



CURRICULUM VITA (Briefly)

Manoug Manougian, Ph.D.

Department of Mathematics and Statistics
University of South Florida, Tampa

Education

Ph.D. (1968) University of Texas at Austin

M.A. (1964) University of Texas at Austin

B.A. (1960) University of Texas at Austin

Academic Positions

Director, STEM Education Center, USF (2010 – present)

Professor, University of South Florida (1976 – present)

Chairman, Department of Mathematics, USF (1974 – 1984)

Associate Professor, Department of Mathematics, USF (1971 – 1976)

Assistant Professor, Department of Mathematics, USF (1968 – 1971)

Teaching Associate, University of Texas at Austin (1966 – 1968)

Assistant Professor, Haigazian University (1960 – 1962) and (1964 – 1966)

Instructor, St. George's School (1954 – 1956)

Grants

NASA –FSGC Rocket Competition \$3,914 (2015 – 2017)

USF Library, Program Coordinator, \$25,000 (2015)

American Mathematical Society, \$7,500 (2015 – 16)

Calouste Gulbenkian Foundation, Director, \$10,000 (2015)

Academy of Applied Science/AEOP, Director, PI, \$50,000 (2011 - 2016)

Jacarlene Foundation, Director, PI \$33,500, (2012 – 2017)

Citi Women in Technology Group, Director, \$4,750 (2016 – 2017)

The Jagged Peak, \$7,500, Director, PI (2012 – 2015)

Steve Voss, former student, \$2,500 promoting STEM Education, (2014)

Honors College, USF, \$10,000, Director, PI (2003 - 2004)

The Philibosian Foundation, Director, PI \$2,000 (2011, 2016)

Florida Dept. of Education/Governor's Program, Co-Director, Co-PI, \$971,600 (1979 – 1995)

National Science Foundation, Director, PI, \$48,895 (1971, 1977)

Awards and Honors

Distinguished Undergraduate Teaching and Service Award, Kosove Society, USF (2015)

Outstanding Undergraduate Teaching Award, USF, (1997, 2002, 2004, 2014)

Distinguished Scholar Award, Haigazian University, (2013)

Endowment to the USF Library honoring Manougian's achievements, \$450,000 (2012)

Excellence in Teaching Award, The National Society of Leadership and Success, (2012)

Outstanding Teaching Award, TIP, USF, (1995, 1999)

A.G.B.U., New York, Scholarship Award, (1966/67)

Gulbenkian Foundation Scholarship (1962)

Armenian Professional Society (Los Angeles) Award, (1962)

Honorary Texas Citizen, (1959)

Scholarship Awards to Study at the University of Texas at Austin, (1956 – 1960)

Research Activities: Applied Research

I directed research on the design, construction and launching of rocket propulsion systems at Haigazian College (1960 – 1966). This student program, called the *Haigazian College Rocket Society*, included the setting up of the required instruments for tests and measurements, and several static tests and launchings were performed. One-, two-, and three- stage rockets were successfully launched some reaching the thermosphere. The last launching involved a 19-ft two-stage rocket with a range of 90 miles.

The *New Scientist Magazine*, (March 12, 2011) in an article headlined “*To Infinity and Beyond*” wrote: “*The launches were remarkably successful.*”

The *Aramco World Magazine* (2013): “... *one of the world’s most successful amateur space programs took off, and with it, the pride of the country.*”

The Cambridge Film Festival, U.K. (2013): “*The story remains truly inspiring...*”

Dr. Robert Massey, Deputy Executive Secretary of the Royal Astronomical Society called the project: “... *an inspiring programme*”

“*A mind-boggling feat ...*” declared the *Smithsonian* magazine (2016).

A 90-minute documentary was released in 2012 featuring this project. The film, produced by About Productions, was premiered at the Toronto International Film Festival, (October 8, 2012). It received the “*Best Feature Documentary Award*” at the Doha Film Festival (Nov. 2012). The documentary has been seen and continues to be shown in the U.K., Canada, Europe, Argentina, the Middle East, and several venues in the U.S. including *Sundance TV* in Utah (2017)

Author of undergraduate mathematics textbooks (a sample)

Precalculus: Algebra and Trigonometry, 3rd Edition (with Charles Odion), Kendall/Hunt (2015)
Introductory Calculus with Applications, 2nd Edition, (with J.S.Ratti), Houghton/Mifflin Co. (1977)
Ordinary Differential Equations, (with R. A. Northcutt), Merrill Publishing Co. 1973
Basic Concepts of Linear Algebra, (with S. Isaak), Norton Publishing Co. 1976

