Sibel B. Sonuç

Ph.D.
University of Florida
Industrial and Systems Engineering

Phone: +1-352-871-4363
Email: `sibel.bilge@ufl.edu`
Homepage: `http://plaza.ufl.edu/sibel.bilge/`

Education

Doctor of Philosophy Industrial and Systems Engineering, University of Florida, December, 2012.
Dissertation Title: Multi-stage MIP Formulation and Exact Solution Approaches for Combinatorial Network Problems.
Advisor: Professor J. Cole Smith

Master of Science Industrial Engineering, Koc University, Istanbul, Turkey, 2007.
Thesis Title: A Scatter Search Approach for Protein Folding Problem in 2D *HP-Model.*
Advisor: Professor Ceyda Oguz

Bachelor of Science Industrial Engineering, Koc University, Istanbul, Turkey, 2005.

Bachelor of Science Mathematics, Koc University, Istanbul, Turkey, 2005.

Employment

January'14 - now Visiting Scholar, Industrial Engineering and Management Systems, University of Central Florida, Orlando, FL.

Spring'14 Adjunct, Industrial Engineering and Management Systems, University of Central Florida, Orlando, FL.

Spring'13 Adjunct, Industrial Engineering and Management Systems, University of Central Florida, Orlando, FL.

August'07 - December'12 PhD Student (Graduate Research Assistant, Teaching Assistant, Instructor), Industrial and Systems Engineering, University of Florida, Gainesville, FL.

Research Interests

Operations research, integer programming, network optimization, large-scale optimization, heuristics, optimization on social networks, optimization on trust networks.

Research Experience

Research Assistant, Department of Industrial and Systems Engineering, University of Florida, Gainesville, FL. *8/2007-12/2012.*

Research Assistant, Department of Industrial Engineering, Koc University, Istanbul, Turkey. *8/2005-7/2007.*

Work/Study Student, SystemsLab, Department of Industrial Engineering, Koc University, Istanbul, Turkey. *11/2001-6/2005.*

Publications

Working Papers/Submitted

S. B. Sonuc, J. C. Smith, I. V. Hicks. "A branch-and-price-and-cut method for computing an optimal bramble," *Working paper*.

S. B. Sonuc, J. C. Smith. "An integer programming approach for liar's domination problem variation," *Working paper*.

Book Chapters

J. C. Smith, **S. B. Sonuc**. "An introduction to integer and large-scale linear optimization," In *Wireless Network Design*. Springer, 2011. 65–97.

S. B. Sonuc, J. C. Smith. "Models for assessing vulnerability in imperfect sensor networks," In *Dynamics of Information Systems: Algorithmic Approcahes*. Springer, 2013.

Talks

S. B. Sonuc, J. C. Smith. "An integer programming approach to determine maximum ambiguity in fault tolerant sensor networks". *INFORMS Annual Meeting Phoenix, 2012.*

S. B. Sonuc, J. C. Smith. "Integer programming approach to determine maximum ambiguity in fault tolerant sensor networks". *INFORMS Optimization Society Conference*. Miami, FL, 2012.

S. B. Sonuc, J. C. Smith. "Multi-stage programming for liar's domination problem variation". *First International Conference on Network Analysis*. Gainesville, FL, 2011.

S. B. Sonuc, J. C. Smith. "An integer programming approach for liar's domination problem variation". *INFORMS Annual meeting Charlotte, 2011.*

S. B. Sonuc, J. C. Smith, I. V. Hicks. "A branch-and-price-and-cut method for computing the bramble". *INFORMS Annual meeting Austin, 2010.*

S. B. Sonuc, J. C. Smith, I. V. Hicks. "A branch-and-price-and-cut algorithm for determining an optimal bramble number". *INFORMS Annual meeting San Diego, 2009.*

S. B. Sonuc, J. C. Smith, I. V. Hicks. "A branch-and-price-and-cut algorithm for determining branch-width". *INFORMS Annual meeting Washington, 2008.*

Professional Activities

Memberships

Institute for Operations Research and Management Science (INFORMS)

INFORMS Optimization Society

Society of Industrial and Applied Mathematics (SIAM)

Reviews

Omega, The International Journal of Management Science *(Elsevier)*

Optimization Letters *(Springer)*

Awards

INFORMS Teaching Effectiveness Colloquium participant, 2010.
Nominated by the Department of Industrial and Systems Engineering, University of Florida.

Full Support Through Teaching and Research Assistantship During PhD Studies, 2007-2012.
Department of Industrial and System Engineering, University of Florida.

Full Support Through Teaching and Research Assistantship During Master Studies, 2005-2007.
Department of Industrial Engineering, Koc University.

Full Support During Bachelor Studies, 2000-2005. (Ranked among top 1000 in university entrance exam, Turkey, 2000)
Department of Industrial Engineering, Koc University.

Teaching Experience

Instructor (University of Central Florida)

EIN 4364: Facilities Planning
Spring'14

EIN 4333: Production and Distribution Systems
Spring'13

EIN 4364: Facilities Planning
Spring'13

Instructor (University of Florida)

EIN 4365: Facilities Planning and Material Handling
Spring'10, Fall'09

EIN 3314C: Work Design and Human Factors
Spring'09

Teaching Assistant (University of Florida)

ESI 6314: Deterministic Methods in Operations Research
Fall'11 (OEM 2013)

EIN 4365: Facilities Planning and Material Handling
Fall'10, Fall'08, Spring'08, Fall'07

ESI 4523: Industrial Systems Simulation
Summer'09

Teaching Assistant (Koc University)

> INDR 568: Heuristic Methods
>
> INDR 262: Introduction to Optimization Methods

References

J. Cole Smith
Professor
University of Florida
Department of Industrial and Systems
Engineering

Phone: +1-352-392-1464 (x2020)
Fax: +1-352-392-3537
Email: cole@ise.ufl.edu
Homepage: http://www.ise.ufl.edu/cole

Panos M. Pardalos
Distinguished Professor
University of Florida
Department of Industrial and Systems
Engineering

Phone: +1-352-392-1464 (x9011)
Fax: +1-352-392-3537
Email: pardalos@ufl.edu
Homepage: http://www.ise.ufl.edu/pardalos

Joseph Geunes
Professor
University of Florida
Department of Industrial and Systems
Engineering

Phone: +1-352-392-1464 (x2012)
Fax: +1-352-392-3537
Email: geunes@ise.ufl.edu
Homepage: http://www.ise.ufl.edu/geunes

Jean-Philippe P. Richard
Associate Professor
University of Florida
Department of Industrial and Systems
Engineering

Phone: +1-352-392-1464 (x2018)
Fax: +1-352-392-3537
Email: richard@ise.ufl.edu
Homepage: http://www.ise.ufl.edu/richard

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