LOREDANA LANZANI

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http://thecollege.syr.edu/people/faculty/pages/math/lanzani-loredana.html

RESEARCH INTERESTS

Harmonic Analysis; PDEs; One and Several Complex Variables.

EDUCATION

B.S. Mathematics (Laurea)	U. of Rome II (Italy)	1989
Ph.D. Mathematics	Purdue University	1997

PROFESSIONAL EXPERIENCE

Professor	Syracuse University	2014 – present
Program Director (Analysis)	NSF-DMS	2011 – 2013
Professor	University of Arkansas	2008 – 2014
Associate Professor	University of Arkansas	2003 – 2008
Assistant Professor	University of Arkansas	1997 – 2003
Teaching Assistant	Purdue University	1990 – 1997
Research Fellow	I.N.d'A.M. (Italy)	1989 – 1990
Visiting Positions	Isaac Newton Institute, Research Member	2019
	MSRI, Research Member	2017
	BIRS-Banff, Research in Teams	2016
	Princeton University	2013; 2011; 2004; 2001; 1999
	U. of Michigan	2005; 2003
	U. of New South Wales	2004; 2003
	CRM (Barcelona, Spain)	2009; 2003
	CRM (Pisa, Italy)	2010; 2004
	University of Kentucky	2000
	Courant Institute	1997

AWARDS

PI, *Collaboration Grant for Mathematicians* Simons Foundation Award (ID: 582053)	2018-2023
PI, *Geometric aspects of harmonic analysis* NSF Conference Award (DMS-1803146)	2018

co-PI, *Midwest SCV Conference at Syracuse U.* NSF Conference Award (DMS-1763456)	2018
co-PI, *Northeast Analysis Network* NSF Conference Award (DMS-1602736)	2017
co-PI, *Northeast Analysis Network* NSF Conference Award (DMS-1602652)	2016
PI, NSF Individual Research Award(DMS-1503612 & 1yr NCO)	2015-2019
PI, NSF Individual Research Award(DMS-1001304 & 2-yr NCO while I was at NSF as PO)	2010-2015
PI, NSF Individual Research Award(DMS-0700815)	2007-2010
PI, NSF Individual Research Award (DMS-0101212, 5-yr award)	2001-2006
co-PI, *Arkansas Spring Lecture Series* NSF Conference Award (DMS-0751330)	2009
co-PI, *Arkansas Spring Lecture Series* NSF Conference Award (DMS-0751330)	2008
co-PI, *Arkansas Spring Lecture Series* NSF Conference Award (DMS-0100599)	2002
co-PI, *Arkansas Spring Lecture Series* NSF Conference Award (DMS-0100599)	2001
co-PI, *Arkansas Spring Lecture Series* NSF Conference Award (DMS-0070592)	2000
co-PI, *Arkansas Spring Lecture Series* NSF Conference Award (DMS-9971763)	1999
SILO/SURF Undergraduate Research Award University of Arkansas	2011; 2003
(Students: Jill Crisler; Erin R. Mason ; Laura J. Fields)	2001
Fulbright College Research Semester University of Arkansas	2004
Fulbright College Research Summer University of Arkansas	2005; 2001
AWM Travel Mentoring Award	2001-2003
Arkansas Science And Technology Authority Research Award	1998
Student Travel Award AWM	1996
Research Foundation Graduate Research Award Purdue University	1994
I.N.d'A.M. Graduate Research Fellowship University of Rome I (Italy)	1989-1993

HONORS

WiSE-ADVANCE Faculty Leader Syracuse University	2015-2019
AWM Research Symposium showcase lecture – section in Harmonic Analysis	2013
AWM Colloquium invited speaker UC San Diego	2012
Mathematical Sciences Outstanding Alumnus Purdue University	2011
NSF-VIGRE Graduate Colloquium Louisiana State	2011
NSF-VIGRE Undergraduate Colloquium Louisiana State	2011
2010 Praire Seminar (U. Kansas) Senior Speaker	2010
Virginia L. Chatelain Memorial Lecture (Kansas State)	2009
U. Arkansas Teaching Academy Award (Student: Jessica L. Tush)	2009
Robert C. & Sandra Connor Endowed Faculty Fellowship U. of Arkansas	2008
Keedy Award for Excellence in Teaching Purdue University	1996

