CURRICULUM VITAE OF

Laura De Carli

(Updated: May 2024)

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EDUCATION

Ph.D. in mathematics (UCLA) 1993	University of California-Los Angeles,
Dottorato di Ricerca, (Ph.D)	University of Roma "La Sapienza", 1993
Bachelor's degree cum laude)	University of Pisa, (Italy), 1988 (summa

FULL-TIME ACADEMIC EXPERIENCE

- **Florida International University (FIU).** Assistant Professor from 8/2002 to 8/2004; Associate Professor from 8/2004 to 8/2014; Full Professor from 2014 to present.
- **University of Missouri – Columbia.** Visiting Professor from 8/2000 to 5/2002 and from 9/1/2008 to 6/1/2009.
- **University of Napoli "Federico II" (Italy).** Tenured Assistant Professor from 8/1993 to 10/2004.

PART-TIME ACADEMIC EXPERIENCE

- **CRM (Barcelona, Spain).** Visiting Scholar from 2/1/2012 to 3/1/2012, from 5/1/2016 to 5/12/2016, from 6/16/2017 to 7/1/2017and from 6/16/2018 to 6/28/2018.
- **Univ. of Missouri –Columbia**. Visiting Scholar from 9/1/2004 to 11/1/2004; from 4/20/1999 to 5/25/1999 and from 8/1/2000 to 6/1/2002 and from 8/1/ 2018 to 6/1/2019
- **Univ. of Kyoto (Japan)** Visiting Scholar from 2/5/1999 to 2/25/1999; from 2/20/1998 to 3/6/1998 and from 6/30/1997 to 6/30/1997.

- **Wright State University (OH)** Visiting Scholar from 3/30/1998 to 4/28/1998.
- **McMaster Univ., Canada**. Visiting Scholar from 5/1/1995 to 9/30/1995.

ADMINISTRATIVE EXPERIENCE

- **Florida International University (FIU).** Chairperson of the Department of Mathematics and Statistics (College of Arts, Sciences and Education). 8/13/2018 to 9/16/2020.

LANGUAGES, SKILLS AND PROFESSIONAL DEVELOPMENT

- Fluent in English, Spanish and Italian (Mother language)
- Familiar with Canvas, Zoom and other remote teaching tools
- Awarded a Remote Badge certificate and a Full Hybrid Certification by FIU (2019-2020)
- Awarded a badge for Online Live development (2021)

Research:

PUBLICATIONS IN DISCIPLINE

Articles Accepted/ Published in refereed journals.

[40] A. Echezabal, L. De Carli, M. Laporta, *Approximating divisor functions.* The Journal of Analysis. https://doi.org/10.1007/s41478-024-00747-y (2024)

[39] L. De Carli, E. Liflyand, *Lp simulation for measures*. Eur. J. Math. 9, no. 3, Paper No. 83 (18 pp) (2023)

[38] P. Casazza, L. De Carli and T. Tran, *Piecewise scalable frames* Linear algebra and its applications 694 (2024), 262–282.

[37] P. Casazza, L. De Carli and T. Tran, *Remark on scalable frames.* Operators and Matrices Volume 17, Number 2 (2023), 327–342

[36] L. De Carli, P. Vellucci, *Applications of the Lax-Milgram theorem to problems in frame theory.* Sampling. Theory Signal Process. Data Anal. 21 (2023), no. 1, Paper No. 17, 18 pp.

[35] L. De Carli, J. Edward, *Riesz bases by replacement,* Sampling Theory, Signal Processing, and Data Analysis 20 (2022) no. 9, https://doi.org/10.1007/s43670-022-00025-7

[34] L. De Carli, D. Gorbachev and S. Tikhonov, *Weighted gradient inequalities and unique continuation problems.* Calculus of Variations and PDE's 59 (89) (2020)

[33]. De Carli, *Concerning exponential bases on multi-rectangles of Rd*, In: Abell, M., Iacob, E., Stokolos, A., Taylor, S., Tikhonov, S., Zhu, J. (eds) Topics in Classical and Modern Analysis. Applied and Numerical Harmonic Analysis. Chapter 3 Birkhäuser, (2019) https://doi.org/10.1007/978-3-030-12277-5_4

[32] L. De Carli, A. Mizrahi, A. Tepper, *Three problems on exponential bases.* Canad. Math. Bull. 62 (2019), no. 1, 55–70.

