

## HARIHARA P. NATARAJAN

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### ACADEMIC POSITIONS

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<b>Associate Professor, University of Miami, Coral Gables, FL</b>	2011-current
<i>Sabbatical at Koc University, Istanbul, Turkey</i>	Spring 2012
<b>Assistant Professor, University of Miami, Coral Gables, FL</b>	2004-2011
<b>Instructor, University of Miami, Coral Gables, FL</b>	2003-2004
<b>Visiting Researcher, University of Texas, Austin, TX</b>	2002-2003
<b>Instructor, Pennsylvania State University, State College, PA</b>	1997-2002

### EDUCATION

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<b>Pennsylvania State University</b>	University Park, PA
<i>Ph.D. in Business Administration (Dual-title in Operations Research)</i>	2004
<b>Primary Field:</b> Management Science and Operations Management;	
<b>Supporting Field:</b> Industrial Engineering	
<b>Dissertation Title:</b> <i>Optimization models to support negotiation and coordination in supply chains</i>	
<b>Pennsylvania State University</b>	University Park, PA
<i>Master of Science in Business Administration</i>	2003
<b>Indian Institute of Technology, Madras</b>	Chennai, India
<i>Bachelor of Technology in Naval Architecture</i>	1996

### RESEARCH INTERESTS

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- Design and configuration of infrastructure and service networks
- Planning, coordination, pricing, and execution in IT-enabled supply chains
- Mathematical programming and discrete optimization

### RESEARCH

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#### A. PUBLICATIONS

- Optimizing Delivery Fees for a Network of Distributors, (with Balakrishnan, A., and M.S. Pangburn). *Manuf. and Service Operations Management* 2(3), 297-316, 2000.
- Connectivity Upgrade Models for Survivable Network Design (with A. Balakrishnan and P. Mirchandani). *Operations Research* 57(1), 170-186, 2009.

- Joint Dynamic Pricing of Multiple Perishable Products under Consumer Choice (with Y. Akcay and S. H. Xu). *Management Science* **56**(8), 1345-1361, 2010.
- Optimal Configuration of a Service Delivery Network: An Application to a Financial Services Provider (with G. A. Meester, A. Mehrotra, and M. J. Seifert). *Production and Operations Management* **19**(6), 725-741, 2010.
  - ♦ Featured in the School of Business *BusinessMiami* magazine
- Optimal Integrated Procurement Planning for Multi-division firms, (with A. Balakrishnan). *Production and Operations Management* **23**(10), 1795-1810, 2014.
- Designing Fee Tables for Retail Delivery Services by Third-party Logistics Providers (with A. Balakrishnan). *IIE Transactions* **46**(12), 1261-1278, 2014.
  - ♦ Findings featured in the *Industrial Engineer* magazine
  - ♦ Best Paper in *IIE Transactions* in Scheduling and Logistics for 2014-15
  - ♦ Featured in the School of Business *BusinessMiami* magazine
- Review of “Operations Planning — Mixed Integer Optimization Models”. *Interfaces*, **46**(1), 109-110, 2016.
- Leadership, Dominance, and Preeminence in a Channel Structure with a Common Retailer (with F. Fang, H. Gurnani), *Decision Sciences*, *forthcoming*.
- Less is More: Harnessing Product Substitution Information to Rationalize SKUs at Intcomex (with P. Bernales, Y. Guan, P. Souza, M. X. A. Tajes), *Interfaces*, *forthcoming*.

#### B. MANUSCRIPTS UNDER REVIEW AND IN PROGRESS

- Planning Product Availability for a Category of Substitutable Products (with Y. Akcay, H. Awad), *preparing for re- submission*.
- Procurement Coordination and Cost Allocation in Multi-division firms, (with F. Fang), *preparing for submission*.
- Integrating location and inventory decisions in a supply chain, (with F. Fang).
- Optimal transshipment network design and inventory placement in distribution networks, (with F. Fang, H. Awad).

#### C. RECENT CONFERENCES (2011-)

- Sourcing and procurement coordination in multi-division firms (with F. Fang), Decision Sciences Annual Meeting, Seattle, WA, 2015.
- Sourcing and procurement coordination in multi-division firms (with F. Fang), INFORMS Annual Meeting, Philadelphia, PA, 2015.
- Leadership, dominance, and preeminence in a channel structure with a common retailer (with F. Fang, H. Gurnani), POMS Annual Meeting, Washington, DC, 2015.
- Integrating location and inventory decisions in a supply chain, (with F. Fang), INFORMS Annual Meeting, San Francisco, CA, 2014.
- Planning product availability with service level requirements, (with Y. Akcay, H. Awad), INFORMS Annual Meeting, Minneapolis, MN. 2013.

