo con numeri approssimati: un percorso didattico per le scuole secondarie* (with M. Vianello). [A.A. 2007-2008]
- F. Basaglia, *A new cubature method over polygons* (with M. Vianello).
- M. Marchioro, *Approssimazione polinomiale e cubatura su mesh debolmente ammissibili del parallelepipedo, del cilindro e del prisma a base triangolare* (with S. De Marchi). [A.A. 2009-2010]
- G. Orzetti, *Approssimazione polinomiale su mesh debolmente ammissibili della palla e del tetraedro* (with M. Vianello). [A.A. 2009-2010]
- M. Briani, *Calcolo di punti quasi ottimali per l'interpolazione polinomiale sul triangolo* (with M. Vianello). [A.A. 2009-2010]
- M. Gentile, *Un algoritmo per la quadrangolazione convessa di poligoni* (with M. Vianello). [A.A. 2009-2010]
- S. Ballan, *Confronti di metodi per l'integrazione numerica di Gaussiane bivariate su poligoni* (with M. Vianello). [A.A. 2010-2011]

- L. Mezzalira, *Calcolo di punti quasi ottimali per l'interpolazione polinomiale sull'intervallo, il quadrato e il disco.* [A.A. 2010-2011]
- M. Festa, *Calcolo di formule minimali sul quadrato.* [A.A. 2010-2011]
- J. Cacco, *Un metodo polinomiale per il calcolo di funzioni di matrici non simmetriche basato sui punti di Leja* (with P. Novati). [A.A. 2010-2011]
- D. Montagner, *Quadratura di Fejer e Clenshaw-Curtis via DCT e DST, e sue applicazioni* [A.A. 2011-2012]
- A. Pinto, *Punti di Lebesgue sul disco* (with F. Rinaldi) [A.A. 2011-2012]
- M. Gentile, *Interpolazione polinomiale e cubatura algebrica su sottoregioni della sfera* (with M. Vianello). [A.A. 2012-2013]
- L. Mezzalira, *Cubatura adattativa su toro e sfera* (with M. Vianello). [A.A. 2012-2013]
- C. Bittante, *Una nuova tecnica di cubatura quasi-Monte Carlo su domini 2D e 3D* (with S. De Marchi). [A.A. 2013-2014]
- M. Zaccaron, *Discrete orthogonal polynomials and hyperinterpolation over planar regions* (with M. Vianello). [July, 25th, 2014]
- G. Conedera, *Formule di cubatura minimali per il disco* (with M. Vianello). [February 12th, 2015]
- G. Bergamasco, *Positive cubature formulas on normal domains* (with M. Vianello). [A.A. 2014-2015]
- M. Agugiaro, *Formule di cubatura su unioni di dischi.* [December 4th, 2015]
- R. Viero, *Formule di cubatura attraverso programmazione lineare semi-infinita* (with M. Vianello). [July 21th, 2017]
- L. Favero, *Iperinterpolazione di tipo Tchakaloff.* [April 19th, 2019]
- E. Bazza, *Cubatura su poligoni curvilinei.* [December 12th, 2019]
- F. Santin, *Cubatura su poligoni curvilinei.* [April 27th, 2020]
- F. Zuccolotto, *Alcuni esperimenti numerici sulle matrici di Vandermonde e le iterazioni del metodo di Arnoldi..* [December 10th, 2020]
- L. Salzano, *Su una formula di J. B. Lasserre relativa all'integrazione sul simplesso..* [December 10th, 2020]

Publications

- CQMC: an improved code for low-dimensional Compressed Quasi-MonteCarlo cubature with G. Elefante and M. Vianello, Dolomites Res. Notes Approx. DRNA 14 (2021), pp. 92-100 (Special Issue "Software for Approximation 2022")
- inRS: implementing the indicator function for NURBS-shaped planar domains, with M. Vianello, Appl. Math. Lett., Volume 130, August 2022, 108026.
- Low cardinality Positive Interior cubature on NURBS-shaped domains, with M. Vianello, accepted upon revision by BIT Numer. Math.
- On *marcov* inequalities, with L. Bos and S. De Marchi, Dolomites Research Notes on Approximation, 14, issue 1, (2021), pp. 92-100.
- RBFCUB: a numerical package for near-optimal meshless cubature on general polygons, with R. Cavoretto, A. De Rossi and M. Vianello, Applied Mathematics Letters, 125 (2022), 107704.
- Near-optimal polynomial interpolation on spherical triangles, with M. Vianello, Mediterr. J. Math., 19 (2022), article 68. Mediterr. J. Math., to appear in April 2022.

