

CURRICULUM VITAE (short)
STEFANO DE MARCHI



<i>Date and place of birth:</i>	December 17, 1962	Candiana (Padova)- Italy
<i>Affiliations:</i>	1. Department of Mathematics “Tullio Levi-Civita” 2. Padova Neuroscience Center	Via Trieste, 63 Via Orus 2B Padova (ITALY), I-35121
<i>email/webpage</i>	University of Padova stefano.demarchi@unipd.it	www.math.unipd.it/~demarchi
Degree	Mathematics	1987 University of Padova;
“Specializzazione”	“Matematica Applicata”	1991 University of Padova;
Ph.D.	“Matematica Comput. e informatica Mat. (ciclo 6)”	1994 Consorzio Nord-Orientale

1 Positions Held

- Assistant Professor of *Numerical Analysis* - Department of Mathematics and Computer Science, University of Udine, 1995-2001.
- Assistant Professor of *Numerical Analysis* - Department of Computer Science, University of Verona, 2001-2005.
- Associate Professor of *Numerical Analysis* - Department of Computer Science, University of Verona, 2005-2009.
- Associate Professor of *Numerical Analysis* - Department of Mathematics, University of Padova, 2009-2022 (May 31).
- Habilitation to Full Professor of *Numerical Analysis* (SSD, MAT08), March 2017.
- Full Professor of *Numerical Analysis* - Department of Mathematics, University of Padova, 2022 (June 1)-.

2 Main research interests

Multivariate polynomial approximation, Radial Basis Functions and meshless approximation, **applications to medical imaging (CT, MRI, fMRI) reconstruction and analysis**, quasi Monte-Carlo compression, mapped bases (“fake nodes”) for Runge and Gibbs phenomena, mathematics and wine, unknown historical pearls.

3 Awards

- Oct.-Dec. 2006: The paper by L. Bos, M. Caliari, S. De Marchi, M. Vianello and Y. Xu, “Bivariate Lagrange interpolation at the Padua points: the generating curve approach” has been classified in the TOP 25 Hottest Articles of J. Approx. Theory.
- 2013: The paper by L. Bos, S. De Marchi, K. Hormann and J. Sidon, “Bounding the Lebesgue constant of Berrut’s rational interpolant at general nodes”, has been classified as the most cited of J. Approx. Theory, 2013.

- Oct 2019: 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 by the CAA Research group, of which I am one of the two coordinators.
- CAF3 Constructive Approximation of Functions 3, Cracow 22-24 February 2022, Conference in honour of my 60th birthday.

4 Coordination of Scientific Groups/Networks

- 2005–present: Coordinator of the “CAA Research Group” (Constructive Approximation and Applications), between the Universities of Verona and Padua. The group consists of 14 researchers. In 15 years the members have published about 200 papers, organized 5 international Workshops and 7 Research Weeks getting supports from: INdAM-GNCS, University of Verona, Department of Mathematics (UniPD), Department of Computer Science (UniVR), Department of Mathematics (UniTO)<https://www.math.unipd.it/~marcov/CAA.html>.
- 2018–21: Coordinator of the “Italian Network on Approximation” (RITA), The network group together more than 70 researchers from various Italian Universities, <https://sites.google.com/view/ritanetworkapp/>
- 2020–: Responsible of the Italian Mathematical Union (UMI) Thematic Group on “Approximation Theory and Applications (A.T.A.)”, The group consists presently of about 80 researchers (Numerical and Mathematical Analysts) from various Italian Universities, See <http://www.umi-taa.dmi.unipg.it/>

5 Recent funded and participations to projects

- PI of the National GNCS-INdAM 2017 project: Approssimazione Multivariata: teoria e applicazioni (7.8K euros).
- Scientific coordinator of DOR funds of the Departement of Mathematics 2017 (5.7K euros).
- Participant to the H2020 GEOEssential project “Essential Variables workflows for resource efficiency and environmental management”, PI prof. M. Putti, funded with 150K euros.
- Scientific coordinator of the ”Assegno di ricerca” BIRD 2018 Approximation by radial basis functions: partition of unity methods, applications to the solution of PDEs and medical imaging, University of Padova (23.6K euros).
- PI of the project “NATIRESCO: Nonstandard multivariate Approximation Techniques in medical Imaging,REmote geospatial Sensing and Computational Optics”, University of Padova for years 2019-20 (17.5K euros).
- Visiting Scientist support for 1 month position, INdAM-GNCS 2019 (1.5K euros)
- Scientific coordinator of two years ”Assegno di ricerca” 2019-2020 issued by the Padova Neuroscience Center. Title: A computational tool for neurodegenerative stratification using PET/MR (55.0K euros).
- Scientific coordinator of one year ”Assegno di ricerca” 2020-2021 within the project “Artificial Intelligence for the analysis of solar Flares data (AI-FLARES) - CUP F86C18000190005” Title: Computational methods for the analysis of solar flares data (29.1K Euros)
- PRIN2020: PI local research unit, “Near Optimal Fitting and Reconstruction of Multivariate Data with Applications” (LRI budget, 149K Euros).
- WCRI 2020 -7 Tesla project (University of Padova): supporting funds Department of Mathematics (25K Euros)
- Participant to the PRIN2022-25 project Computational mMethods for Medical Imaging (CEMI) , PI: Cristina Campi (University of Genova).