- Planning product availability with service level requirements, (with Y. Akcay, H. Awad), POMS Annual Meeting, Denver, CO. 2013.
- Optimal inventory policy for an assortment of vertically differentiated products, (with Y. Akcay), INFORMS Annual Meeting, Phoenix, AZ. 2012.
- Optimal integrated procurement planning for multi-division firms (with A. Balakrishnan), Koc University, Istanbul, Turkey. Spring 2012.
- Optimal inventory policy for an assortment of vertically-differentiated products (with Y. Akcay), POMS Annual Conference, Chicago, IL, April 2012.
- Delivery fee design for logistics partnerships (with A. Balakrishnan), IFORS Triennial Conference, Melbourne, Australia, July 2011.

## HONORS AND AWARDS

- Best Paper in *IIE Transactions* Scheduling and Logistics for 2014-15 2016
- UM CIBER Intl. Bus. Research Grant 2012
- Faculty Banner Marshal for the Graduate School, Fall Commencement 2011
- James W. McLamore Research Grant in Business and Social Sciences 2006, 2010
- University of Miami School of Business Summer Research Grant 2004-05, 2007-09, 2011-12
- Delta Phi Epsilon Outstanding Professor Nomination 2006, 2007
- University of Miami Excellence in Teaching Nominee 2006
- Penn State Alumni Association Doctoral Dissertation Award 2002
- Center for Supply Chain Research (CSCR) Graduate Research Award 2002
- Finalist, eBusiness Research Center 2<sup>nd</sup> Annual Doctoral Dissertation Award 2002
- Smeal College Nominee for the INFORMS and DSI Doctoral Colloquia 2001, 2002
- Smeal College Nominee, Graduate Student Outstanding Teaching Award 1999, 2000

## TEACHING

- **Executive**
  - » *Principles of Operations for Healthcare Managers* (MGT 653) Spring 2016  
**Developed** Process design, improvement, and execution in healthcare services.  
Average student rating: **4.9/5**.
  - » *Enhancing Global Operations* (BUS 661) Fall 2015-16  
Academic Directory for a residency module on contemporary operations and supply chain issues and methods. Average student rating over two sections: **4.8/5**.
  - » *Principles of Operations Management* (MGT 653) at UM Spring, Summer 2015  
Course that explores models for supply chain design, coordination, and execution. Average student rating for two sections: **4.9/5**
- **Graduate**
  - » *Principles of Supply Chain Management* (MGT 645) at UM Fall 2010, 2013  
MBA level case-based course that explores models for supply chain design, coordination, and execution. Average student rating for one section: **4.9/5**
  - » *Principles of Operations Management* (MGT 643) at UM Spring 2008, 2010, 2011, 2014  
Core MBA level case-based course that introduces students to basic concepts,

- emphasizing managerial implications. Average student rating for five sections: **4.5/5**
- » *Management Science Consulting* (MAS638) at UM Fall/Spring 2010, Spring 2012  
Co-taught modules on call center operations and integrated sales and operations planning.
  - » *Graduate Business Consulting* at UM Spring 2015, 2016  
Faculty advisor for a 6-person student team that successfully completed an assessment of trade spend activities at a large multinational alcoholic beverages company, identifying substantial opportunities for improvement in allocation through rigorous analysis of sales and trade spend data in 10 different countries.
- **Doctoral**
    - » *Optimization Models for Operations and Supply Chain Management* (MGT 686) Spring 2014  
**Developed** seminar class that introduces, analyzes, and discusses deterministic optimization applications in the operations and supply chain area. Average student rating for one section: **5.0/5**
    - » *Optimization Models for Ops and Supply Chain Mgt* (OM 392) at UT Austin Spring 2012  
Taught a module on call center planning models in this Ph. D. level class.
    - » *Introduction to Mathematical Programming* (MS&IS 540) at PSU Spring '99 & Spring '01-'02  
M.S./Ph. D. level class; Conducted tutorial sessions, graded assignments, and covered special topics
  - **Undergraduate**
    - » *Supply Chain Modeling and Analysis* (MGT445) at UM Fall 2011 – 2016  
**Developed** an elective course for senior UG students. Develops models and analytical tools for supply chain design, planning, and operation. Average student rating for five sections: **4.7/5**
    - » *Production and Operations Management* (MGT303) at UM Fall '03 – Fall '12  
Junior-level core class for business majors. Introduces concepts in operations and supply chain management. Developed engaging in-class games to clarify concepts and highlight linkages between various topics. Average student rating for 27 sections – **4.5 / 5.0**
    - » *Materials Management* (OISM 418) at PSU Summer '02  
Taught production and inventory management emphasizing mathematical models  
Student Rating – **6.1 / 7.0**
    - » *Methods and Models for Managerial Decision Making* (MS&IS 450) at PSU Fall '98-99 & Spring '00  
Taught modeling and problem solving using Linear Programming and Decision Analysis; Average student rating over 3 sections – **6.3 / 7.0**
    - » *Introduction to Business Statistics* (MS&IS 200) at PSU Fall '97  
Conducted tutorial sessions on problem solving exercises
  - **Student advising**
    - » *Doctoral Advisor*, Fang Fang (graduated 2016); Initial placement: **California State University, Los Angeles**
    - » *Doctoral Committee Member*, Fernando Jaramillo, A., ongoing
    - » *Doctoral Committee Member*, Guangrui Guo (graduated 2015); Initial placement: University of Windsor, Ontario, Canada
    - » *Doctoral Committee Member*, Lihui Bai (graduated 2013)
    - » Supervised a special topics class (MGT 699, Fall 2012) focusing on mathematical formulation and computer implementation of facility location models.