- Numerical hyperinterpolation over spherical triangles, with M. Vianello, Math. Comput. Simulation 190 (2021), pp. 15-22.
- Near-algebraic Tchakaloff-like quadrature on spherical triangles, with M. Vianello, Appl. Math. Lett. 120 (2021).
- RBF moment computation and meshless cubature on general polygonal regions, with M. Vianello, Appl. Math. Comput. 409 (2021).
- Computing Tchakaloff-like cubature rules on spline curvilinear polygons, with M. Vianello, Dolomites Res. Notes Approx. DRNA 14 (2021), pp. 1-11.
- Compressed cubature over polygons with applications to optical design, with B. Bauman and M. Vianello, J. Comput. Appl. Math. 370 (2020), published online 10 December 2019
- Algebraic cubature on polygonal elements with a circular edge, with E. Artioli and M. Vianello, Comput. Math. Appl., published online 5 November 2019
- Quadrature-based polynomial optimization, with A. Martinez, F. Piazzon and M. Vianello, Optim. Lett. 14 (2020), Pages 1027-1036,
- On the computation of sets of points with low Lebesgue constant on the unit disk, with G. Meurant, Journal of Computational and Applied Mathematics, Volume 345, 1 January 2019, Pages 388-404.
- Discrete norming inequalities on sections of sphere, ball and torus with M. Vianello, J. Inequal. Spec. Funct. 9-4 (2018), 113–121
- Nearly optimal nested sensors location for polynomial regression on complex geometries, with M. Vianello, Sampl. Theory Signal Image Process. 17 (2018), 95–101
- Subperiodic Trigonometric Hyperinterpolation, with G. Da Fies and M. Vianello, in: Contemporary Computational Mathematics - a celebration of the 80th birthday of Ian Sloan (invited paper) J. Dick, F.Y. Kuo, H. Wozniakowski Eds., Springer, 2018, pp. 283–304
- Numerical quadrature on the intersection of planar disks, with M. Vianello, FILOMAT 31:13 (2017), 4105–4115
- Subperiodic trigonometric subsampling: a numerical approach, with M. Vianello, Appl. Anal. Discrete Math. 11 (2017), 470–483
- Caratheodory-Tchakaloff Least Squares, with F. Piazzon and M. Vianello, Sampling Theory and Applications 2017, IEEE Xplore Digital Library, DOI: 10.1109/SAMPTA.2017.8024337
- Numerical hyperinterpolation over nonstandard planar regions, with M. Vianello, Math. Comput. Simulation 141 (2017), 110–120
- On the use of compressed polyhedral quadrature formulas in embedded interface methods, with Y. Sudhakar, M. Vianello and W.A. Wall, SIAM J. Sci. Comput. 39 (2017), B571-B587
- Optimal polynomial meshes and Caratheodory-Tchakaloff submeshes on the sphere, with P. Leopardi and M. Vianello, Dolomites Res. Notes Approx. DRNA 10 (2017), 18–24
- Caratheodory-Tchakaloff Subsampling, with F. Piazzon and M. Vianello, Dolomites Res. Notes Approx. DRNA 10 (2017), 5–14 poster presented at DWCAA16, Canazei (Italy), 2016
- Polynomial approximation and quadrature on geographic rectangles, with M. Gentile and M. Vianello, Appl. Math. Comput. 297 (2017), 159–179 poster presented at SIAM GeoSciences 2013, Padova (Italy)
- Polynomial Meshes: Computation and Approximation, with S. De Marchi,

F. Piazzon and M. Vianello, Proceedings of CMMSE 2015, 414–425, ISBN 978-84-617-2230-3, ISSN 2312-0177

- Compression of multivariate discrete measures and applications, with M. Vianello, Numer. Funct. Anal. Optim. 36 (2015), 1198–1223
- Polynomial fitting and interpolation on circular sections, with M. Vianello, Appl. Math. Comput. 258 (2015), 410–424
- Multivariate Christoffel functions and hyperinterpolation, with S. De Marchi and M. Vianello, Dolomites Res. Notes Approx. DRNA 7 (2014), 26–33
- Fast variants of the Golub and Welsch algorithm for symmetric weight functions, with G. Meurant, Numer. Algo. 67, Issue 3 (2014), 491-506.
- Algebraic cubature by linear blending of elliptical arcs, with G. Da Fies and M. Vianello, Appl. Numer. Math. 74 (2013), 49–61
- Fast Construction of Fejer and Clenshaw-Curtis rules for general weight functions, Comput. Math. Appl., Volume 65, Issue 4, February 2013, Pages 682-693.
- Computing almost minimal formulas on the square, with M. Festa, J. Comput. Appl. Math. 236 (2012), 4296-4302.
- On the generation of symmetric Lebesgue-like points in the triangle, with F. Rapetti and M. Vianello, J. Comput. Appl. Math. 236 (2012), 4925–4932
- Polynomial approximation and cubature at approximate Fekete and Leja points of the cylinder, with S. De Marchi and M. Marchioro, Appl. Math. Comput. Vol. 218 (2012), 10617-10629.
- Computing Fekete and Lebesgue points: simplex, square, disk, with M. Briani and M. Vianello, J. Comput. Appl. Math. 236 (2012), 2477–2486
- On Multivariate Newton Interpolation at Discrete Leja Points, with L. Bos, S. De Marchi and M. Vianello, Dolomites Res. Notes Approx. DRNA 4 (2011), 15–20
- Polynomial interpolation and cubature over polygons, with M. Gentile and M. Vianello, J. Comput. Appl. Math. 235 (2011), 5232–5239
- An algebraic cubature formula on curvilinear polygons, with G. Santin and M. Vianello, Appl. Math. Comput. 217 (2011), 10003–10015
- Geometric Weakly Admissible Meshes, Discrete Least Squares Approximations and Approximate Fekete Points, with L. Bos, J.P. Calvi, N. Levenberg and M. Vianello, Math. Comp. 80 (2011), 1601–1621
- Padua2DM: fast interpolation and cubature at the Padua points in Matlab/Octave, with M. Caliari, S. De Marchi and A. Sommariva Numer. Algorithms 56 (2011), 45–60
- Weakly Admissible Meshes and Discrete Extremal Sets, with L. Bos, S. De Marchi and M. Vianello, Numer. Math. Theory Methods Appl. 4 (2011), 1–12
- Computing multivariate Fekete and Leja points by numerical linear algebra, with L. Bos, S. De Marchi and M. Vianello, SIAM J. Numer. Anal. 48 (2010), 1984–1999 poster presented at ICIAM 2011, Vancouver
- Least-squares polynomial approximation on weakly admissible meshes: disk and triangle, with L. Bos and M. Vianello, J. Comput. Appl. Math. 235 (2010), 660–668
- Approximate Fekete points for weighted polynomial interpolation, with M. Vianello, Electron. Trans. Numer. Anal. 37 (2010), 1–22
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