

FATMA TERZIOGLU

CONTACT INFORMATION

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EDUCATION

MAY 2018 | Ph.D. in MATHEMATICS
(Expected) | TEXAS A&M UNIVERSITY, College Station, TX, USA
Dissertation: "Compton Camera Imaging and the Cone Transform"
Advisor: Dist. Prof. Peter KUCHMENT

JUNE 2011 | MS in MATHEMATICS
BOGAZICI UNIVERSITY, Istanbul, TURKEY
Thesis: "Positive Definite Functions on Spheres"
Advisor: Prof. Alp EDEN

JUNE 2009 | Integrated BS&MS Program in MATHEMATICS EDUCATION
BOGAZICI UNIVERSITY, Istanbul, TURKEY

RESEARCH INTERESTS

Inverse problems and imaging | Applied Harmonic Analysis | Microlocal analysis
Integral transforms of Radon type and their applications | Compton camera imaging
Hybrid imaging | Medical and homeland security imaging applications

PUBLICATIONS

F. TERZIOGLU Some Inversion Formulas for the Cone Transform,
Inverse Problems, 31 (2015), 115010 (21pp)
<http://dx.doi.org/10.1088/0266-5611/31/11/115010>

P. KUCHMENT and F. TERZIOGLU Three-Dimensional Image Reconstruction from Compton
Camera Data, *SIAM J. Imaging Sci.*, 9(4) (2016), pp. 1708-1725
<http://dx.doi.org/10.1137/16M107476X>

P. KUCHMENT and F. TERZIOGLU Inversion of Weighted Divergent Beam and Cone Transforms,
Inverse Problems and Imaging, 11(6) 2017, (20pp), [arXiv:1612.06772](https://arxiv.org/abs/1612.06772).

P. KUCHMENT, L. KUNYANSKY,
and F. TERZIOGLU Compton camera imaging and the cone transform:
A brief overview, in preparation.

F. TERZIOGLU Fourier inversion of the cone transform, in preparation.

P. KUCHMENT and F. TERZIOGLU Microlocal analysis of the cone transform, in preparation.

AWARDS AND HONORS

JULY 2017 | COLLEGE OF SCIENCE LEADERSHIP IN EQUITY AND DIVERSITY (LEAD) AWARD
Texas A&M University College of Science
Given every year to one individual in each of the Faculty, Staff, and Student/Postdoctoral Associate categories
in recognition of commitment to enhancing the college's environment of mutual respect and diversity.

- MAY 2017 | SIAM STUDENT CHAPTER CERTIFICATE OF RECOGNITION
Society for Industrial and Applied Mathematics
Given every year to one student from each chapter to be recognized for exceptional service to the chapter
- JULY 2016 | SIAM STUDENT PAPER PRIZE
Society for Industrial and Applied Mathematics
For the publication "Some Inversion Formulas for the Cone Transform", *Inverse Problems* 31 (2015) 115010
- APR. 2016 | L.F. GUSEMAN Award
Texas A&M University
Given each spring semester to a graduate student in math with high scholastic achievement and who has demonstrated outstanding achievement in teaching, research or service.
- APR. 2015 | ACADEMY FOR FUTURE FACULTY FELLOW
Texas A&M University
Two-semester teaching and professional development program run by CIRT@TAMU for graduate students and post-docs in preparation for a career in higher education.
- SEP. 2011 | DEAN'S SCHOLARSHIP
Texas A&M University
- JULY 2009 | HIGH HONORS CERTIFICATE
Bogazici University
Given to students graduating with a GPA of 3.50 or higher.

WORK EXPERIENCE

TEXAS A&M UNIVERSITY, College Station, TX

SEP. 2011 - PRESENT

- FALL 2017 | GRADER
Advanced Calculus
- FALL 2013 - SUMMER 2017 | RESEARCH ASSISTANT
NSF DMS grant 1211463
- SUMMER-II 2015 | INSTRUCTOR OF RECORD
Taught "Mathematical Concepts - Calculus". Prepared and gave lectures, assigned homework, prepared and graded exams and quizzes, maintained course webpage (www.math.tamu.edu/~fatma/teaching.html).
- SPRING 2013 | TEACHING ASSISTANT
Mathematical Modeling
- FALL 2012 | Engineering Mathematics I
- SPRING 2012 | Calculus I for Biological Sciences
Duties included running recitations and Matlab labs (two meetings per week), providing in-class group activities, grading assignments/exams, keeping grade records, and helping students with mathematical concepts/work-out problems and Matlab assignments.
- SUMMER 2012 | HELP SESSION TA
Engineering Mathematics II
- SUMMER 2013 | GRADER
Differential Equations

BOGAZICI UNIVERSITY, Istanbul, TURKEY

SEP. 2009 - JUNE 2011

	TEACHING ASSISTANT
SPRING 2011	Discrete Mathematics
FALL 2010	Calculus II
SUMMER 2010	Differential Equations
SPRING 2010	Finite Mathematics
FALL 2009	Mathematics for Social Sciences
	Duties included preparing material for weekly recitation activities, leading weekly recitation sessions, holding office hours, creating and grading quizzes, proctoring and grading exams, keeping grade records, maintaining the course webpage.