[31] L. De Carli, P. Vellucci *p-Riesz basis and quasi-shift invariant spaces* in: Contemporary Mathematics volume *"Proceedings of the AMS Special Sessions "Frames, Harmonic Analysis and Operator Theory"* edited by: Y. Kim, S. K. Narayan, G.Picioroaga, and E. Weber. Contemporary Mathematics 706 (2018).

[30] L. De Carli, P. Vellucci *Stability results for Gabor frames and the p-order hold models (short version) Linear* Algebra and Its Applications, 536C (2018) pp. 186—200, DOI 10.1016/j.laa.2017.09.020

[29] L. De Carli and Shaikh Goheen Samad, *One-parameter groups and discrete Hilbert transform*, Canad. Math. Bull. 59 (2016), 497-507

[28] L. De Carli, D. Gorbachev, and S. Tikhonov, *Pitt inequalities and restriction theorems for the Fourier transform* , Revista Mat. Iberoamericana 33, (3) 2017, pp. 789–808.

[27] L. De Carli and Z. Hu, *Parseval, frames with n+1 elements in Rn* in: Methods of Fourier analysis and approximation theory, (Applied and numerical harmonic analysis) Birkhauser (2016) pp 23—32,

[26] L. De Carli and S. Hudson, Split *functions, Fourier transforms and multipliers*. *Collect. Math.* 66 (2015), no. 2, 297–309.

[25] L. De Carli, S. Hudson and X. Li, *Minimal potential results for the Schrodinger equation in a slab*, Forum Mathematicum, 28 (2016), no. 4, pp 689—712.

[24] L. De Carli, A. Kumar , *Exponential bases on two dimensional trapezoids*, *Proc. Amer. Math. Soc.* 143 (2015), no. 7, 2893–2903.

[23] L. De Carli, D. Gorbachev, and S. Tikhonov, *Pitt and Boas inequalities for Fourier and Hankel Transforms* Journal of Mathematical Analysis and Applications. Volume 408, Issue 2, 15 (2013), 762–774

[22] L. De Carli, J. Edward, S. Hudson, M. Leckband, *Minimal support results for Schrodinger's equation*, *Forum Math.* 27 (2015), no. 1, 343–371.

[21] L. De Carli, *On Fourier multipliers over tube domains*, Recent Advances in Harmonic Analysis and Applications (In Honor of Konstantin Oskolkov), Springer Proceedings in Mathematics (2012), 79 –92.

[20] D. Bilyk, L. De Carli, A. Petukhov, A. Stokolos and B. D. Wick , *On The Scientific Work of Konstantin Ilyich Oskolkov* , Recent Advances in Harmonic Analysis and Applications (In Honor of Konstantin Oskolkov), Springer Proceedings in Mathematics (2012)

[19] L. De Carli, S. Hudson, *A Faber-Krahn inequality for solutions of Schrodinger's equation*, Advances in Mathematics 230 (2012), pp. 2416-2427

[18] L. De Carli, S. Hudson, *A generalization of Bernoulli's inequality*, Le Matematiche 65 (2010), n. 1

[17] L. De Carli, S. Hudson, *Geometric Remarks on the Level Curves of Harmonic Functions*, Bull. London Math. Soc. 42 (2010), n. 1, 83—95

[16] L. De Carli, M. Ash, *Growth of Lp Lebesgue constants for convex polyhedra and other regions*, Transaction of the American Math. Soc. 361 (2009), n. 8, 4215--4232.

[15] L. De Carli, *Local Lp inequalities for Gegenbauer polynomials*, in: *Topics in classical analysis and applications in honor of Daniel Waterman*, 73--87, *World Sci. Publ., Hackensack, NJ*, (2008).