Ph.D. STUDENTS

Stephen Farnham (*co-advised with L. Shen (Applied Math)*)	(in progress, Syracuse U.)
Belen Espinosa	(Ph.D. 2013 U. Arkansas)
Jeanine Myers (*co-advised by A. Raich*)	(Ph.D. 2013 U. Arkansas)
Jennifer Paulk	(Ph.D. 2010 U. Arkansas)

UNDERGRADUATE STUDENTS (Honors theses)

Jill Crisler	(BS 2011 U. Arkansas)
Samantha Meadors	(BS 2010 U. Arkansas)
Jessica Tush	(BS 2009 U. Arkansas)
Erin Mason	(BS 2003 U. Arkansas)
Rebecca Caldwell	(BS 2002 U. Arkansas)
Laura J. Fields	(BS 2001 U. Arkansas)
Zane Chrisman	(BS 1998 U. Arkansas)

RESEARCH

Articles

23. Lanzani L. and Stein E. M., *The Cauchy-Leray integral: counter-examples to the L^p-theory*, to appear in Indiana U. Math. J. (ArXiv: 1701.03812).

22. Lanzani L. and Stein E. M., *The role of an integration identity in the analysis of the Cauchy-Leray transform*, Science China Mathematics, **60** (2017) 1923 - 1936.

21. Lanzani L. and Stein E. M., *The Cauchy-Szegő projection for domains with minimal smoothness*, Duke Math. J. **166** no. 1 (2017), 125-176.

20. Lanzani L. and Stein E. M., *Hardy Spaces of Holomorphic functions for domains in $\mathbb{C}^n$ with minimal smoothness* in Harmonic Analysis, Partial Differential Equations, Complex Analysis, and Operator Theory: Celebrating Cora Sadosky's life, AWM-Springer vol. 1 (2016), 179 - 200. ISBN-10: 3319309595.

18. Lanzani L., Myers J. and Raich S. A., *Taylor Series of Conformal Mappings onto Symmetric Quadrilaterals*, Cplx. Vbls & Ellipt. Eqns., **60** no. 8, (2015) 1133-1141.

19. Lanzani L., *Harmonic Analysis Techniques in Several Complex Variables*, Bruno Pini Math. Analysis Seminar, Series 1, (invited submission), (2014), 83-110. ISSN 2240-2829.

17. Lanzani L. and Stein E. M., *The Cauchy Integral in $\mathbb{C}^n$ for domains with minimal smoothness*, Advances Math. **264** (2014) 776 – 830.

16. Lanzani L. and Stein E. M., *Cauchy-type integrals in several complex variables*, Bull. Math. Sci. **3 (2)** (2013), 241-285. DOI: 10.1007/s13373-013-0038-y.

15. Lanzani L. *Higher Order analogues of the exterior derivative complex*, Bull. IMAS (New Series) **8 (3)** (2013) 389 – 398.

14. Lanzani L. and Raich A. S. *On Div-Curl for higher order*, Advances in Analysis: the Legacy of E. M. Stein, (invited submission) Princeton U. Press (2013), ISBN: 9780691159416.

13. Lanzani L. and Stein E. M. *The Bergman projection in L^p for domains with minimal smoothness*, Illinois J. of Math. (invited submission) **56 (1)** (2013) 127 – 154.

12. Barrett, D. E. and Lanzani L., *The Leray transform on weighted boundary spaces for convex Reinhardt domains*, J. Funct. Analysis **257 (9)** (2009), 2780-2819.

11. Koenig, K. and Lanzani, L. *Bergman vs. Szegő via Conformal Mapping*, Indiana Univ. Math. J. **58**, no. 2 (2009), 969-997.

10. Lanzani, L. *Cauchy Integrals for non-smooth domains: $\mathbb{C}^n$ vs. $\mathbb{C}$ – the effect of dimension*, Oberwolfach Reports **32** (2008), 55-60.

9. Brown, R., Capogna, L. and Lanzani, L. *On the Mixed Boundary Value Problem for Laplace's Operator on Lipschitz Planar Domains*, Math. Annalen, **342** (2008), 91-124.

8. Lanzani, L. and Mendez, O. *The Poisson Problem for the Laplacian with Robin Boundary Condition in Non-Smooth Domains.* Revista Mat. Iberoamer. **22** (2006) 181-204.

