CURRICULUM VITAE

ANDREEA C. NICOARA

Department of Mathematics   (215) 898-2417 (O)
University of Pennsylvania   (215) 573-4063 (fax)
Philadelphia, PA 19104   anicoara@math.upenn.edu

Born in Bucharest, Romania; US citizen.

Education:
Ph.D.   Princeton University, June 2002
        Advisor: Joseph J. Kohn

M.A.   Princeton University, November 1999

B.S.   Stanford University, June 1997 with distinction and honors in Mathematics
        (minor with honors in Religious Studies)
        Undergraduate Thesis Advisor: Yakov Eliashberg

Research Interests:
Several complex variables
Algebraic geometry
Model theory

Positions:
Tenure-track Assistant Professor, University of Pennsylvania July 2008 to present
Visitor, Centro de Giorgi, Scuola Normale Superiore, Pisa June-July 2010
Fellow, Mathematics Department, Harvard University spring 2008
Benjamin Peirce Assistant Professor of Mathematics, Harvard University 2002-fall 2007
National Science Foundation Postdoctoral Fellow 2003-2006

Academic Honors:
Mathematics Department Good Teaching Award for Math 104 (Calculus I) Active Learning, University of
        Pennsylvania, Fall 2014
Mathematics Department Good Teaching Award for Math 180 (Mathematical applications to law, medicine,
        and economics) and Math 203 (Freshman seminar in abstract algebra and logic), University of
        Pennsylvania, Spring 2013
Mathematics Department Good Teaching Award for Math 410 (Undergraduate complex analysis),
        University of Pennsylvania, Fall 2013
SAS Dean's Award for Distinguished Teaching by an Assistant Professor, University of Pennsylvania,
        April 2011
Mathematics Department Good Teaching Award for Math 180 (Mathematical applications to law, medicine,
        and economics), University of Pennsylvania, Fall 2010
Fellowship, Centro de Giorgi, Scuola Normale Superiore, Pisa June-July 2010
Nominated for the Levenson Memorial Teaching Award, Harvard University, May 2008
Luce Fellowship at Princeton University, 1997-1999

Firestone Medal for Excellence in Research for honors thesis in Mathematics, 1997
Robert M. Golden Medal for Excellence in the Humanities for honors thesis in Religious Studies, 1997
Waldemar J. Trjitzinsky Memorial Fund Award (administered by the AMS), 1996
Elected to Phi Beta Kappa as a junior, 1996
President's Award for Academic Excellence in the Freshman Year, Stanford University, 1994
The Boothe Prize for Excellence in Writing, Stanford University, 1994

Publications:
(1) Reduction of the Kohn Conjecture to a Nullstellensatz (new version in preparation)
(2) An Approximate Diederich-Fornæss Theorem (with Dmitri Zaitsev; in preparation)
(3) A Global Nullstellensatz for Ideals of Denjoy-Carleman Functions (with Francesca Acquistapace and Fabrizio Broglia; arXiv:1412.4461v1 [math.AG] 15 Dec 2014; 5 pages; submitted)
(4) Direct Proof of Termination of the Kohn Algorithm in the Real-Analytic Case (arXiv:1409.0963v1 [math.CV] 3 Sep 2014; 33 pages; submitted)
(5) The Kohn Algorithm on Denjoy-Carleman Classes (arXiv:0806.1917v5 [math.CV] 12 Aug 2014; 22 pages; submitted)
(6) Coherence and Other Properties of Sheaves in the Kohn Algorithm (arXiv:1308.5289v1 [math.AG] 24 Aug 2013) Internat. J. Math. 25(8):1450077 (13 pages), 2014; DOI: 10.1142/S0129167X14500773
(7) On the Relationship between D'Angelo q-Type and Catlin q-Type (with Vasile Brinzanescu; arXiv:1302.2294v4 [math.CV] 8 Jan 2014; DOI: 10.1007/s12220-014-9490-5; 18 pages; in press at the Journal of Geometric Analysis)
(8) Failure of the Weierstrass Preparation Theorem in Quasi-analytic Denjoy-Carleman Rings (with Francesca Acquistapace, Fabrizio Broglia, Michail Bronshtein, and Nahum Zobin; arXiv:1212.4265v3 [math:CA] 5 Mar 2014) Advances in Mathematics 258C (2014), pp. 397-413; DOI: 10.1016/j.aim.2014.03.002
(9) A Nullstellensatz for Łojasiewicz Ideals (with Francesca Acquistapace and Fabrizio Broglia; arXiv:1210.2504v1 [math.AG] 9 Oct 2012) Revista Matemática Iberoamericana 30 (2014), no. 4, 1479-1487; DOI 10.4171/RMI/822
(10) Effective Vanishing Order of the Levi Determinant (arXiv:1102.0356v2 [math.CV] 13 Feb 2011) Mathematische Annalen 354 (2012) no.4, 1223-1245; DOI: 10.1007/s00208-011-0742-4
(11) Global Regularity for $\bar{\partial}_b$ on Weakly Pseudoconvex CR Manifolds (math.CV/0512072) Advances in Mathematics 199 (2006) 356-447
(12) The $\bar{\partial}_b$ Equation on Weakly Pseudoconvex CR Manifolds of Dimension 3 (with J.J. Kohn; math.CV/0512073) Journal of Functional Analysis 230 (2006), no.2, 251-272