[14] L. De Carli, *On the Lp-Lq norm of the Hankel transform and related operators*, J. Math. Anal. Appl. 348 (2008), n. 1, 366--382.

[13] L. De Carli, S. Hudson, *Unique continuation for nonnegative solutions of Schrödinger type inequalities.* J. Math. Anal. Appl. 318 (2006), no 2, 467--471.

[12] L. De Carli, *Uniform estimates of ultraspherical polynomials of large order* , Canadian Math. Bullettin. 48 (2005), no 3, 382—393.

[11] L. De Carli and L. Grafakos, *On the restriction conjecture*, Michigan Math. J. 52 (2004), no. 1, 163--180.

[10] L. De Carli and T. Okaji, *Strong Unique continuation for Schrodinger operator from a sphere*, Houston J. Math. 27 (2001), no. 1, 219--235.

[9] L. De Carli and E. Laeng, *On the (p,p) norm of monotonic Fourier multipliers*, C. R. Acad. Sci. Paris Sér. I Math. 330 (2000), no. 8, 657--662.

[8] L. De Carli and E. Laeng, *Truncations of weak- L^p functions and sharp Lp bounds for the segment multiplier*, Collect.Math. 51 (2000), no. 3, 309—326.

[7] L. De Carli, *Unique continuation for elliptic operators with non multiple characteristics*, Israel J. Math. 118 (2000), 15--27.

[6] L. De Carli and T. Okaji, *Strong Unique continuation for the Dirac operator*, Publ. Res. Inst. Math. Sci. 35 (1999), no. 6, 825—846.

[5] L. De Carli and A. Iosevich, *Some sharp restriction theorems for homogeneous manifolds*, J. Fourier Anal. Appl. 4 (1998), no. 1, 105--128.

[4] L. De Carli and M. Nacinovich, *Unique continuation in abstract pseudoconcave CR manifolds*, Ann. Scuola Norm. Sup. Pisa Cl. Sci. (4) 27 (1998), no. 1, 27--46.

[3] L. De Carli *Unique continuation for a class of higher order elliptic operators*, Pacific J. Math. 179 (1997), no. 1, 1--10.

[2] L. De Carli and A. Iosevich, *A restriction theorem for flat manifolds of codimension two*, Illinois J. Math. 39 (1995), no. 4, 576--585.

[1] L. De Carli, *Lp estimates for the Cauchy transform of distributions with respect to convex cones*, Rend. Sem. Mat. Univ. Padova 88 (1992), 35--53.

Work submitted for publication:

[41] A. Asipchuk, L De Carli and W. Li, *Concerning the stability of exponential systems and Fourier matrices* (2024) https://arxiv.org/pdf/2404.05469.pdf
[42] *Generalized Vieta formulas and complete homogeneous symmetric polynomials* (with A. Echezabal and M. Laporta) (2024)

Works in progress

[43] *A primality test and the Goldbach conjecture* (with A. Echezabal and M. Laporta) (2023--2024)

[44] *Egyptian fraction and the Sierpinski triangle*, (with A. Echezabal and I. Morel) (2024)

Other publications

- *Recent Advances in Harmonic Analysis and Applications* -In Honor of Konstantin Oskolkov. (Editor: with D. Bilyk, A. Petukhov, A. Stokolos and B.D. Wick) Springer Proceedings in Mathematics (2012).

- *Topics in Classical Analysis and Applications in Honor of Daniel Waterman*, (Editor. With K. Kazarian and M. Milman) World Scientific publishing Company (2008).
- *Interpolation theory and applications.* (Editor. with M. Milman) *Proceedings* of the conference in honor of Professor Michael Cwikel held in Miami, FL, March 29--31, 2006, and the Special Session of the American Mathematical Society Eastern Sectional Meeting held at Florida International University, Miami, FL, April 1--2, 2006. Contemporary Mathematics, 445. American Mathematical Society.