6 Recent services at the University of Padova

- Member of “Giunta di Dipartimento”, Dipartimento di Matematica (2013-17)
- Member of “Commissione Valutazione”, Dipartimento di Matematica (2017-)
- Member of “Gruppo di lavoro 800 anni Ateneo” (2020-)
- Dottorato “Medicina dello Sviluppo e Scienze della programmazione sanitaria” (2013-20)
- Dottorato “Scienze Matematiche” (2021-)
- Member of the “Commissione Risorse”, Dipartimento di Matematica (2022-)
- I am in board of the Padova Neuroscience Center (2022-)

7 Fellowships

- Post-doc at the University of Padova: February - December 1995.
- CNR program ”Short-term mobility”: Oct. 1998 and June 1999.
- DAAD (Deutscher Akademischer Austauschdienst): exchange program between researchers of European countries, 2001.
- Erskine Visiting programme: University of Canterbury (NZ), Jul.-Aug. 2018.

8 Recent Short Research Visits

- Gipsa-Lab, UMR 5216 CNRS, Grenoble, December 4-8, 2016.
- “Fachbereich Mathematik, Universität Giessen (Germany)”, June 11 - June 15, 2017.
- Department of Scientific Computing, University of Uppsala (Sweden), June 16 - June 18, 2017.
- Department of Mathematics, University of Uppsala (Sweden), September 20-27, 2018.
- Institute of Mathematics, Department of Approximation Theory, Jagiellonian University, Nov. 4-10, 2018.
- Erwin Schrödinger Institute, Vienna, Aug. 25-30, 2019
- Institute of Mathematics, Department of Approximation Theory, Jagiellonian University, Oct. 7-19, 2019.
- Reny Institute, Hungarian Academy of Science, Feb. 5-10, 2024.
- Institute of Mathematics, Department of Approximation Theory, Jagiellonian University, March 6-20, 2024

9 Didactics

From 1995 I have taught: Numerical Calculus (Mathematics, Computer Science, Statistics, Astronomy, Engineering), Mathematical Analysis (1 and 2, Computer Science and Statistics), Numerical Methods for Differential Equations (Mathematics), Approximation Theory and Applications (Mathematics and Mathematical Engineering), Intro to Complex Analysis, Computer graphics. I’ve also taught PhD courses for Mathematics and Medicine. Teaching experience abroad in Antwerp (B), Giessen and Hambrug (D), Warsaw and Cracow (PL), Christchurch (NZ) and Yaoundeé (Cameroon).

10 Supervisor experience

- 3 PhD students in Mathematics curriculum “Computational Mathematics”, 1 PhD student in “Medicina delle Scienze Sanitarie” (UniPD), 1 PhD Co-Supervised at University of Fribourg (CH), 1 PhD Co-Supervised Kharazmi University Teheran.
- 8 degree theses in Mathematics, 24 master theses in Mathematics (UniUD, UniVR and UniPD)

- 1 master thesis in Applied Mathematics (UniVR)
- 1 degree thesis in Computer Science (UniVR)
- 1 degree thesis in Mechanical Engineering (UniPD)
- co-supervisor of 3 master theses in Mathematics (UniVR, UniPD and UniCal).

11 Scientific publications: summary table

Papers in referred journal	105
Paper in proceedings/book chap.	24
Proceedings edited	9
Miscellanea	6
Relevant Tech. Reports	12
Monographs	2
Didactics books	2
Submitted papers	1

- 3 certified software packages (2 on NA, 1 on ACM-TOMS)
- 12 packages available at the web page or GitHub

11.1 5 most cited papers (Google Scholar)

