Curriculum Vitae Edriss S. Titi

Name: Edriss S. Titi

Date of Birth: March 22, 1957 Citizenship: Israel and USA

Place of Birth: Acre, Israel

Address: Department of Mathematics

Texas A&M University

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Education:

1986 Indiana University, Bloomington

Ph.D. in Applied Mathematics. Advisor: Professor Ciprian Foias

Title: "A Uniform Spectral Estimate for the Linearized Navier-Stokes Operators and their Galerkin

Approximations."

1981 The Technion, I.I.T., Haifa, Israel

M.Sc. in Mathematics, (with distinction). Advisor: Professor Dov Aharonov

Title: "A Minimal-Area Problem for Univalent Odd Functions."

1979 The Technion, I.I.T., Haifa, Israel

B.Sc. in Mathematics, Magna Cum Laude.

Areas of Research Interest:

Nonlinear Partial Differential Equations, Applied Mathematics, Numerical Analysis, Fluid Mechanics, Atmospheric and Oceanic Dynamics, Data Assimilation, Control Theory, and Infinite Dimensional Dissipative Dynamical Systems.

Professional Experience:

2020-present Texas A&M University, University Distinguished Professor & Member of the Hagler

Institute of Advanced Study Electorate

2018-present University of Cambridge, Nonlinear Mathematical Science Chair Professor

Department of Applied Mathematics and Theoretical Physics.

2014-present Texas A&M University, Arthur Owen Professor of Mathematics

Department of Mathematics.

2003–present Weizmann Institute for Science, Israel, Professor

Department of Computer Science and Applied Mathematics.

2014-present	University of California, Irvine, Professor Emeritus Departments of Mathematics, and of Mechanical and Aerospace Engineering.
1997–2013	University of California, Irvine, Professor Departments of Mathematics, and of Mechanical and Aerospace Engineering.
1994–1997	University of California, Irvine, Associate Professor Department of Mechanical and Aerospace Engineering.
1992–1997	University of California, Irvine, Associate Professor Department of Mathematics.
1991–1994	Cornell University, Adjunct Associate Professor Center for Applied Mathematics.
1988–1992	University of California, Irvine, Assistant Professor Department of Mathematics.
1988–1989 and 1990–1991 1986–1988	Cornell University, Visiting Assistant Professor Department of Mathematics and Mathematical Sciences Research Institute.
	The University of Chicago, L.E. Dickson Instructor Department of Mathematics.
1989–2013	Los Alamos National Laboratory Visiting Collaborator and Consultant.

Administrative Experience and Committees:

Vice Chairman for Graduate Studies, Department of Mathematics, University of California, Irvine, July 1, 2001 – December 15, 2002.

Served on various Review Panels for different funding agencies and educational institutions.

Organizer and co-organizer of several International Scientific Conferences, Workshops and Meetings.

Served on various Departmental Committees: Recruiting Committee, Graduate Studies Committee, Undergraduate Studies Committee, Admission Committee, Colloquium Committee, and Distinguished Speakers Committee.

Served on various Campus-wide Committees at the University of California Irvine: Representative of the School of Physical Sciences on the Committee on Courses, Coordinator Officer between the Committee on Courses and the Committee on Educational Policy, Representative of the School of Physical Sciences on the Committee of Education Abroad.

Honors, Awards, Prizes and Fellowships:

2020	2020 International Consortium of Chinese Mathematicians Best Paper Award (Gold Medal) Jointly with C. Cao and J. Li.
2018-present	Named Fellow of the John Simon Guggenheim Memorial Foundation
2018-2020	Einstein Visiting Fellow, Einstein Stiftung Berlin/Einstein Foundation Berlin Freie Universität Berlin
04-07/2018	Gaspard Monge Distinguished Visiting Professor, École Polytechnique - Paris Centre de Mathématiques Laurent Schwartz.