Talks at colloquia and conferences (since 2004)

- March 2024, AMS sectional meeting, Tallahassee, FL. Contributed talk. Title: Lp simulation for measures
- Sept. 2023, Savannah (GA). International Conference on Approximation and Potential Theory. Invited talk. Title: *"New frames from old. Weaving, scaling and more".*
- May 2023. Vanderbilt Univ, International Conference on Approximation Theory and Beyond. Contributed talk. Title: *Application of Lax Milgram theorem in frame theory*
- Sept 22, CUNY, colloquium talk. Title: "*Weaving of Riesz bases and piecewise scaling of frames*"
- Aug. 22, BIRS-CMO, workshop on Applied Functional Analysis, Casa Matematica Oaxaca (Mexico). Invited talk. Title: *Weaving of Riesz bases and piecewise scaling*
- June 22, 11th International Conference on Harmonic Analysis and Partial Differential Equations, El Escorial, (Madrid). Invited talk. Title: "*Piecewise scaling of frames and Riesz bases*"
- May 22: Focus program on data sciences, approximation theory and harmonic analysis, the Field Institute, Toronto (Canada). Invited talk. Title "*Piecewise scaling of frames and Riesz bases"*
- March 22: AMS Spring Central Sectional Meeting at Purdue University, West Lafayette, IN. Contributed talk. Title: *Piecewise scaling of finite frames"*

- Oct. 2021. AMS Fall Western virtual sectional meeting. Contributed talk. *Title" Sufficient conditions for exponential bases and Riesz bases on domains of Rd"*
- July 2020: *CUNY*, colloquium talk. *Title "Riesz bases by replacement"*
- June 2018*: CRM (Barcelona)* Colloquium talk. Title: *Pitts inequalities for the gradient and unique continuation*.
- Febr. 2018. Univ. Missouri-Columbia, Colloquium talk. Title: *Three problems on exponential bases.*
- Sept. 2017, AMS sectional meeting, Orlando (FL). Invited speaker in the Special Session on Applied Harmonic Analysis: Frames, Samplings and Applications. *Title: p- Riesz bases on quasi shift invariant spaces*
- Aug. 2017. Cimpa school, Buenos Aires. Keynote speaker. Title *Many questions and few answers on exponential bases".*
- July 2017: MCA, Montreal. Invited speaker in the session "Harmonic analysis and inverse problems". *Title "p- Riesz bases on quasi shift invariant spaces*
- June 2017: CRM (Barcelona) Follow-up workshop on Function spaces and high-dimensional approximation. Invited speaker. Title: *Exponential bases on multi-rectangles in Rd*
- Febr. 2017: Fourier talks, Univ. Maryland (Baltimore). Title: *Stability for the n-order hold models*
- Jan. 2017: Contributed talk at the joint mathematical meeting (JMM), Atlanta (GA). *Title: Stability for the n-order hold models*
- Vanderbilt University (Nashville), Sept. 2016. Colloquium talk. Title: *Exponential bases in Rd.*
- Centro de Recerca Matematica (Barcelona) May 2016. Invited speaker at the "workshop in Function spaces and high dimensional approximation", Title: *Exponential bases on rectangles in Rd*
- Vanderbilt University (Nashville), Nov. 2015. Colloquium talk. Title: *New bases from old*
- Florida Atlantic University (Boca Raton) Sept. 2015. Colloquium talk. Title: *New bases from old*
- Univ. Missouri (Columbia) May 2015. Colloquium talk. Title: *Semigroup of operators and discrete Hilbert transform***.**
- Oaxaca (Mexico) July 2015. Invited speaker at the conference CMO-BIRS 15w5088: Applied Functional Analysis. Title: *From exponential bases to the discrete Hilbert transform*

