

MOSTAFA GHANDEHARI

OFFICE

Civil Engineering
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OBJECTIVE

To engage in research and teaching of bioengineering, civil engineering, computer science, mathematics, statistics, operations research, industrial engineering, and to contribute to the on-going task of improving the working and studying environment for faculty, students and staff.

EDUCATION:

Ph.D. Bioengineering, Univ. of Texas at Arlington, Expected(May 2014)
Ph.D., Mathematics, University of California, Davis (June 1983)
Dissertation topic: Geometric Inequalities in the Minkowski Plane.
M.E.A., Engineering Administration, University of Utah (August 1980)
M.S., Mathematics, University of Arizona (December 1978)
B.A., Mathematics, University of Utah (August 1974)
University of Wisconsin, Madison, Graduate Work in Mathematics (Fall 1975)
University of Washington, Graduate work in Mathematics (September 1974 - March 1975)
Chapman University, Graduate work in Psychology (Fall 1990)
Monterey Peninsula College, French and Spanish (August 1990 - June 1991)
University of San Francisco, Counseling and Educational Psychology (1983 - 1986)
Institute of European Studies, Paris, France, French language (Summer 1983)

AREAS OF SPECIALIZATION:

Mechanics
Traffic flow theory
Algorithms and theory of computation
Discrete and Convex Geometry
Calculus of variations and optimal control
Differential and Integral Equations
Pharmacokinetics

Honors and Awards

Outstanding Civil Engineering Instructor(Universty of Texas at Arlington 2007-2008)
Honorary life member, Golden Key honor society
Top five percent for teaching award(Naval Postgraduate School, Monterey, California 1989)
Nominated for the college of science teaching award(University of San Francisco 1986)
Member of the New York Academy of Sciences(1985)
Pi Mu Epsilon member, Honorary National Mathematical Society
Earl C. Anthony Graduate fellowship(University of California at Davis, 1980)
Undergraduate merit scholarship(University of Utah 1973-74)

EXPERIENCE

Senior Lecturer, University of Texas at Arlington, Civil Engineering (2004-present)
Lecturer, University of Texas at Arlington, Mathematics (1998-present)
Senior Lecturer, University of Texas at Arlington, Computer Science and Engineering (2004-2008)
Lecturer, University of Texas at Arlington, Computer Science and Engineering (2000-2004)
Lecturer, University of Texas at Arlington, Civil and Environmental Engineering (1999-2004)
Lecturer, University of Texas at Arlington, Mathematics (1998-present)
Instructor, University of Texas at Arlington, Upward Bound, Summer (1999-2000)
Instructor, Texas Christian University (1997-1998)
Visiting Assistant Professor, University of Texas at Arlington (1995-1997)
Instructor, San Joaquin Delta College (1993 - 1994)
Visiting Lecturer, University of the Pacific (1992 - 1993)
Lecturer, University of California, Davis (1991 - 1992)
Assistant Professor, Naval Postgraduate School (1989 - 1991)
Adjunct Professor, Naval Postgraduate School (1988 - 1989)
Adjunct Lecturer, Santa Clara University (1987 - 1988)
Instructor, Menlo College (1987 - 1988)
Lecturer, San Jose State University (1986 - 1987)
Assistant Professor, University of San Francisco (1983 - 1986)
Instructor, University of San Francisco (1982 - 1983)
Teaching Assistant, University of California, Davis (1979 - 1982)
Teaching Assistant, University of Arizona (1976 - 1978)
Student employee, Science Library, Massachusetts Institute of Technology (summer 1973)
Tutor, University of Utah (1972 - 1974)
Instructor, Marvi High School, Tehran, Iran 1971

Civil engineering courses taught:

Statics and dynamics, Stochastic Models for Civil Engineering, Numerical Methods in Structural Engineering, numerical methods in mechanics, construction productivity, construction and value engineering

Computer science and engineering courses taught:

Discrete Structures, Algorithms and Data Structures, Theoretical Concepts in Computer Science and engineering, Neural Network Design, computer Graphics, Advanced programming