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Senior Simons Professorship Institute of Mathematics of the Polish Academy of Sciences, Warsaw, Poland.
Ciência sem Fronteiras - Science without Boundaries Scholarship, Special Distinguished Visiting Researcher Award The Conselho Nacional de Desenvolvimento Científico (CNPq), Brazil
Fellow of the Inaugural Class of the American Mathematical Society (AMS)
Fellow of the Society of Industrial and Applied Mathematics (SIAM)
Humboldt Research Award for Senior U.S. Scientists Alexander von Humboldt Stiftung/Foundation, Germany.
SIAM Prize on Best Paper in Partial Differential Equations SIAM Activity Group on Analysis of Partial Differential Equations.
Fellow of the Institute of Physics London, UK.
Stanislaw M. Ulam Distinguished Visiting Scholar The Center for Nonlinear Studies, Los Alamos National Laboratory.
Varon Visiting Professorship Weizmann Institute of Sciences, Rohovot, Israel.
Orson Anderson Distinguished Visiting Scholar Institute of Geophysics and Planetary Physics, Los Alamos National Laboratory.
and Awards:
University Distinguished Professor; and Member of the Hagler Institute of Advance Study Electorate Texas A&M University.
Arthur Owen Professorship of Mathematics Texas A&M University.
Elected Chair SIAM Activity Group on Analysis of Partial Differential Equations.
Elected Program Director SIAM Activity Group on Analysis of Partial Differential Equations.
Fellow of the Center of Smart Interfaces Technische Universität Darmstadt, Germany.
Award of Outstanding Contributions to Undergraduate Education School of Physical Sciences, University of California, Irvine.
MAOF Fellowship Israeli Council of Higher Education.
Award of Outstanding Contributions to Undergraduate Education School of Physical Sciences, University of California, Irvine.
Graduate School Research Fellowship Award

September Distinguished Lecture Series in Mathematics

2023 University of Wisconsin – Madison.

June 2023 The Atiyah Distinguished Lecture

The Maxwell Institute for Mathematical Sciences, University of Edinburgh and

Heriot-Watt University, Edinburgh, UK.

March 2023 The Applied Mathematics and Computational Science Distinguished Lecture Series

King Abdullah University of Science and Technology (KAUST), March 14, 2023.

March 2023 Herbert Keller Colloquium in Computing and Mathematical Sciences

Caltech, Pasadena, California, March 6, 2023.

February 2023 Inaugural Distinguished Lecture Series in Mathematics

Florida International University, Miami, Florida, February 6-10, 2023

August 2022 Pauli Symposium – 2022

Wolfgang Pauli Institute, University of Vienna, August 22, 2022.

July 2022 SIAM, Society for Industrial and Applied Mathematics Annual Meeting – 2022

Plenary Speaker, Pittsburgh, Pennsylvania, July 11–15, 2022.

June 2022 Isaac Newton Institute for Mathematical Sciences 30th Anniversary Celebrations

Plenary Speaker, Cambridge, UK, June 28, 2022.

October 2021 Howard E. Rowlee Jr. Public Lecture

Department of Mathematics, University of Nebraska - Lincoln.

September 5th Tosun Terzioğlu Lecture

2020 Turkish Mathematical Society (TÜRK MATEMATİK DERNEĞİ), Karaköy – Istanbul, Turkey.

June 2020 Ramaiah University of Applied Sciences Distinguished Lecture Series

Ramaiah University of Applied Sciences – Bangalore, Government of Karnataka Technol-

ogy Business Incubator and Ministy of Human Resources Development, India.

July 2019 EQUADIFF 2019

Plenary Speaker, Leiden University, the Netherlands.

June 2018 **17-th International Conference on Hyperbolic Problems:**

Theory, Numerics and Applications

Plenary Speaker, State College, Pennsylvania.

January 2018 American Mathematical Society, Joint Mathematics Meeting (JMM 2018)

One Hour Plenary Address, San Diego, California.

July 2017 Bifurcations and Instabilities in Fluid Dynamics 2017 (BIFD 2017)

Plenary Speaker, Woodlands, Texas.

May 2017 Israeli Mathematical Union Annual Meeting – 2017

Plenary Speaker, Acre, Israel.

February 2017 PIMS-AMI Annual Distinguished Lecture

Pacific Institute for the Mathematical Sciences (PIMS) & Applied Mathematics Institute

(AMI), University of Alberta, Edmonton, Canada.