- Florida Atlantic University (Boca Raton) July 2015. Invited speaker and co-organizer of the conference in honor of Yoram Sagher. Title: *Pitt inequalities and restriction theorems*
- City College of New York, June 2015. Invited speaker at the International Conference on Harmonic Analysis and Applications. Title: *From exponential bases to the discrete Hilbert transform*
- University of South Florida (Tampa), Apr. 2014. Colloquium talk. Title: *From exponential bases to the discrete Hilbert transform*
- Univ. Alabama (Birmingham), January 2014. Colloquium talk. Title: *Pitt inequalities and restriction theorems.*
- Bar-Ilam University (Tel Aviv), June 2014. Colloquium talk. Title: *Stability theorem for exponential bases*
- Technion (Haifa), June 2014. Colloquium talk. Title: *Minimal support result for Shrodinger equations in a slab*
- Univ. Of Arizona (Tucson), March 2014, Colloquium talk. Title: *Stability theorems for exponential bases on domains of Rd*
- Nova Southeastern Univ (Ft. Lauderdale) Nov. 2013. Math Colloquium series. Title: *"Problems and applications in finite frame theory"*
- Krakow (Poland), Aug. 2013. Invited speaker at the conference "Isaac 2013" in the special session" Harmonic analysis and approximation". Title: *"Split functions, Fourier transform and multipliers".*
- Roosevelt Univ. (Chicago) Nov. 2012. Contributed talk at the conference "Special Functions, Partial Differential Equations and Harmonic Analysis, a conference in honor of Calixto P. Calderón. Title: *Exponential bases for two dimensional trapezoids*
- Centro de Recerca Matematica (Barcelona) Febr. 2012 Colloquium talk. Title: *Minimal support results for Schrodinger equations.*
- Univ. of Missouri (Columbia), May 2011. Colloquium talk. Title: *Minimal support results for Schrodinger equations.*
- Georgia Southern Univ., (Statesboro), March 2010. Colloquium talk. Title: *On the Lp behavior of the Fourier transform of the characteristic function of the union of two intervals*.
- Florida Atlantic Univ. (Boca Raton), Nov. 2009. Contributed talk at the AMS sectional meeting. Title: *A generalization of Bernoulli's inequality.*
- Univ. Kansas (Lawrence), Nov 2008. Prairie Analysis seminar. Title: *On the level set of harmonic functions.*
- Univ. of Missouri (Columbia), Nov. 2008. Analysis seminar (2 lectures). *On the level set of harmonic functions*

- Merida, (Mexico), Febr. 2008. Invited speaker at the Workshop in Harmonic Analysis and partial differential equations. *From hypercontractivity to best constant.*
- DePaul University (Chicago) Nov. 2007. Analysis seminar (3 lectures). Title: *From hypercontractivity to best constants*
- Davidson College (NC) March 2007. Contributed talk at the AMS sectional meeting. Title: *Growth of Lp Lebesgue constants for convex polyhedra and other regions.*
- Merida (Venezuela) Jan. 2006. Invited speaker at the CIMPA school, Title: *Best constant for the Hankel transform and hypercontractivity of Laguerre semigroup.*
- DePaul University (Chicago), Dec. 2005. Contributed talk in the international conference "Harmonic Analysis and Ergodic theory" in honor of M. Ash and R. Jones in Chicago. Title: *Best constant for the Hankel transform.*
- Arizona State University (Phoenix) Dec. 2004. Colloquium talk. Title: *Reverse Holder inequalities for ultraspherical polynomials and spherical harmonics*
- DePaul Univ. (Chicago) Nov. 2004. Colloquium talk. Title: *Problems in Unique continuation*.
- Univ. of Missouri (Columbia), Oct. 2004. Colloquium talk. Title: *Reverse Holder inequalities for ultraspherical polynomials and spherical harmonics*.
- Albuquerque, (NM), Oct. 2004. Contributed talk at the AMS sectional meeting. Title: *Unique continuation for elliptic operators: a non-Carleman approach.*
- El Escorial, (Spain), June. 2004. Contributed talk at the international conference “Harmonic Analysis and Partial Differential Equations”. Title: *Unique continuation for elliptic operators: a non-Carleman approach.*
- Houston, (TX), May 2004. Contributed talk at the joint meeting AMS- Sociedad Matematica Mexicana. Title: *Uniform estimates for ultraspherical polynomials.*