7. Lanzani, L. and Stein, E. M. *A note on Div-Curl inequalities*, Mathematics Research Letters **12** (2005), 57-61.

6. Lanzani, L. Shen, Z., *On the Robin Problem for the Laplace Equation in C^1 and Lipschitz Domains in $\mathbb{R}^n$,* Comm. Part. Diff. Eq. **29** (2004), 91-109.

5. Lanzani, L. and Stein, E. M., *Szegő and Bergman Projections on Non-Smooth Planar Domains.* J. Geom. Anal. **14** (2004), 63-86.

4. Bernstein, S. and Lanzani, L., *Szegő Projections for Hardy Spaces of Monogenic Functions and Applications.* Int. J. of Math. and Math. Sc., **29** (2002), 613-627.

3. Lanzani, L. *The $C\ell_n$-Valued Robin Bundary Value Problem on Lipschitz Domains in $\mathbb{R}^n$,* Clifford Analysis and its Appl. NATO ARW Series (2001), Kluwer, 183-192.

2. Lanzani, L. *Cauchy Transform and Hardy Spaces for Rough Planar Domains* Contemp. Math., **251** (2000), 409-428.

1. Lanzani, L., *Szegő Projection Versus Potential Theory For Non-Smooth Planar Domains* Indiana Univ. Math. J. **48** (1999), 537-556.

Books

Capogna, L., Kenig, C., Lanzani, L., *Recent Progress in Harmonic Measure: the Geometric and the Analytic Points of View*, AMS University Lecture Series (book), **35** (2005), ISBN: 0821827286.

co-Editor, *Harmonic Analysis and Boundary Value Problems: Selected Papers from the 25th University of Arkansas Spring Lecture Series*, Contemp. Math. **277** (2001).

Invited plenary talks (Colloquia; conferences; disciplinary seminars)

2019:	Academia Sinica (Taipei, Taiwan); JMM (Baltimore); AMS # 1147 (Honolulu); Washington U.
2018:	UFSCar (Sao Carlo, Brazil); McGill U. (Canada); Notre Dame U.; Creighton U.; Rutgers U.; AMS # 1136 (OH State); AMS # 1139 (Northeastern U.); CIRM (Italy); Brown U.; Joint meeting AMS & Chinese Math. Soc.; AMS # 1143 (U. Michigan).
2017:	MSRI; UCSD (SCAPDE); UIUC; Mt. Pleasant; MCA (Montreal, Canada); U. Goteborg (Sweden); U. Wroclaw (Poland); AMS # 1132 (SUNY Buffalo).
2016:	JMM (Seattle); TSIMF (Sanya, China); Duke U.; GA Tech.; SUNY-Albany; Midwest SCV (U. Toledo); BIRS-Banff (Research in Teams); AMS # 1121 (Bowdoin C.).
2015:	East China Normal U.; BIRS-CMO (Mexico); Cornell U.; ESI (Austria).
2014:	Virgina Commonwealth U.; Syracuse U; CUNY-Lehman College; Indiana U.; George Mason U.; Academia Sinica (Taiwan); U. Bologna (Italy).
2013:	Rutgers U.; Workshop in SCV and PDE, Serra Negra (Brazil); U. British Columbia;