2016 The Fisk Distinguished Speaker Series Department of Mathematics at the University of Wyoming. 2016 Dr. Karen A. Ames Memorial Lectures on Applied Mathematics Department of Mathematics University of Alabama, Huntsville. 2016 The Lansdowne Lectureship The University of Victoria, British Columbia, Canada. January 2016 **Airbus Corporate Sponsored Public Lecture** International Center for Theoretical Science of the Tata Institute of Fundamental Research, Bangalore, India. November **Barcelona Mathematical Days 2014** 2014 Plenary Speaker, Barcelona, Spain. June 2013 33rd CNLS Annual Conference: The Oceans and Turbulence Plenary Speaker, Los Alamos National Laboratory, Los Alamos, New Mexico. Congresso Nacional de Matemática Aplicada e Computacional (CNMAC-2012) September 2012 Plenary Speaker, Águas de Lindóia, Brazil. June 2012 Canadian Applied and Industrial Mathematics Annual Meeting, CAIMS/SCMAI 2012 Keynote Speaker, Fields Institute for Research in the Mathematical Sciences, Toronto, Canada. July 2012 **IUTAM Symposium: Topological Fluid Dynamics II** Keynote Speaker, Newton Institute, Cambridge, UK. AMS-MAA-SIAM Joint Mathematics Annual Meeting January 2012 SIAM Invited Lecture, Boston, Massachusetts. December 2008 The 100th Statistical Mechanics Meeting Plenary Speaker, Rutgers University, New Brunswick, New Jersey. May 2007 Euler Symposium, Euler Institute St. Petersburg Plenary Speaker – St. Petersburg, Russia. July 2006 SIAM, Society for Industrial and Applied Mathematics Annual Meeting Invited Address, Boston, Massachusetts. May 2004 Annual Israeli Mathematical Union Meeting - 2004 Plenary Speaker, Kibbutz Shfaim, Israel. December 2003 The 90th Statistical Mechanics Meeting - Celebrating the 100th Anniversary of the Birth of Lars Onsager Plenary Speaker, Rutgers University, New Brunswick, New Jersey. September Frontiers of Science and Engineering in the Middle East - Sponsored by 2003 The U.S. National Academies Invited Speaker, Istanbul, Turkey. August 2002 **Foundations of Computational Mathematics** Plenary Speaker, Minneapolis, Minnesota. June 2002 American Mathematical Society, Western Section

Invited Address, Portland, Oregon.

February 2000 Royal Meteorological Society

Invited Address, London, UK.

November London Mathematical Society

1995 Invited Address, Spitalfields Day, Cambridge, UK.

Editorial Activities:

2022-present Mathematical Control and Related Fields (MCRF)

Member of the Editorial Board. American Institute of Mathematical Sciences.

2019-present Physica D

Member of the Advisory Board. Elsevier.

2018–present Pure and Applied Functional Analysis

Member of the Editorial Board. Yokohama Publishers of Yokohama, Japan.

2015-present Frontiers in Applied Dynamical Systems: Reviews and Tutorials

Member of the Editorial Advisory Board. Springer.

2014–2020 Mathematics of Climate and Weather Forcasting

Member of the Editorial Advisory Board. De Gruyter.

2014-present Transactions of Institute of Mathematics and Mechanics of NAS Azerbaijan

Member of the Editorial Board.

2012–present **Journal of Nonlinear Science**

Member of the Editorial Board. Springer.

2012–2019 Physica D

Member of the Editorial Board. Elsevier.

2012-present Journal of Algerian Mathematical Society

Member of the Editorial Board.

2012–2021 Asymptotic Analysis

Member of the Editorial Board. IOS Press.

2011-present Journal of Mathematical Physics

Associate Editor. American Institute of Physics.

2011–2018 Advances in Differential Equations

Member of the Editorial Board.

2009–2018 Turkish Journal of Mathematics

Member of the Editorial Board. Academic Journals - Tübitak

2003-present Nonlinearity

Member of the Editorial Board. Institute of Physics Publishing.

2002–present **Journal of Numerical Functional Analysis and Optimization**

Member of the Editorial Board. Taylor & Francis.

Academic and Scientific Synergistic Activities:

Chairman of the "Saul Abarbanel Prize in Applied Mathematics" Committee, 2022

External Member of the Board of Studies "Department of Mathematics and Statistics", Ramaiah University of Applied Sciences, 2020–present.

Member of the "International Scientific Advisory Board (Fachbeirat)", The Max Planck Institute in Mathematics for Science in Leipzig, Germany, 2020–2023.

Member of the "Hagler Institute of Advanced Study" Electorate, Texas A&M University, 2020– present.

Member of the "Sir Michael Atiyah Fellowships Committee", London Mathematical Society, 2019–2022.

Member of the "SIAM Fellows Selection Committee", Society for Industrial and Applied Mathematics (SIAM), 2019–2021.

Member of the "Maxwell Prize" Selection Committee, The International Council for Industrial and Applied Mathematics (ICIAM), ICIAM – 2019.

Member of the Advisory board of the "Department of Mathematics and Statistics", **The American University of Sharjah**, 2016–present.

Member of the Advisory board of the "Department of Mathematics", University of South Florida, 2016–present.