Ph.D. students

- **2021--present. Aleh Asipchuk:** Currently working on exponential bases on domains of Rn
- **2022—present. Luis Rodriguez.** Currently working on stability of frames and bases in Hilbert spaces

Master's research directed at FIU

- **2010--2012 Anudeep Kumar.** Title of the master's project: *"Stability of Hilbert space Frames and Applications"* (original research - contained, in part, in the paper [23]). Anudeep graduated in mathematics at FIU in 2020.
- **2011--2013. Zhongyuan Hu.** Title of the master's project: *"Parseval frames in R^n"* (original research - contained, in part, in the paper [26]). After her master's in mathematics, Zhongyuan earned a master's in economy at FIU. She is currently a graduate student in statistics at the Univ. Central Michigan.
- **2012—2014. Santosh Pathak.** Title of the master's project: *Stability of exponential bases on d-dimensional domains* (original research- still in progress). Santosh earned his Ph.D at the Univ. New Mexico in 2019.
- **2013--2015. Shuai Xu.** Title of the master's project: *Restriction theorems for the Fourier transform"* (original research- still in progress). Shuai graduated in Computer sciences at FIU in 2019.
- **2013—2015. Gohin Shaikh Samad.** Title of the master's project: *One-parameter groups and discrete Hilbert transform* (original research - contained, in part, in the paper [28]. Gohin graduated in mathematics at Univ. Iowa.
- **2015—2017. Jorge Rivero.** Title of the master's project*: An Explicit Greedy Approximation of Step Functions Using Waveform Dictionaries*. Jorge is a graduate student in economics at the Univ. Washington.
- **2016—2018. Alex Tepper.** Title of the master's project*: Problems on exponential bases on two-dimensional domain.* Our original research is contained in the paper [32]. Alex is a graduate student in mathematics at the Univ. Georgia.
- **2021--2022. Andrew Echezabal:** Title of the Master's project: *"Primality tests and the Goldbach conjecture"* which contains original research.

Undergraduate student research directed

- **Spring 2024:** I started mentoring **Ismael Morel,** a new FIU graduate who is pursuing some research in combinatorics and number theory. The research collaboration with Ismael and my former student Andrew Echezabal is producing original results (see item [44] in the publication list)
- **Summer 2023:** I directed a research group during the Summer REU at FIU and, together with my students Oleg Asipchuk and Luis Rodrigues, I mentored the undergraduate students, Jacob Glidewell. (Univ. Alabama) and Mikhail Samoshin (FIU).

  The students produced an original paper *"Additive stability of frames", (https://arxiv.org/pdf/2309.06331*) now submitted for publication.
- **Summer 2022:** I directed a research group during the Summer REU and, together with my student Oleg Asipchuk, I mentored three undergraduate students from FIU.

  The students produced an original paper: O. Asipchuk, V. Drezel, *Construction on exponential bases on split intervals,* Canadian Math Bulletin (2023)
- **2015—2017: Alberto Mizrahi** (a honor student at FIU). He worked with me and A. Tepper on exponential bases on domains of R^d. Our original research is contained in the paper [32]. Alberto graduate from Princeton with a master's in computer sciences.
- **2015—2016 David Harper.** I helped him complete the paper *PDEs and hypercomplex-analytic function theories Arxiv: https://arxiv.org/abs/1609.0341*. David graduated with a Ph.D. at Georgia Tec.

Funded research

- Summer 2006 and 2009. Awarded FIU Summer research grants, ($6000)
- 2012: Awarded a grant from the CRM (Centre de recerca Matematica) to take part in the "Special semester in harmonic analysis and approximation theory" at the Univ. Autonoma de Barcelona and spend a month at the CRM (approx. $7000)
- 2016: awarded an NSF Travel Award ($2,170) to participate in the Intensive Research Program (IRP) "Constructive Approximation and

Harmonic Analysis" at the Centre de Recerca Matemàtica (CRM) in Barcelona, Spain, from May 1 – July 30, 2016.

