

FERNANDO TOVIA

100 Leverington Av. PH17 Philadelphia, PA 19127. Tel~(Cell) (215) 429-3366 ~(Office)
(215) 491-5652

toviaf@philau.edu. <http://faculty.PhilaU.edu/toviaf>

EDUCATION

Ph.D. in Industrial Engineering, University of Arkansas, July 2004

Concentration: Supply Chain Modeling, Service Parts Logistics, Applied Operations
Research and Simulation Systems.

Dissertation: Modeling and Analysis of Regional Service Parts Logistics Systems.

Master of Science Industrial Engineering, Oklahoma State University, December 1987

Concentration: Operations Research, Manufacturing Systems, Information Systems.

Bachelor of Science Industrial Engineering, Universidad de las Americas, Mexico,
December 1981

PROFESSIONAL EXPERIENCE

Associate Professor of Engineering, Philadelphia University (August 2004- present)

Responsibilities include Program Coordinator of the Industrial and Systems Engineering
program, developing and teaching undergraduate and graduate courses, and developing
an active program of sponsored research.

Drexel University, Adjunct Associate Professor and Course Chair, (Fall 2009 –
present)

Systems Engineering and Engineering Management Program

Associate Adjunct Professor, Temple University (Fall 2009 – December 2017)

Taught ENGR3096 Economic Analysis (Fall 09 – Fall 14), College of Engineering
STEM Summer Camp Academic Director (Summer 2014 – Fall 2017), College of
Science and Technology

National Textile Center Site Director, Philadelphia University (March 2005-2009)

President and Owner, Manufacturas Monarca (Puebla, Mexico, 1992 – 2001)

General Manager, Textiles El Centenario (Puebla, Mexico, October 1987 – May 1992)

RESEARCH PROJECTS

***Summer STEM (Science Technology Engineering and Math) Camp 2017, 2016, 2015,
2014, 2013, 2012, PI, McKean Defense Group FY 2017 \$39404, FY 2016 \$39, 971,
FY 2015 \$50,000, FY 2014, \$50,000, FY 13, \$50,400, FY2012 \$42,400***

Conducted in collaboration with the GSEP a two-week non-residential summer camp for
fifty underrepresented middle and high school girls from the Greater Philadelphia Area.

***Greater Philadelphia STEM Center After School Program, PI, McKean Defense
Group, FY 2017 \$30,000, FY 2016 \$30,000, FY 2015 \$25,000, FY 2014 \$25,000, FY
2013 \$24,995, FY 2012, \$14,500, 2011 \$11,425***

The project consists of developing and implementing a 15-week after school curriculum
for inner city middle school to engage, attract, and educate student STEM majors.

***PU-GSEP STEM Summer and Day Camps for Middle School Students, PI, DVIRC-
Lenfest Foundation, FY 2011, \$35,000, 2010 \$32,000***

The project consists of conducting a two-week non-residential STEM Summer Camp in collaboration with the Girls Scouts of Eastern Pennsylvania.

***Alkali-Activated Fly Ash Concrete for Emergency Residential Shelters*, Co-PI, National Science Foundation, Award No. 0923818, FY 2009-10, \$50,000.**

The objective of this research is to develop technology that utilizes alkali-activated fly ash concrete for fabrication of precast emergency residential shelters.

***Activated Fly Ash-Based Concrete as a Sustainable Structural Building Material"*, Co-PI, Delaware Valley Key Innovation Grant, FY 2009 \$11,400.**

The objective of this research project is to develop a methodology for utilization of fly ash in AAFAC to produce structural concrete members.

***Scent-Infused Textiles to Enhance Consumer Experiences*, Co-PI, National Textile Center, Project F05-PH03, FY 2005 \$47,626 , FY 2006 \$302,072, FY 2008 \$102,000**

This project will explore the incorporation of scents into polymers that are then extruded into fibers and the psychology of acceptance of synthetic scents in textile goods.

***Emergency Logistics: A model to assess the logistics challenges in humanitarian relief responses*, PI, Minority Junior Faculty Award – Lindback Foundation, FY 2005 \$15,000 (May 2005- April 2006).**

The objective of this project is to develop a computer simulation model that incorporates risk assessment and risk management to gain insights into the behavior of the emergency logistics systems.