Invited Talks:
Analysis Seminar, University of Wisconsin at Madison, May 11, 2001
Complex Analysis Seminar, University of Chicago, October 16, 2001
Fred and Lois Gehring Complex Analysis Conference, University of Michigan, October 17-21, 2001
CR Geometry Seminar, Princeton University, April 23, 2002
Several Complex Variables Seminar, University of California San Diego, May 16, 2002
Differential Geometry Seminar, Massachusetts Institute of Technology, September 30, 2002
Real and Complex Analysis Seminar, Ohio State University, January 7, 2003
Short Programme on Analysis and Resolution of Singularities, CRM, Université de Montréal,
August 18 - September 5, 2003
Gauge Theory and Topology Seminar, Harvard University, October 24, 2003
Conference on Several Complex Variables and Complex Geometry in Honor of Yum-Tong Siu's
Sixtieth Birthday, University of Hong Kong, November 20-24, 2003

Geometric Analysis Seminar, Humboldt University, January 14, 2004
Conference on Asymptotic and Effective Results in Complex Geometry, Johns Hopkins University,
March 18-21, 2004
International Conference on Complex Analysis in Several Variables, satellite conference of the Fourth
European Congress in Mathematics, Mid-Sweden University, June 21-24, 2004
Conference on CR Geometry and Partial Differential Equations, CIRM (Trento), September 12-17, 2004
Special Session on Several Complex Variables and CR Geometry, AMS Meeting, University of New Mexico,
Albuquerque, October 16, 2004
International Conference on Several Complex Variables, USTC, Hefei, China, June 20-25, 2005
Mathematics Department Colloquium, University of Notre Dame, November 30, 2005
Second Brazilian School on Differential Equations, IMPA, Rio de Janeiro, Brazil, January 23-27, 2006
2006 KIAS School on Complex Analysis, KIAS, Seoul, South Korea, March 28-30, 2006
Special Session on PDE and Several Complex Variables, AMS Meeting, Florida International University,
Miami, April 1-2, 2006
57th Midwest Partial Differential Equations Seminar, UIC, April 21-23, 2006
Analysis Seminar, University of Wisconsin at Madison, May 2, 2006
International Conference in PDE, Complex Analysis and Differential Geometry in Honor of
M. Salah Baouendi, University of Notre Dame, June 11-16, 2006
International Summer School in Several Complex Variables, Szczyrk, Poland, June 19-23, 2006
Geometry and Several Complex Variables Seminar, Texas A&M University, December 1, 2006
Mathematics Department Colloquium, Indiana University - Bloomington, January 16, 2007
Mathematics Department Colloquium, University of Toronto, January 24, 2007
Mathematics Department Colloquium, Texas A&M University, February 19, 2007
Analysis Seminar, Massachusetts Institute of Technology, February 28, 2007
Analysis Seminar, Brown University, March 14, 2007
Special Session on PDE Methods in Several Complex Variables, AMS Meeting, Miami University,
Oxford, Ohio, March 16-18, 2007
IV Workshop on Geometric Analysis of PDE and Several Complex Variables, Serra Negra, Brazil,
August 6-10, 2007
Special Session on Geometric Analysis of Complex Laplacians, AMS Meeting, Rutgers University,
New Brunswick, October 6-7, 2007
Analysis Seminar, University of Pennsylvania, January 29, 2008
Several Complex Variables and Complex Dynamics Seminar, University of Michigan, February 11, 2008
Analysis Seminar, Michigan State University, February 13, 2008
Gauge Theory and Topology Seminar, Harvard University, February 29, 2008
Mathematics Department Colloquium, Georgetown University, April 11, 2008
Special Session on Several Complex Variables and Partial Differential Equations, AMS-SBM
First Joint Meeting, IMPA, Rio de Janeiro, Brazil, June 4-7, 2008
Conference on Analysis and Geometry in Several Complex Variables, IMAR, Bucharest, Romania,
June 24-28, 2008
Conference on Complex and CR Geometry, Partial Differential Equations, and Invariant Theory
in honor of Joseph J. Kohn, Prague, Czech Republic, June 30-July 4, 2008
Complex Analysis and CR Geometry Seminar, Rutgers University, October 31, 2008
Mathematics Department Colloquium, Temple University, December 1, 2008
MAMLS Meeting, Harvard University, May 9-10, 2009
Complex Analysis and Geometry XIX Conference, CIRM (Trento), June 1-5, 2009
Complex Analysis Seminar, University of Ljubljana, June 9 and 16, 2009
Mathematics Department Colloquium, Rutgers-Newark University, October 31, 2009