Mathematics courses taught:

Introduction to Foundations of Geometry, Calculus, Precalculus, Finite Mathematics, Trigonometry, College Algebra, Linear Algebra, Vector Analysis, Ordinary Differential Equations, Intermediate Algebra, Introduction to Modern Algebra, Advanced Linear Algebra, Real Analysis, Advanced Calculus, Calculus of Variations, Discrete Structures, Topics in Calculus of Variations, Principles and Techniques of Applied Mathematics, Intermediate Analysis, Logic, Integral Transforms, Mathematics for Social Sciences, Introduction to Abstract Mathematics, Mathematical Programming, Introduction to Probability and Statistics, Mathematical Statistics, Texas Academic Skills Program (TASP), Elementary Algebra, Mathematical Modeling, Arithmetic Problem Solving, Wave Propagation.

TRAININGS

Institute for Retraining in Computer Science, Clarkson University (Summers: 1984 1985)
Cray Time Sharing, California State University, Sacramento (1987)
Intel Parallel Computing, Beaverton, Oregon (1991)
Library Reference, University of Texas at Arlington (1997)

MEMBERSHIPS

American Mathematical Society, Mathematical Association of America, Institute for Operations Research and Management Sciences. Honorary member of the Golden Key International Honour Society, US Chess Federation, American Society of Civil Engineers

PUBLICATIONS

" Macroscopic Speed-Flow Models for Characterization of Freeway and Managed Lanes, " Buletinul Institutului Politehnic Din Lasi, Vol. LVII(LXI), No.1, 2011, pp. 149-159(with S. Ardekani and S. Nepal)

Ghandehari, Mostafa. "Restricted Curvature in the Minkowski Plane." *Journal of Mathematical Inequalities* 4.2 (2010): 307-313.

Ghandehari, Mostafa and Siamak Ardekani. "A System of Partial Differential Equations for Traffic Flow." *Libertas Mathematica* 29 (2009): 139-142.

Ghandehari, M. & Ardekani, S. (2008). *An Analysis of Modified Greenberg Speed-flow model.* Arlington, TX: Math. Dept. UT Arlington.

Ghandehari, Mostafa and Siamak Ardekani. "The Laplace Transform of the Linear Car-following Model." *Libertas Mathematica* 28 (2008): 143-147.

Ghandehari, Mostafa and Jennifer Holyk. "A geometric inequality in pharmacokinetics." *Libertas Mathematica* 27 (2007): 99-104.

Ghandehari, M. & Kashefi, F. (2007). *Geometry of Post's Correspondence Problem.* In *ASEE Gulf-Southwest Annual Conference* (pp. 1-4). University of Texas-Pan American: American Society for Engineering Education.

Ghandehari, M. & O'Neill, E. J. (2005). *The reflection property in normed linear planes with applications to generalized conics.* Arlington, TX: Math Dept. UT Arlington, TR#351.

Ghandehari, M. & Kashefi, F. (2005). *Geometrical Problems in Engineering Mechanics.* Arlington, Texas: Math. Dept. Univ. of Texas at Arlington, TR#352.

Ghandehari, M. & Khan, S. (2003). *Examples from elements of theory of computation.* In *ASEE Gulf-Southwest 2003.* University of Texas at Arlington: ASEE.

Ghandehari, M., Nestell, M., & Sridhar, S. (2002). A quadratic matrix equation. Arlington, TX: Math. Dept. UT Arlington.

Ghandehari, Mostafa. "Tennis and basketball the lazy way." *The Mathematical gazette* 86.no.507 (2002): 501.

Ghandehari, Mostafa and Merlynd Nestell. "A quadratic Fredholm integral equation and its solution for various kernels." *Libertas Mathematica* 22 (2002): 41-48.

Ghandehari, M. (2001). Minkowski's inequality for convex curves. Arlington, TX: Math. Dept., UT Arlington.