***Genetic Algorithms in Molecular Design of Novel Fibers*, Co-PI National Textile Center, Project C05-PH01, FY 2005 \$151,739, FY 2006 \$299,500**

This project will use the newest approaches from Genetic Algorithms to establish an extensive structure-property correlation database library.

***Stimulating High School Students in Engineering*, PI, Delaware Valley Industry Research Center Grant, FY 2005 \$15,000, FY 2006 (\$70,000), FY 2007 (\$10,000)**

The objective is to conduct research on how high school students respond to early exposure to solve engineering problems.

Dept. of Industrial Engineering, University of Arkansas

***Modeling and Analysis of Regional Service Parts Logistics Systems* (2002 – 2004).**

This dissertation, a collaboration with a major retailer, involved development and implementation of an integral solution to the assignment of technician coverage, and the inventory and operational policies in a service parts supply chain.

***Performance and Uptime Analysis for Production Lines* (2001- 2002)**

This research project, funded project by ConAgra Foods, involved the analysis and optimization of the operation of their Healthy Choice production lines.

ACADEMIC AWARDS AND HONORS

The Chartered Institute of Logistics and Transportation (UK), Best Paper Award for the Logistics Research Network Conference 2006, “An Emergency Logistics Response System for Natural Disasters”, September 2006

Christian R. & Mary F. Lindback Foundation, Minority Junior Faculty Award, May 2005-April 2006.

Organization of American States Fellowship, 2002 – 2004

CONACYT (National Science Agency in Mexico) Fellowship, 2002 – 2005

Member of Alpha Pi Mu, Tau Beta Pi

PROFESSIONAL MEMBERSHIPS

American Society for Engineering Education
Humanitarian Emergency Logistics Professionals
Institute of Industrial Engineers (IIE)
Institute for Operations Research and the Management Sciences (INFORMS)
The Chartered Institute of Logistics and Transportation UK

PROFESSIONAL SERVICE

Board Grant Reviewer member, Pontificia Universidad Catolica de Peru (2016-present)
Editorial Board, Journal of Humanitarian Logistics and Supply Chain
Network of Talents, Institute of Mexicans Aboard, Mexican State Department, member since July 2009
IIE South Jersey Professional Chapter, Director-at-large, member of the Board of Directors (January 2007-present)
Reviewer, Industrial Engineering Research Conference, International Journal of Logistics Research and Applications, Journal of Humanitarian Logistics and Supply Chain.

PUBLICATIONS

Rostami, H., Tovia, F., Masoodi, R., and Bahadory., "Reduction of Corrosion of Reinforcing Steel in Concrete Using Alkali Ash Material", Journal of Solid Waste Technology and Management, Vol. 41, Issue 2, April 2015

Rostami, H., Tovia, F. and Bahadory, M. "Alkali Activated Material: Compression between Sodium and Potassium Based Activation" accepted for publication in International Refereed Journal of Engineering and Science (IRJES), 2014.

Rostami, H., Brooks, M., Tovia, F., R., Bahadory, "Removal of Mercury from Contaminated Water", The Journal of Information Systems Technology & Planning, Vol. 4, Issue 10, September 2011.

Brooks, M. R., Bahadory, M., Tovia, F., Rostami, H. "Removal of Lead from Contaminated Water", International Journal of Soil, Sediment and Water, accepted for publication, October 2010.

Tovia, F., Whitt B., "Implementing a Dynamic Inventory in a Perishable Frozen Warehouse", Proc. of the 2010 Industrial Engineering Research Conference, June 2010, Cancun, MX.

Bahadory, M., Brooks, M. R., Tovia, F., Rostami, H., "Alkali Activated Material: Comparison of Na and K Based Activation, accepted for publication to the ACI Structural and Materials Journal.

Tovia, F., Brooks, R., Cassady, R., Rossetti, M., "Modelling and Analysis of Service Parts Logistics Systems", accepted for publication, The International Journal of Operations Research, to appear, Vol. 10, No. 1, 2011.