1. L Bos, M Caliari, S De Marchi, M Vianello, Y Xu: Bivariate Lagrange interpolation at the Padua points: the generating curve approach, *Journal of Approximation Theory* 143 (1) (2006), 15-25 (158 cit)
2. L Bos, S De Marchi, A Sommariva, M Vianello: Computing multivariate Fekete and Leja points by numerical linear algebra, *SIAM Journal on Numerical Analysis* 48 (5) (2010), 1984-1999 (157 cit)
3. S De Marchi, R Schaback, H Wendland: Near-optimal data-independent point locations for radial basis function interpolation, *Advances in Computational Mathematics* 23 (3) (2005), 317-330 (152 cit)
4. M Caliari, S De Marchi, M Vianello: Bivariate polynomial interpolation on the square at new nodal sets, *Applied Mathematics and Computation* 165 (2) (2005), 261-274 (116 cit)
5. S De Marchi, R Schaback: Stability of kernel-based interpolation *Advances in Computational Mathematics* 32 (2) (2010), 155-161 (83 cit)

More details: <https://www.math.unipd.it/~demarchi/publications.html>

12 Talks/Seminars

- 73 at conferences/workshops (26 as plenary or invited speaker, 9 session invited speaker)
- 42 seminars/colloquia in various Italian, European and extra-European Universities and Institutions.

13 Conference organization, editorial experience, review service

- Member of the organizing and scientific committees of “Dolomites Workshop on Constructive Approximation and Applications” (DWCAA06-09-12-16-21), Alba di Canazei (Trento, Italy),
- Member of the organizing committees of the “Dolomites Research Week on Approximation” 2007, 2008, 2010, 2011, 2013, 2014, 2015, 2017 and 2018 at Alba di Canazei.
- Organizer of various Minisymposia in international conferences (among them EMS 2021, ICIAM 2023)

14 Editorial activity

- 2008-present: Managing editor of "Dolomites Research Notes on Approximation", Padua Univ. Press (Q2 for Appl. Mathematics)
- 2018– Editor, Science, Technology and Innovation, E-ISSN: 2544-9125, ICV: 66.96.
- 2019– Editor, Axioms, ISSN 2075-1680, MDPI Ed. (Q3 for Mathematics)
- 2020– Editor, Journal of Mathematics and Modeling in Finance (JMMF), CoF of Iran.
- 2020-22 Associate Editor, Journal of Approximation Theory (JAT), Elsevier (Q2 for Mathematics)
- 2021- Editor, Mathematics ISSN 2227-7390, MDPI Ed. (Q1 for Mathematics)
- Member of the Editorial Board of the Aracne pub. BIOMATHEMATICS AND NUMERICAL ANALYSIS BOOK SERIES
- 2021- Editor, General Mathematis, eISSN1584-3289
- 2021- Editor, BIT Numerical Mathematics
- 2022- Editor, Communications in Applied and Industrial Mathematics, eISSN2038-0909
- 2023- Editor, Frontiers in Applied Mathematics and Statistics,
- 2023- Associate Editor, Bulletin Iranian Math. Society
- 2023- Editor, Modern Mathematical Methods, <https://modernmathmeth.com/index.php/pub/about/editorialTeam>
- Referee for (list not completed): AMS-Math. Rev. (51 reviews), Siam J. Matrix Anal. Appl., Siam J. Numer. Anal., J. Approx. Theory, Adv. Comput. Math., Numer. Math., J. Complexity, Compu. Math. Appl., Simul. Model. Practise and Th., J. Comput. Appl. Math., Numer. Algorithms, Proceedings A Royal Mathematical Society, Mediterranean J. Math., International Math. J., Appl. Math. E-Notes, Methods and Applications of Analysis.
- Referee for projects: FCT Portugal, SIR proposals, FWO Belgium, FISIR Covid19
- Referee for Grants: RGC Hong Kong, DFG Germany.
- Reviewer of the book: "Kernel-based Approximation Methods using MATLAB", by G. Fasshauer and M. Mc Court, World Scientific Publishing.

15 Scientific membership

- 1990–1996 Graduate member (GIMA) and then Fellow member (FIMA), The Institute of Mathematics and Its Applications (UK).
- 2014–15, 2021–: SIMAI Italy, member.
- 1994–: INdAM-GNCS (Gruppo Nazionale di Calcolo Scientifico), member.
- 2019– : UMI (Unione Matematica Italiana), member.
- 2021–: SIAM, EMS member.

16 Bibliometrics

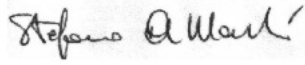
- Co-authors (from Scopus) = 83
- MathSciNet: 99 pub, 700 cit.
- Google Scholar: 2441 cit. (1168 from 2019), h-index=26
- Scopus: 105 pub, 1366 cit., h-index=22
- ResearchGate: 163 pub., 1923 cit., h-index=23

- Erdős Number=2

Personal: I am a sommelier (AIS), runner (20 marathons, 15 half, many long distance races), swimmer.

More details: <http://www.math.unipd.it/~demarchi/CV.html>

In faith,

A handwritten signature in black ink that reads "Stefano De Marchi". The signature is written in a cursive style and is positioned below the text "In faith,".