Mentoring and theses director (A sample)

Director, Honors Theses (2016):

“*Development of an Autonomous Sample Return System*” By Nicholas Conde

“*Design of an Amateur Rocket*” By Carey Whitehair

“*Analysis of the S.I.R. Model Utilizing the H1N1 Swine Influenza Virus*” By Timothy Freeman

Doctoral Thesis, committee member: “*Nearest Neighbor Foreign Exchange Rate Forecasting With Mahalanobis Distance,*” by Vindya K. Pathirana (2015)

Honors Thesis, committee member: “*Additive Manufacturing in a Microgravity Environment,*” by Christine E. Lane (2015)

Doctoral Dissertation committee member, “*Bi-integrable and Tri-integrable Coupling and Their Hamiltonian structures,*” by Jinghan Meng, (December 2012)

Doctoral Dissertation, committee member “*Wronskian, Gramian and Pfaffian Solutions to Nonlinear Partial Differential Equations*” by Alrazi Abdeljabbar (2012)

Director: “*The Effect of Drag on Artificial Earth Satellites*” by Anthony Ciesla, (2011)

Director, Honors College Thesis: *Mathematics of Man-made Wonders of the World,*” by Sarah Mustafa, (2010)

Co-Director, (With Dr. M. Elhamdadi) Senior Thesis: *Knot Theory, the Braid Group, and Their Applications in Cryptography,* by Grant Conine, (2010)

STEM Education Center

In 1971, I introduced STEM education for high school students at the University of South Florida. Since 1979 the summer program has been offered continuously. The objective of the program is to promote creativity and provide pre-college students with an in depth understanding of the various STEM fields and their interconnectedness. The program seeks to inspire and challenge the participants to pursue careers in STEM. I serve as Director of the program.

Society of Aeronautics and Rocketry (S.O.A.R.) – Faculty Advisor/Mentor

S.O.A.R. is a USF student club devoted to space exploration. The focus of the society is to promote holistic education and production of new scientific knowledge through innovative research. S.O.A.R. provides a platform for young scientists to develop skills necessary to make an effective problem solving team by fostering the development of individual accountability, positive interdependence, and social skills. All aspects of S.O.A.R. are governed entirely by students under the guidance of the Faculty Advisor.

On Social issues

Co-author and associate producer of a four-hour documentary made for television, examining the history of genocide and man's inhumanity to man from early times to the present. The *Genocide Factor: The Human Tragedy* was produced by Media Entertainment, Inc. and distributed by PBS stations and the History Channel internationally. It is introduced by award winning actor Jon Voight. The series received the *2002 Gold Special Jury Award for Best Television and Cable TV Series Documentary* at the Houston International Film Festival. It was chosen as "*One of the 10 Best Documentaries*" at the Prism Foundation 12th Night Film Festival in 2002. See http://robertjemery.com/genocide_factor.htm

The Center for the Study of Family Violence (USF)

Through a gift by a friend, James N. Harrell, I helped in establishing the Harrell Center for the Study of Family Violence, located in the College of Public Health at U.S.F. I serve on its Advisory Board. I edited and published a book on the subject: "*Working Together to End Domestic Violence*" authored by P. Jaffe, Nancy Lemon, Jack Sandler and David Wolfe, 1996.

Social Issue Courses Taught in the Honors College (USF)

The History of Genocide: Man's Inhumanity to Man

Invited Speaker/Participant

Invited Delegate to the 2016 *Global Aerospace Summit*, Abu Dhabi (UAE) March 2016

Mathematics Program evaluator: the American University at Sharjah, Dubai (UAE)

Invited Speaker, College of Arts and Sciences, USF - **Trail Blazers**

"From Flying Carpets to STEM Education: How My Students and I Reached the Thermosphere." (Nov. 2015)

Invited Speaker, Pleasantville Film Festival, N.Y. (Sept., 2014)

Keynote Speaker, Florida Gulf Coast University, "On STEM education," (Jan., 2014)

Invited Speaker, The Cambridge Film Festival, Cambridge, U.K. (Sept., 2013)

Invited Speaker, Haigazian University, Beirut, Lebanon, (April, 2013)

Invited Speaker, Toronto International Film Festival, (Sept. 2012)

Keynote Speaker, Haigazian University, 55th Anniversary, Glendale, CA (Nov., 2011)

Invited Speaker, Oxford Round Table, Oxford, U.K.: Member and Speaker.

Invited Speaker, "*Man's Inhumanity to Man*," Eastern Connecticut State Univ., (March 2009)