Brooks R., Bahadory, M., Tovia, F., Rostami, H., "Reduction of Corrosion of Reinforcing Steel in Concrete using Alkali Ash Material", The Journal of Solid Waste, Vol. 35, No. 3, August 2009

Tovia, F., Stover, L., Ruiz, E., "Backlog of Matriculas and Passports at Consulates: Implement an Integrated Industrial Engineering Approach", Proc. of the 2009 Industrial Engineering Research Conference, June 2009, Miami, US.

Rostami, H., Brooks R, Tovia, F., Bahadory, M., “Development of Lightweight Construction Material from Alkali Activated Fly Ash”, *The Journal of Solid Waste and Technology Management*, V35, No. 1, August 2009.

Tovia, F, Cassady, R., Rossetti, M., “Modeling and Analysis of Service Parts Logistics Systems”, *Proc. of the Logistics Research Network Conference 2008*, September 2008, Liverpool, UK.

Yan L, Tovia, F., Pierce, “Consumer Acceptability of Scent-infused Knitting Scarves Using Functional Melt-spun PP/PLA Bicomponent Fibers”, *Textile Research Journal*, Vol. 79, No. 6, pp. 566-573, 2009.

Yan L, Tovia, F., Pierce, J.D., Balasubramian, K., Dugan, F. , “Scent Infused Textiles to Enhance Consumer Experiences”, *The Journal of Industrial Textiles*, Vol. 37, No. 3, January 2008.

Tovia, F. “An Emergency Logistics Response System for Natural Disasters”, *International Journal of Logistics Research and Applications*, Volume 10, No. 3, September 2007, pp173-186.

Tovia F, Liu, Y., “Students Evaluating Significant Factors on Retention: A Statistical Analysis”, *Proc. Of the International Conference on Engineering Education*, accepted for publication and presentation, September 3-7, 2007, Coimbra Portugal.

Tovia F, Rostami, H., “Implementation of Sustainable Residential Shelters: A Feasibility Analysis”, *Proc. of the Logistics Research Network Conference 2007*, September 2007, Hull, UK.

Tovia F, Govindaraj, M., Brookstein, D., “A New Multidisciplinary Engineering Education Initiative”, *Proc. of the ASEE 2007 Annual Conference*, Hawaii, US.

Tovia, F. “An Emergency Logistics Response System for Natural Disasters”, *Proc. of the Logistics Research Network Conference 2006*, September 2006, New Castle, UK.

Tovia F., “Modeling and Analysis of Regional Service Parts Logistics Systems”, Ph.D. Thesis , University of Arkansas, Fayetteville, August 2004.

Tovia F., S.J. Mason and B. Ramasami and, “A Scheduling Heuristic for Maximizing Wirebonder Throughput”, *IEEE Transactions on Electronics Packaging Manufacturing*, Volume 27, No. 2, p 145-150.

Tovia, F. and C.R. Cassady., “Simulating Service Parts Logistics System”, *Proc. of the Industrial Engineering Research Conference*, May 15-20, 2004, Houston, Texas

Tovia, F. and C.R. Cassady., “The Value of Information Sharing in a Service Parts Logistics System”, *Proc. of the Industrial Engineering Research Conference*, May 18-20, 2003, Portland Oregon.

Ramasami, B., F. Tovia and S.J. Mason, “Mathematical Programming Approach for Wire Bonder Scheduling”, *Proc. of the Industrial Engineering Research Conference*, May 18-20, 2003, Portland Oregon.

Tovia, F., C.R. Cassady, and E. Kutanoglu, “Inventory Management through Information Sharing and Collaboration”, *Proc. of the 31st International Conference on Computers & Industrial Engineering*, February 2-4, 2003, San Francisco, CA.

Tovia, F., E. Kutanoglu and T. Collins, "Performance and Uptime Analysis for Production Lines", Technical Report for Con Agra Frozen Foods, The Logistics Institute, University of Arkansas, October 2002, Fayetteville, AR.

Tovia, F., E. Kutanoglu and T. Collins, "A Throughput and Uptime Analysis in a Frozen Food Industry", Proc. of the Industrial Engineering Research Conference, May 17-20, 2002, Orlando, FL.