RESEARCH TALKS

JAN. 2017	<i>Image Reconstruction from Compton Camera Data</i> (Invited) Joint Mathematics Meeting, Atlanta, GA
NOV. 2016	<i>Image Reconstruction from Compton Camera Data</i> Texas Women in Mathematics Symposium, University of Texas, Austin, TX
OCT. 2016	<i>Image Reconstruction from Compton Camera Data</i> Inverse Problems Seminar, Texas A&M University, College Station, TX
JULY 2016	<i>Some Inversion Formulas for the Cone Transform</i> (Invited) SIAM Annual Meeting, Boston, MA
MAY 2016	<i>Image Reconstruction from Compton Camera Data</i> (Invited) 8th International Conference "Inverse Problems: Modeling and Simulation", Fethiye, TURKEY
MAR. 2016	<i>Compton Camera Imaging and the Cone Transform</i> Graduate Student Seminar, Texas A&M University, College Station, TX
MAR. 2015	<i>Some Inversion Formulas for the Cone Transform</i> (Invited) AMS Central Spring Sectional Meeting, Michigan State University, East Lansing, MI
MAR. 2015	<i>On the Inversion of the Cone Transform</i> Inverse Problems Seminar, Texas A&M University, College Station, TX

RESEARCH POSTERS

JUNE 2016	<i>Compton Camera Imaging</i> Gordon Research Conference: Image Science, Stonehill College, Easton, MA
FEB. 2016	<i>Compton Camera Imaging</i> Imaging Sciences Spotlight Series, Texas A&M University, College Station, TX
OCT. 2014	<i>Compton Camera Imaging and Cone Transforms</i> Inverse Problems and Spectral Theory Conference, Texas A&M University, College Station, TX

SERVICE AND OUTREACH ACTIVITIES

MARCH 2017	100 Years of the Radon Transform Conference, Linz, March 27-31, 2017 <i>Co-organizer of the minisymposium "Cone/Compton transforms and their applications"</i>
FEB. 2017	STEMFest 2017, Texas A&M University, College Station, TX <i>Volunteer</i> Helped running the math art booth, taught origami to participants.
JAN. 2017	Grad Fair, Joint Mathematics Meeting, Atlanta, GA <i>Volunteer</i> Helped running the Texas A&M University booth
JAN. 2017	Joint Mathematics Meeting, Atlanta, GA <i>Presenter</i> Presented the poster "Texas A&M SMaRT Camp"
FALL 2015- SUMMER 2017	Texas A&M University Student Chapter of AWM (TAMU-AWM) <i>President</i> Leading the Chapter and managing its activities in accordance with the policies and procedures of the chapter bylaws.
FALL 2015- SUMMER 2017	Women in Math Mentoring Lunches <i>Co-organizer</i> Helped to organize lunches for women in mathematics. The lunches focus on topics and issues of interest to graduate students, each with a specific theme.
JUN.19-JUL.2, 2016 JUN. 16-29, 2013	SMaRT Camp (Summer Math Research Training High School Camp) <i>Counselor</i> Assisted students with the daily homework activities.
FALL 2015- SPRING 2016	Texas A&M University Graduate Student Chapter of SIAM (SIA&M) <i>Co-founder and Vice-President</i> Duties included assisting the President in the management of the Chapter, helping inviting seminar speakers and organizing Chapter's events and activities, tracking attendance at the chapter activities, keeping a record of eligibility fulfillment of the members of the Chapter, verify requirements and issue a list of members of the Chapter at the end of the year.
FEB. 2016	Panelist, <i>How to choose an advisor</i> First Year Graduate Students Seminar, Texas A&M University, College Station, TX

CONFERENCES AND WORKSHOPS ATTENDED

JAN. 2017	<i>Joint Mathematics Meeting, Atlanta, GA</i>
AUG. 2016	<i>Graduate Student Workshop on Inverse Problems, Colorado State University, Fort Collins, CO</i>
JULY 2016	<i>SIAM Annual Meeting, Boston, MA</i>
JUNE 2016	<i>Gordon Research Conference: Image Science, Stonehill College, Easton, MA</i>
MAY 2016	<i>8th International Conference "Inverse Problems: Modeling&Simulation", Fethiye, TURKEY</i>
JAN. 2016	<i>Winter Graduate School on Geometric PDEs and Their Approximations,</i>

- | Texas A&M University, College Station, TX
- JUNE 2015 | *Hybrid Methods in Imaging*, BIRS, Banff, AB, CANADA
- MAY 2015 | *Summer School and Conference on Applied Inverse Problems*,
University of Helsinki, Helsinki, FINLAND
- APR. 2015 | *Summer Preschool on Inverse Problems at CIRM*, Marseille, FRANCE
- MAR. 2015 | *AMS Central Spring Sectional Meeting*, Michigan State University, East Lansing, MI
- OCT. 2014 | *Inverse Problems and Spectral Theory Conference*, Texas A&M University,
College Station, TX
- AUG. 2013 | *MSRI Summer School "Introduction to Mathematics of Seismic Imaging"*, MSRI,
University of California, Berkeley, CA
- MAY 2012 | *CBMS Conference "Mathematical Methods of Computed Tomography"*,
University of Texas, Arlington, TX

PROFESSIONAL MEMBERSHIPS

American Mathematical Society (AMS) | Texas A&M University Chapter of AMS |
Association for Women in Mathematics (AWM) | Texas A&M University Chapter of AWM |
Society for Industrial and Applied Mathematics (SIAM) | Texas A&M University Chapter of SIAM

LANGUAGES

TURKISH (Native), ENGLISH (Fluent)

COMPUTER SKILLS

Programing Languages: MATLAB, Mathematica
Typesetting: \LaTeX , Beamer, HTML