	George Washington U.; UC Santa Clara; UC Irvine; AMS #1093; UPenn; JMM (San Diego); U. Kentucky; UMass - Boston; Princeton U.; Northeastern U.
2012:	Academia Sinica (Taiwan); U. Addis Ababa (Ethiopia); U. Minnesota; UC-Irvine; UC-San Diego; AMS meeting #1081; Georgetown U; George Washington U.
2011:	Columbia U.; Washington U.; Workshop in PDE and SCV (Brazil); Purdue U.; Louisiana State U.
2010:	CRM Pisa (Italy); Brown U.; Marrakech (Morocco); U. Kansas; Harmonic Analysis conference, Gargnano (Italy).
2009:	AMS meeting #1047; U. Virginia; Trento (Italy); CRM Barcelona (Spain); Rouen (France); Kansas State U.; ESI (Austria); CMS (Canada).
2008:	U. Kentucky; Ohio State U.; Oberwolfach (Germany).
2007:	Calderon-Zygmund Seminar (Chicago); AMS meeting #1025; Georgia Tech; SCV Fest (Ann Arbor); Washington U.; Workshop in PDEs and SCV (Brazil); Banach Center (Poland); U. Rome II (Italy); AMS meeting # 1031.
2006:	Midwest PDE Seminar (UIC); AMS meeting # 1015; U. of Notre Dame; Banff International Research Station (Canada);
2005:	AMS meeting #1004; ESI (Austria); Oberwolfach (Germany); U. Western Ontario;
2004:	Centro De Giorgi (Pisa, Italy); U. of Toronto; AMS meeting #1000;
2003:	U. of Barcelona (Spain); U. of New South Wales; U. of Michigan.
2002:	U. of Kentucky; U. of Wisconsin; AMS Meeting #982.
2001:	Oklahoma State; U. of Michigan; CMFT, Aveiro (Portugal); Workshop on PDE, S. Paulo (Brasil); AMS meetings: #964; #967; #972.
2000:	NATO Advanced Research Workshop, Prague; AMS meeting #953; Weimar Bauhaus Universitat (Germany).
1999:	ANU (Canberra); Rutgers; Temple; AMS meetings: #939; #945; #946.
1998:	U. of Kansas; AMS meeting #933.

Graduate mini-courses

Academia Sinica (Taiwan)	2012
Singular Integral Techinques in Several Complex Variables	
International Workshop in SCV and PDEs, Serra Negra (Brazil)	2011
The L^p-regularity problem for the Bergman Projection	

SYNERGISTIC ACTIVITIES

Service for the American Mathematical Society

Centennial Fellowship	Member, Selection Committee	2009 – 2011
Southeastern Sectional Meetings	Member, Invited Address Selection Committee	2006 – 2008

Service for the National Science Foundation

Division of Mathematical Sciences	Program Director (Analysis)	2011 – 2013
Office of International Science and Engineering	Member, Committee of Visitors	2011
Division of Mathematical Sciences	Panelist, Disciplinary Panels	2002 – 2017

Division of Education and Human Resources   Panelist, Disciplinary Panels   2004 – 2011

Service for the Association for Women in Mathematics

JMM Committee	Member	2019 – 2021
AWM Research Network in Several Complex Variables	Founder & Leader	2018 –
Dissertation Prize Committee	Member	2017 – 2019

Editorial Boards

Associate Editor: *Complex Analysis and its Synergies*, a Springer journal.

Outreach: Advising and panels

Panelist, *Career arcs in Mathematics*, Park City Mathematics Institute	2018
Faculty Advisor, *AWM Chapter*, Syracuse U.	2018
Panelist, *Women in Mathematics: challenges & opportunities* MSRI (Berkeley)	2017
Keynote Speaker, *Re:Boot* Workshop, Duke U.	2016
Post-Doc Committee *Women in Science & Engineering* (WiSE) Syracuse University Chapter	2015 –
Co-Advisor with C. Miller *Syracuse Women in Mathematics* (SWiM)	2014 – 2017
Faculty advisor of student registered organization *Arkansas Women in Statistics and Mathematics* (AWSM, pronounced "awesome")	2002 – 2014
Speaker, *Career Options for Women in the Mathematical Sciences* IMA Special Workshop	2013
Panelist, *Career Options for Women in the Mathematical Sciences* IMA Workshop for Women in Analysis and PDE	2012
Panelist, *On Mentoring, Collaborating and Writing* Conference Honoring Eli Stein, Princeton University	2011

Outreach: public lectures; events hosted by student registered organizations

U. New Mexico	(Public Lecture for *UNM-PNM Statewide Math Contest*)	2018
U. Notre Dame	(*AWM chapter event*)	2018
Rutgers University	(*AWM chapter event*)	2018
U. Notre Dame (Public Lecture for *Conference on Complex Geometry & SCV*)		2018
UIUC	(*Graduate Colloquium*)	2017
Central Michigan U.	(*Graduate Colloquium*)	2017
Georgia Institute of Technology	(*Undergraduate Colloquium*)	2016
Duke U.	(*Graduate Colloquium*)	2016
Colgate U.	(*Undergraduate Colloquium*)	2015
CUNY-Lehman College	(*HRM Workshop Series*)	2013
UC-San Diego	(*AWM Colloquium*)	2012