- 2017: Awarded an AMS travel grant ($1350) to participate in the Mathematical Congress of the Americas in Montreal
- 2017: Awarded an NSF Travel Award ($1000) to participate in the Intensive Research Program (IRP) "Constructive Approximation and Harmonic Analysis" at the Centre de Recerca Matemàtica (CRM) in Barcelona, Spain.

PROFESSIONAL ACTIVITIES AND PUBLIC SERVICE

(1) Service to professional Associations/Societies:

- Member of the Nominating Committee of the American Mathematical society (AMS), from January 2016 to January 2019
- Member of the Committee on Academic Freedom, Tenure, and Employment Security (CAFTES) of the AMS from January 2015 to January 2016
- Member of the Committee meetings and conferences (CoMCo) of the AMS from January 2012 to January 2015
- Chair of the CoMCo focus breakfast group at the Joint Mathematical Meeting in San Diego (January 2013)

(2) Organizer of conferences

- Co-organizer of the conference "Frame theory day" St Luis University, October 20-21 2023 and October 18--20 2024
- Co-organizer of the conference "Analysis in Missouri, a Midwestern symposium", Columbia (MO) 9/5/2019—9/8/2019.
- Organizer of a special session in bases and frames in Hilbert spaces at the AMS sectional meetings at Georgetown Univ., March 2015.
- Co-organizer of special sessions in Harmonic Analysis at AMS sectional meetings, (Florida State Univ. March 2004; FIU, April 2006; DePaul University, October 2007; Georgia Southern Univ., March 2010. Albuquerque, April 2014;
- Member of the organizing committee of the AMS sectional meeting at FIU in 2006.

- Co-organizer of 8 editions of the South Florida Analysis seminar (from 2004 to 2010)
- Co-organizer of a conference in honor of D. Waterman (a satellite of the 6th South Florida Analysis seminar, Ft. Lauderdale, May 2007)
- Co-organizer of a conference in honor of M. Cwikel (a satellite of the AMS meeting at FIU, Miami, March 2006)
- Organizer of the Italian Harmonic Analysis meeting (convegnetto in analisi armonica) Sorrento, (NA), (Italy), June 2002.

(3) Editor of Proceedings

Co-editor of the volumes:

- *On The Scientic Work of Konstantin Ilyich Oskolkov*, Recent Advances in Harmonic Analysis and Applications (in honor of Konstantin Oskolkov), Springer Proceedings in Mathematics (2012).

- *Topics in Classical Analysis and Applications* in Honor of Daniel Waterman, World Scientific publishing Company (2008).

- *Interpolation theory and applications.* Proceedings of the conference in honor of Professor Michael Cwikel held in Miami, FL, March 29--31, 2006, and the Special Session of the American Mathematical Society Eastern Sectional Meeting held at Florida International University, Miami, FL, April 1--2, 2006. Contemporary Mathematics, 445. American Mathematical Society, Providence, RI, (2007).

(4) Referee

I have refereed 80+ papers for the Journal of Mathematical Analysis and Application (on-going collaboration) and occasionally for: Proceedings of the American Mathematical Society, American Mathematical Monthly, Journal of functional Analysis, Collectanea Mathematica, Canadian Math Journal

(5) Other professional service

(a) Reviewer of the promotion file of Dr. B. Johnson (St. Louis Univ.)

(b) Reviewer of the tenure and promotion file of Dr. A. Stokolos (Georgia Southern Univ.)
(c) Member of the thesis committees of N. de la Rosa (Ph.D. in education at FIU), R. Whittaker and R. Alvarez (Ph.D. in economics at FIU) and S. Pathak (Ph.D. in Mathematics at the Univ. New Mexico)
(d) Reviewer of the Ph.D. thesis of P. Vellucci (Univ. Roma "La Sapienza" Italy).

University Service at FIU

(1) Service to the Department.

