

Ahmed Ghoniem

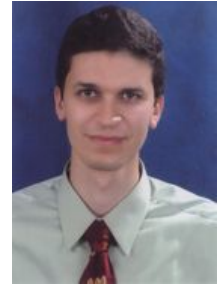
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Professional Positions

Fall 2008-Present Assistant Professor, Department of Finance and Operations Management, Isenberg School of Management, University of Massachusetts, Amherst.
2007-2008 Postdoctoral Associate at the ISE Department, Virginia Tech.

Education

June 2007 Ph.D., **Industrial and Systems Engineering (ISE)**, Virginia Tech, USA.
Dissertation Topic : Enhanced Formulations for Minimax and Discrete Optimization Problems with Applications to Scheduling and Routing. **Advisor** : [Dr. Hanif D. Sherali](#).
August 2003 M.S., **Industrial and Systems Engineering**, Virginia Tech.
July 2002 M.S., **Operations Management in Production and Logistics**, Ecole des Mines de Nantes (EMN), France.
1997-1998 **Preparatory classes** for the competitive exams of the French Engineering Schools in Lycée Clémenteau, Nantes, France.
June 1997 **French Baccalauréat** (A-level equivalent) with distinction, Doha, Qatar.

Professional Experience and Interests

Academic-related Experience

Instructor FINOPMGT 497S *Supply Chain Management* (Spring 2009, 2010).
SCH-MGMT 752 *Deterministic Models in Management Science*, UMass, Amherst (Fall 2008, Fall 2009).
SCH-MGMT 825X *Integer Programming*, UMass, Amherst (Spring 2009, 2010).
Teaching Assistant ISE 6514 *Advanced Topics in Mathematical Programming*, Virginia Tech (Fall 2007).
ISE 5406 *Optimization II*, Virginia Tech (Spring 2007, Spring 2008).
ISE 2204 *Manufacturing Processes*, Virginia Tech (Spring 2004).
Research Assistant ISE Department, Virginia Tech (2004-2007).

Industry-related Experience

2005-2006
- Proposal co-writing and consulting study for *Volvo Logistics North America* : Optimization of joint truck assembly-routing problems (with Dr. Hanif D. Sherali).
- Proposal co-writing and consulting study for *Harley-Davidson Motor Company* : Balancing production and resource consumption in a mixed-model assembly line (with Dr. Hanif D. Sherali).
Summer 1999 Internship at *Motorola Semiconducteurs* (Toulouse, France). Study of the factors that influence the performance of the stepper in the Photolithography Area. Company advisor : Bernard Cassini.

Research/Teaching Interests

- Large-scale optimization in logistics and in airline, machine, and sports scheduling.
- Mathematical programming (linear, nonlinear, integer, and dynamic programming).
- Enhanced mathematical formulations and tight polyhedral representations.
- Production and retail operations management.

Publications/Presentations

Accepted/Submitted Papers

- (1) Sherali, H. D. and Ghoniem, A. (2008), Joint vehicle assembly-routing problems : An integrated modeling and optimization approach, *Networks*, 53 (3), 249-265.
- (2) Ghoniem, A. and Sherali, H. D. (2009), Complementary column generation and bounding approaches for set partitioning formulations, *Optimization Letters*, 3 (1), 123-136.
- (3) Ghoniem, A. and Sherali, H. D. (2009), Models and algorithms for the scheduling of a doubles tennis training tournament, *Journal of the Operational Research Society*, forthcoming.
- (4) Ghoniem, A. and Sherali, H. D. (2009), Defeating symmetry via objective perturbations and hierarchical constraints, in review after 1st revision.
- (5) Ghoniem, A., Scherrer, C. R. and Solak, S. (2009), Vehicle routing with demand allocation for nonprofit distribution operations, in review.
- (6) Ghoniem, A. and Sherali, H. D. (2010), Set partitioning/packing versus assignment formulations for subassembly matching problems, in review.

Conference Papers

- (1) Musa, R., Chen F. F., and Ghoniem, A. S. (2006), Dynamic variation reduction technique in assembly lines after batch inspection, *IERC Proceedings*, Orlando, FL, May 2006.

Presentations

A column generation approach for joint vehicle assembly-routing problems, INFORMS Annual Meeting, San Diego, October 13, 2009 (invited talk).

Joint optimization of aircraft arrival and departure schedules, INFORMS Annual Meeting, San Diego, October 11, 2009 (invited talk).

Joint assortment, pricing, and ordering in retail management, IIE Annual Conference and Expo, Miami, FL, June 2, 2009 (invited talk).

Joint vehicle assembly-routing problems : an integrated modeling and optimization approach, UMass Amherst INFORMS Student Chapter, October 24, 2008 (invited talk).

Symmetry compatible formulations via objective perturbations and hierarchical constraints, INFORMS Annual Meeting, Washington D.C., October 13, 2008 (invited talk).

Joint vehicle assembly-routing problems : an integrated modeling and optimization approach, Virginia Tech INFORMS Student Chapter, May 2, 2007 (invited talk).

Grants

- (1) Optimization of Aircraft Arrival and Departure Schedules in Multiple-Runway Airports. Funded by Faculty Research Grant/Healey Endowment Grant, University of Massachusetts Amherst, 2008-2009. Amount : \$6,990.

Ph.D. Students

- (1) Farbod Farhadi (2009-2013), Management Science Ph.D. Track, Isenberg School of Management, University of Massachusetts.

Misc.

Awards & Honors

2009
2008

Outstanding Faculty Support Award, INFORMS Chapter, University of Massachusetts Amherst.
Nominated by the Isenberg School of Management, University of Massachusetts Amherst, to attend the Teaching Effectiveness Colloquium at the *INFORMS* Annual Meeting, Washington D.C..

Misc. (continued)

- 2006** Nominated by the ISE Department, Virginia Tech, to attend the Doctoral Colloquium at the *INFORMS* Annual Meeting, Pittsburgh, PA.
- 1997-1999** Awarded an Excellence Scholarship by the French government.
- 1997** Ranked 1st at the French Baccalauréat exam for French schools in the Middle East.

Membership

- 2006-present** The Institute for Operations Research and the Management Sciences (INFORMS).
- 2008-present** Institute of Industrial Engineers (IIE).

Services

- 2007** Referee for the *Journal of Global Optimization*, *IEEE Transactions on Intelligent Transportation Systems*.
- 2005-2006** President, *INFORMS* Student Chapter, Virginia Tech.