Mathematics Department Colloquium, University of Georgia, December 2, 2009
Geometry Seminar, University of Pisa, January 20, 2010
Complex Analysis and CR Geometry Seminar, Rutgers University, April 8, 2011
Real Algebraic Geometry Conference, Université de Rennes 1, Rennes, France, June 20-24, 2011
Algebraic Geometry and CR Geometry Seminar, NYU, March 6, 2012
Analysis Seminar, Temple University, March 12, 2012
Mathematics Department Colloquium, Reed College, April 12, 2012
Conference on Complex Analysis and Partial Differential Equations, Addis Ababa, Ethiopia,
                                                                June 25-29, 2012
AIM SQuaRE on Problems of Division in Quasi-Analytic Classes I, Palo Alto, August 13-17, 2012
Workshop on Whitney Type Extension and Trace Problems, Fields Institute, Toronto, Canada,
                                                                August 27-31, 2012
BIRS Workshop on Whitney Problems, Banff, Canada, April 21-26, 2013
AIM SQuaRE on Problems of Division in Quasi-Analytic Classes II, Palo Alto, June 3-7, 2013
Mathematics Department Colloquium, University of Toronto, November 6, 2013
Conference on CR Geometry and Partial Differential Equations VI, CIRM (Trento), June 23-27, 2014
Seventh Whitney Problems Workshop, Williamsburg, August 18-22, 2014
Analysis Seminar, Temple University, December 1, 2014
Algebraic Geometry Seminar, University of Chicago, December 3, 2014
Conference in Analysis and Geometry in Several Complex Variables, Texas A & M University at Qatar,
                                                                Doha, Qatar, January 4-8, 2015
Conference on Complex Analysis and Geometry on the Occasion of Sidney Webster's 70th Birthday,
                                                                Madison, March 27-29, 2015

Service Activities:
Confluentes Mathematici editor (journal started in 2009)
Co-organizer with Erwan Le Gruyer and Matthew Hirn of the Whitney Problem Workshop 2015
    at CIRM, Luminy, France, October 19-23, 2015
Active Learning Committee, University of Pennsylvania, Academic Year 2014-2015
TA Training Committee, University of Pennsylvania, Academic Years 2008-2009, 2010-2015
TA Recruitment Committee, University of Pennsylvania, Academic Year 2014-2015
Prelim Exam Committee, University of Pennsylvania, Spring 2014
Undergraduate Committee, University of Pennsylvania, Academic Year 2012-2013
Graduate Advising, University of Pennsylvania, Spring 2010, Fall 2011
Undergraduate Mathematics Major Advising, University of Pennsylvania, Spring 2009-Spring 2011
Faculty Advisor to the Penn Undergraduate Mathematics Society, Academic Year 2009-2010
Colloquium Committee, Mathematics Department, Harvard University, Spring 2004-Fall 2007
Member of the Committee on the Standing of Women, Harvard University, Academic Year 2004-2005
Co-organizer with John D'Angelo, Xiaojun Huang, and Joseph J. Kohn of the Special Session
    on CR Geometry and Singularities at the 2004 Spring Eastern Section Meeting of the AMS
    at Rider College in Lawrenceville, New Jersey on April 17-18
Graduate Mathematics Admissions Committee, Harvard University, Academic Year 2002-2003

Teaching Experience:
Mathematical applications to law, medicine, and economics, University of Pennsylvania, Fall 2009,
                                                                Fall 2010, Spring 2013, Spring 2015
Calculus, Part I, Active Learning, University of Pennsylvania, Spring 2014, Fall 2014
Honors calculus II, University of Pennsylvania, Spring 2014

Undergraduate complex analysis, University of Pennsylvania, Fall 2012, Fall 2013

Freshman seminar in abstract algebra and logic, University of Pennsylvania, Spring 2009, Spring 2011, Spring 2013

First semester of the Masters' level real analysis sequence, University of Pennsylvania, Fall 2011

NSO preceptorial on proof and games, University of Pennsylvania, September 2011

Honors calculus, University of Pennsylvania, Fall 2010, Fall 2011

Graduate course on complex analysis of one variable, University of Pennsylvania, Spring 2010

Calculus, Part I, University of Pennsylvania, Fall 2009

Calculus, Part IV, University of Pennsylvania, Fall 2008, Spring 2009

Graduate course on complex analysis of one variable, Harvard University, Fall 2007

Honors multivariable calculus and linear algebra, Harvard University, Academic Year 2006-2007

Undergraduate complex analysis course, Harvard University, Spring 2006

Linear algebra (course head), Harvard University, Fall 2005

Second semester of the upper calculus track, Harvard University, Spring 2005

Undergraduate point-set and algebraic topology course, Harvard University, Fall 2004

Graduate course on several complex variables, Harvard University, Spring 2003

Graduate course on complex analysis of one variable, Harvard University, Fall 2002

First semester of the upper calculus track, Princeton University, Fall 2000

Princeton University's Freshman Scholars Institute, Academic Year 2000-2001

Second semester of the lower calculus track, Princeton University, Spring 2000