Ghandehari, M. (2001). A geometric inequality for convex polygons. Arlington, TX: Math. Dept., UT Arlington.

Ghandehari, Mostafa and Michael Golomb. "Minimum path problems in normed spaces: reflection and refraction." *J. Optim. Theory Appl.* 105.no.1 (2000): 1-16.

Nestell, M. & Ghandehari, M. (2000). A quadratic Volterra integral equation and its solution for various kernels. In *Volterra equations and applications*(Arlington, TX 1996) (pp. 357-365). Arlington, TX: Gordon and Breach.

Ghandehari, Mostafa. "Total Curvature in Minkowski planes." *Libertas Mathematica* 20 (2000): 107-112.

Ghandehari, Mostafa and Michael Golomb. "Minimum Path Problems in Normed Spaces: Reflection and Refraction." *Journal of Optimization Theory and Applications* 105.1 (2000): 1-16.

Ghandehari, Mostafa. "Controlling Curvature in Minkowski Planes." *Journal of Mathematical Analysis and Applications* 252.no.2 (2000): 951-958.

Ghandehari, Mostafa and Edward J. O'Neill. "Self-circumference of rotors." *Acta Mathematica Hungarica* 79.no.3 (1998): 179-190.

Ghandehari, Mostafa. "Ray Optics on Surfaces." *Libertas Mathematica* 18 (1998): 49-52.

Ghandehari, Mostafa. Rev. of *Global Methods in Optimal Control*, by Vadim F. Krotov. *SIAM Review* 1998: 152.

Ghandehari, Mostafa and Merlynd Nestell. "On a separable nonlinear Volterra integral equation with power nonlinearity." *Libertas Mathematica* 17 (1997): 175-181.

Ghandehari, M. (1997). Snell's law in normed linear planes. Arlington, TX: Math. Dept., UT Arlington.

Ghandehari, M. (1997). Heron's problem in the Minkowski plane. Arlington, TX: Math. Dept. UT Arlington, TR#306.

Ghandehari, Mostafa. "An Optimal control formulation of the Blaschke-Lebesgue theorem." *J. Math. Anal. Appl.* 200.no.2 (1996): 322-331.

Ghandehari, Mostafa. "Polar duals of rotors." *Acta Mathematica Sinica, new series* 12.no.1 (1996): 40-42.

Ghandehari, Mostafa. "Sums of distances in normed spaces." *Acta Math. Hungar.* 67.no.1-2 (1995): 123-129.

Ghandehari, Mostafa and Richard Pfiefer. "Polygonal Circles." *Mathematics and Computer Education Journal* 29.no.2 (1995): 203-210.

Ghandehari, Mostafa and Dave Logothetti. "How the elliptic integrals K and E arise from circles and points in the Minkowski plane." *J.Geom.*50.no.1-2 (1994): 63-72.

Ghandehari, Mostafa. Rev. of *Foundations of Coding*, by J. Adamek. *SIAM review* 1994: 125.

Ghandehari, Mostafa. "Steinhardt's inequality in the Minkowski plane." *Bull. Austral. Math. Soc.* 45.2 (1992): 261-266.

Ghandehari, Mostafa. "Polar duals of convex bodies." *Proc. Amer. Math. Soc.* 113.no.3 (1991): 799-808.

Ghandehari, M. & Pfiefer, R. (1989). *Self-Circumference in the Minkowski Plane*. Monterey, California: Naval Postgraduate school.

Chakerian, G. D. & Ghandehari, M. A. (1985). The sum of distances determined by points on a sphere. In *Discrete geometry and convexity* (pp. 88-91). New York: New York. Acad. Sci.

Andrew, A. D. & Ghandehari, M. A. (1985). An inequality for a sum of distances. In *Sundance Conference on combinatorics and related topics, Cong.Num.*50 (pp. 31-35). Sundance, Utah:.

Chakerian, G. D. and M. A. Ghandehari. "The Fermat problem in Minkowski spaces." *Geom. Dedicata* 17.3 (1985): 227-238.