Member of the External Advisor Council "Department of Mathematical Sciences", University of Texas - Dallas, 2016–present.

Member of the Advisory Board of the "EPSRC Centre for Doctoral Training in the Mathematics of Planet Earth (MPECDT)", Imperial College, London, UK, 2014–2020.

Chairman of the "Steering Committee for Scholarship Fund for Arab Israeli Undergraduates- "IRTEKA"", Israeli Council of Higher Education, 2013–2021.

Member of the "Supreme Academic Council", Nazareth Academic Institute, Nazareth, Israel, 2010–2013.

Member of the "SIAM's Coordinating Committee for the Joint Mathematics Meeting (JMM)", USA, 2013–2016.

Member of the "Gene Golub SIAM Summer School Committee", 2009–2011.

Elected member of the "Commission on Mathematical Physics – C18" of the International Union of Physics and Applied Physics, 2008–2011.

Member of the Scientific Advisory Board of the "Istanbul Matematiksel Bilimler Merkezi" (Istanbul Center for Mathematical Sciences), **Boğaziçi Üniversitesi**, Istanbul, Turkey, 2008–present.

Member of the "Jürgen Moser Prize" Selection Committee, SIAM, Dynamical Systems Activity Group, 2006–2007.

Member of the "Committee on Human Rights of Mathematicians", **American Mathematical Society**, 2004–2006 and 2012–2015.

Member of the "Galilee Research Center for Applied Mathematics" Academic Advisory Committee, **ORT Braude College**, Karmiel, Israel, 2003–present.

Member of the Advisory Committee to the "SIAM, Dynamical Systems Activity Group", 2001–2003.

Member of the Advisory Committee to the "Turbulence Working Group" in Los Alamos National Laboratory, 2000–2004.

Member of the Advisory Board to the "Center of Nonlinear Studies", Los Alamos National Laboratory, 1997–1998.

Society and Community Synergistic Activities:

Member of the "General Assembly and Board of Trustees of "TAAWON"", A Palestinian Welfare Association, 2020– present.

Member of the "Steering Committee for Excellence in the Arab Community in Israel", Yad-Hanadiv Rothschild Foundation, Operated by the Davidson Institute at the Weizmann Institute of Science, 2014–present.

Founding Member of "Al-Maram", **Outreach Group of Scientist** to promote scientific awareness among Arab kids in Elementary, Middle and High Schools.

Member of the Advisory Board of "Acre Students' Fellowship", Acre, Israel, 2003–2020.

Member of the Advisory Board of "Arab Center for Alternative Planning", Eilaboun (Galilee), Israel, 2003–present.

Co-founder of, and volunteer in, "Young Scientists Club - Al-Muntada", Outreach scientific activities for school kids, West Bank and Gaza, Palestine, 1996–2003.

Professional Membership:

A.M.S., S.I.A.M., P.S.M.S., I.M.U., E.M.S.

Ph.D. Students:

Débora A.F. Albanez (co-advisor, Brazil), Daniel Boutros (University of Cambridge), Chongsheng Cao, Yanping Cao, Yeo-Jin Chung, Aseel Farhat, Shandy Hauk (University of California, Irvine), Lucas Huysmans (University of Cambridge), Hussain Ibdah (Texas A&M University), Don A. Jones (University of California, Irvine), Ori Katz (co-advisor, Weizmann Institute of Science), Dan Kushnir (co-advisor, Weizmann Institute of Science), Adam Larios (University of California, Irvine), Boris Levant (Weizmann Institute of Science), Quyuan Lin (Texas A&M University), Jasmine Linshiz (Weizmann Institute of Science), Evelyn Lunasin, Hung V. Ly (Charles Lee) (University of California, Irvine), Vencint Martinez (co-advisor, Indiana University), Tural Sadigov (co-advisor, Indiana University) and Shannon Wynne (University of California, Irvine).

Masters Students (with thesis):

Khalid Abo-Ria (Weizmann Institute of Science), Yasser Awad (Al-Quds University), Zvi El-Gavish, Boris Ettinger, Daniel Shallom and Jasmine Tal (co-advisor)(Weizmann Institute of Science).