LA State U.	(*VIGRE Undergraduate Colloquium*)	2011
LA State U.	(*VIGRE Graduate Colloquium*)	2011
Purdue University	(*AWM chapter event*)	2011

Outreach: other

Practice Workshop: *Writing a compelling Broader Impacts section of your research proposal*, Northeast Analysis Network Conference SUNY-Albany	2018
Practice Workshop: *Writing a compelling Summary of your research proposal*, Northeast Analysis Network Conference Syracuse U.	2017
Presentation: *Funding opportunities in the Mathematical Sciences* Northeast Analysis Network Conference U. Rochester	2016
Introduced and organized the *Lunch for Women in Mathematics* as one of two showcase outreach activities at the Arkansas Spring Lecture Series in the Mathematical Sciences	2002 – 2014
Introduced the *Evening Public Lecture* as one of two showcase outreach activities at the Arkansas Spring Lecture Series in the Mathematical Siences	2000 – 2014
Why I became a mathematician: essay in *I, Mathematician* (book) S. Krantz Ed., Mathematical Association of America.	2015

Conference Organization

Co-organizer, *Special Session on Several Complex Variables*, AWM Workshop at JMM (2020)

Co-leader (with Mei-Chi Shaw, U. Notre Dame), thematic research group in Complex Analysis *Women in Analysis RCCW* Banff International Research Station (2019)

Lead Organizer, *Workshop on problems on Holomorphic Function Spaces & Complex Dynamics*, American Institute of Mathematics (2019)

Co-founder and co-organizer of the *Northeast Analysis Network* conference series for the years: 2016 (U. Rochester, *Excelsior Lecturer*: Jill Pipher); 2017 (Syracuse U, *Excelsior Lecturer*: Svitlana Mayboroda); 2018 (SUNY-Albany, *Excelsior Lecturer*: Alice Chang)

Co-Organizer, *International Conference on Geometric Aspects of Harmonic Analysis*, Cortona, Italy (2018)

Co-Organizer, *Midwest SCV Conference*, Syracuse University (2018)

Co-organizer, *Session on Several Complex Variables*, AWM Research Symposyum (UCLA) 2017

Co-organizer, *Arkansas Spring Lecure Series* for the years: 2013 (principal speaker: C. Fefferman); 2009 (principal speaker: M. Lacey); 2008 (principal speaker: A. Chang); 2002 (principal speakers: M. Christ and A. Kiselev); 2001 (principal speakers: L. Caffarelli and R. de la Llave); 2000 (principal speaker: C. Kenig); 1999 (principal speakers: M. Lyubich and J. Milnor)

Lead Organizer, *Workshop in Real Analysis, Complex Analysis and Boundary Value problems*, Banff International Research Station (2010).

Co-organizer, Special Special Session on *Harmonic Analysis and Partial Differential Equations in Real and Complex Domains*, AMS meeting #1037 (2008)

Co-organizer, Co-organizer, Special Session on *Boundary Operators in Real and Complex Domains*, AMS meeting #1022 (2006)

Service for Syracuse University (highlights)

College of Arts & Sciences	Cluster hiring search Committee	2018-2019
College of Arts & Sciences	SU-WiSE First Year Forum for Women in STEM (Pilot)	2018
College of Arts & Sciences	Member, SU-WiSE Faculty team on Innovation	2017–
College of Arts & Sciences	Member, Steering Committee CAS Strategic Plan Committee	2016-2017
College of Arts & Sciences	Working Group on Inclusivity CAS Strategic Plan Committee	2016-2017
College of Arts & Sciences and College of Engineering and CS		
	Member, SU-WiSE-ADVANCE Post-doctoral Committee	2015 –
Mathematics Department	Member, Graduate Recruiting Committee	2019-2021
Mathematics Department	Member, Executive Committee	2016
Mathematics Department	Member, Calculus Coordination Committee	2015 –
Mathematics Department	Chair, Faculty Search Committee (Appl. Math.)	2014
Mathematics Department	Chair, Hiring Comittee (Appl. Math.)	2014

Reviewer:

I routinely serve as reviewer for several professional journals, including *Communications in Partial Differential Equations*, *CRELLE*, *Duke Mathematical Journal*, *Journal of Functional Analysis*, etc.