- Linear algebra coordinator since the Spring 2023
- Calc 3 coordinator since the Fall 2021
- History of Mathematics and Functional Analysis coordinator since the 2015
- In the curriculum and scheduling committee since the Fall 2021
- Organized the Department Colloquia from 2012 to 2018. Organized a graduate students' seminar from 2018 to 2019.
- Served in the graduate committee and as graduate adviser from 2010 to 2018
- Served in the hiring committee in the 2003--2004 (we successfully hired 3 new tenure-track faculty that year), and also in the undergraduate committee, and in the curriculum and scheduling committee.
- Member of ad-hoc committees (Ph.D. program, Academic learning compact and merit and DAS for NTT faculty).
- In charge of the SLO (Students learning outcome) and PO (professional outcome) reports for the Math. graduate program from 2010 to 2018.

(2) Service to the School/College.

- I co-authored the Academic Learning Compact for the Department of Mathematics in 2005.

- I have served in the College Steering Committee (2014-2015)

- I am a member of the college committee for diversity faculty hiring.

- I was a member of the College Carbon Footprint Reduction Committee from 2020 to 2022.

(3) Service to the University.

- I served in the University Graduate Council in 2013 and 2014.
- I am part of the CASE election committee since 2023.

TEACHING

Undergraduate classes taught at FIU

- MAC 2311 (Calculus 1) *also in active-learning modeling-based format*
- MAC 2312 (Calculus 2)
- MAC 2313 (Multivariable Calculus)
- MAP 2302 (Differential equations)
- MAP 4412 (Introduction to Fourier Analysis)
- MAD 3305 (Graph theory)
- MHF 3404 (History of Math) also *in online live format*
- MAS 3105 (Linear algebra) also *in online live format*
- MAA 4211 (Advanced Calculus) *also in active learning format*
- MAT 4934 (Senior seminar)
- IDS 4920- Liberal studies colloquium (Topics In the history of modern sciences)
- MHF 4401 (Topics in the history of modern mathematics)
- MAA 4504 (Functional analysis)
- MAA 4990 (Introduction to frame theory -experimental)

Graduate classes taught at FIU

- MAP 5415 (Fourier Analysis. In person and on-line)
- MAA 5616 (Introduction to real analysis)
- MAP 5407 (Methods of applied analysis)
- MAP 5236 (Operational research)

- MAP 5326 (Partial differential equations)
- MAA 5991 (Frame theory - experimental)
- MAP 6326 (Partial differential equations)

Course developed and curriculum development activities

- Graduate Fourier Analysis (MAP 5415)
- Fourier analysis (MAP 4412)
- Functional Analysis (MAA 4504)
- Topics in the history of modern mathematics (MHF 4401)
- Topics in the history of modern sciences (IDS 4920 - a liberal arts colloquium)
- Frame theory (MAA 5991 - experimental)
- Introduction to Frame theory (MAA 4990 - experimental)
- Re-designed the syllabus of MHF 3404 (History of mathematics) and MHF 4401 (Topics in the history of modern mathematics) to meet the standards of the Global Learning for Global Citizenship's Quality Enhancement Plan.
- 2020: I earned the Remote Teaching Badge certification
- 2020: I attended the full hybrid certification training and earned the hybrid teaching certification.
- 2021:I attended the Online Live training and earned the Online Live teaching certification.
- 2021:I attended the CASE Quality Matter (QM) workshop for online classes

I designed the following classes in Online Live format

- 2021: History of mathematics (MHF 3404)
  Note: This is a QM (quality matters)certified class since 2023.
- 2022: Linear algebra (MAS 3105)
  Note: This class is in the final stage of the QM approval process.
- 2022: Methods of applied Analysis/Functional Analysis (MA5407+4504)
  2024: Introduction to Fourier analysis (MAP 5415+4212)
- In 2021 I also redesigned the online MAC 2233 (business calculus) by introducing new assignment and “show your work” options to further engage students and improve their learning outcome.
  Note: This is a QM certified class since 2023.