Postdoctoral Fellows:

Débora A.F. Albanez (Freie Universität - Berlin), Abderrahim Azouani (Freie Universität - Berlin), Allen Bergeon, Andrew Ferrari, Salvador Segundo Garcia Zambrano (University of California, Irvine), Yanqiu Guo (Weizmann Institute of Science), Simon Markfelder (University of Cambridge), Hyung-Chun Lee (University of California, Irvine), Jinkai Li (Weizmann Institute of Science), Xin Liu (Texas A&M University and Freie Universität - Berlin), Julia Novo (University of California, Irvine), Cecilia Mondaini (Texas A&M University), Marcel Oliver, Eric Olson (University of California, Irvine), Fabio Ramos (Weizmann Institute of Science) and Stefan Vater (Freie Universität - Berlin).

Invited	Visiting	Professor	at:
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04-07/2019 Einstein Visiting Fellow, Einstein Stiftung Berlin/Einstein Foundation Berlin

Freie Universität Berlin.

04-07/2018 École Polytechnique - Paris

Gaspard Monge Distinguished Visiting Professor, Centre de Mathématiques Laurent Schwartz.

10-11/2017 Shanghai Center for Mathematical Sciences (SCMS), Fudan University

Fudan University, Shanghai, P.R. China.

January 2017 Institute of Mathematics of the Polish Academy of Sciences, Warsaw, Poland

Senior Simons Professorship.

01-05/2017 ICERM, Brown University

Institute for Computational and Experimental Research in Mathematics (ICERM), Provi-

dence, RI.

January 2016 Tata Institute of Fundamental Research

International Center for Theoretical Sciences, Bangalore, India.

December 2015 University of Vienna

Wolfgang Pauli Institute, Vienna, Austria.

November Universidade Federal do Rio de Janeiro

2015 Instituto de Matematica.

July 2015 École Polytechnique - Paris

Centre de Mathématiques Laurent Schwartz.

02-06/2014 Instituto Nacional de Matemática Pura e Aplicada (IMPA)

Rio de Janeiro, Brazil.

October 2013 Universidade Federal do Rio de Janeiro

Instituto de Matematica.

03–08/2012 Freie Universität, Berlin, Germany

Fachbereich Mathematik & Informatik, Institut für Mathematik.

09/2010- Freie Universität, Berlin, Germany

02/2011 Fachbereich Mathematik & Informatik, Institut für Mathematik.

May 2008 and Université de Paris 13, France Department of Mathematics.

June 2008 Université de Rennes 1, France Department of Mathematics.

09 & 12/2006 École Polytechnique Federale de Lausanne, Switzerland

The Bernoulli Center of Mathematics.

05–06/2006 École Normale Supérieure - Paris, France

Department of Mathematics and Applications.

April 2006 University of Vienna

Wolfgang Pauli Institute, Vienna, Austria.

December 2004 National University of Singapore

The Institute of Mathematical Sciences.

April 2003	Russian Academy of Sciences, Moscow, Russia Institute of Information Transmission Problems.
06-07/2001	Univeristé Henri Poincaré, Nancy 1, France Institut Elie Cartan, Laboratoire de Mathématiques.
05–06/2001	The University of Chicago Department of Mathematics.
April 2001	Feza Gürsey Institute, Istanbul, Turkey Tübitak and Bogazici University.
01-04/2001	New York University, New York Courant Institute of Mathematical Sciences. Princeton University Program in Computational and Applied Mathematics.
December 2000	Technische Universität Wien, Austria Institute of Mechanics.
June 2000	Université de Reims, France Departement de Mathématiques.
September 1998	École Normale Supérieure de Cachan, France Centre Mathématiques et de leurs Applications.
November 1997	Universität - Gesamthochschule Paderborn, Germany Department of Mathematics and Computer Science.
1997–1998	Los Alamos National Laboratory Institute for Geophysics and Planetary Physics.
06–07/1997	University of Patras, Greece Institute of Chemical Engineering and High Temperature Chemical Processes/Foundation of Research and Technology Hellas.
12/1997 08–09/1996 12/1996 and 08–12/1995	Cambridge University, Cambridge, UK The Isaac Newton Institute for Mathematical Sciences.
09–10/1994	The Swedish Academy of Sciences, Sweden The Mittag–Leffler Institute.
03-06/1993	University of Minnesota Army High Performance Computing Research Center.
June 1992	University of Heidelberg, Heidelberg, Germany Institute for Applied Mathematics.
December 1991	École Central de Lyon, France Department of Mathematics and Computer Science.

04–05/1991 Mathematical Sciences Research Institute, Berkeley

December 1990 College de France, Paris, France

03–06/1990, University of Minnesota

09/1997, Institute for Mathematics & Its Applications.

04/1998 and 04-06/2010

1989–2013 Los Alamos National Laboratory

Visiting Collaborator and Consultant.