» **Undergraduate Honors Projects**

Advised four students (Stephanie Feit, Hannah Ringel, Anand Patel, and Jason Pymonto) on Operations area-related honors work

## INDUSTRY EMPLOYMENT

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- **Software Engineer, Tata Consultancy Services, Madras, India** 1996-'97
  - » Software design, conversion and maintenance.
  - » Part of the Integrated Standard Baking Systems (ISBS) design and development team.

## CONSULTING EXPERIENCE

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- **Intcomex, Miami, FL** 2010-
  - » Estimation of product substitution patterns and development of tools for product portfolio rationalization.
- **Watsco, Miami, FL** 2011
  - » Provided guidance on supply chain network design.
- **Dsquare Solutions, Bangalore, India** 2011
  - » Directed the algorithmic development of a hotel revenue management solution.
- **Marketics, Bangalore, India** 2008
  - » Provided guidance on airline fleet planning problems.
- **Corning, Corning, NY** 2001
  - » Developed a model to leverage enterprise-wide sourcing volumes through optimal supplier selection and assignment.
- **Uponor Aldyl Company, Shawnee, OK** 2000
  - » Developed and implemented spreadsheet-based decision support solutions (*SPRINT* and *CAPS*) to support integration of production planning and sales operations.
- **Armstrong World Industries, Lancaster, PA** 1998
  - » Developed *CODES*, an Excel-based LP model that determines compensation for distribution operations.

## SERVICE

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### COMMUNITY ACTIVITIES

- Chair, Organizing Committee, First Miami Conference on Operations (February 2017)
- Organizing Committee Member for the MIP Annual Workshop at UM (May 2016)
- Doctoral Exam External Reviewer, Summer 2015
- External Tenure Review Letter Writer, 2014 (2)
- Judge, Nielsen Case Competition, Spring 2013
- **Associate Editor, *Decision Sciences***, (2012 - present)
- President, INFORMS South Florida Chapter (2014 - present)
- INFORMS Optimization Society Conference, Coral Gables, FL, February 2012
- Member, Organizing Committee; Member, Program Committee

- Treasurer, INFORMS South Florida Chapter, till 2014
- Member: INFORMS (since 1999); DSI (2002); and POMS (since 2007).
- President, Penn State-INFORMS Student Chapter, 2001. Vice-President, 2000.
- Reviewed articles for the *European Journal of Operational Research*, *IEEE Transactions on Reliability*, *IIE Transactions*, *INFORMS Journal on Computing*, *Interfaces*, *International Journal of Production Research*, *Journal of Industrial Management and Optimization*, *Journal of the Operational Research Society*, *Management Science*, *Manufacturing and Service Operations Management*, *Networks*, *Operations Research*, *Optimization Letters*, and *Production and Operations Management*.

## UNIVERSITY ACTIVITIES

- Provost Research Award Review Panel (2016)
- Member, University Curriculum Committee (2016 - )
- Member, Undergraduate Business Education Committee (2015 - )
- Faculty Lead, Supply Chain Initiatives at UM SBA via the Tracy and Jeffrey Brown Gift (2015 - )
- Board Member, Anthony Burns Center for Advanced Supply Chain Management (2015 - )
- Faculty coordinator, Lunch-and-learn at Ziff, a series of talks by industry experts intended to introduce graduate students to contemporary business topics
- OM-area recruitment coordinator, 2014, 2015
- Member, Grading Policy Task Force, (2015 - 2016)
- Jointly coordinating AACSB-related activities and instructor recruitment for the UG core Operations class (since Spring 2010)
- OM Area Coordinator, Ph. D. program (2012 - 2015)
- Facilitated creation and execution of programs for CIBER. Participated actively in the proposal to renew the CIBER at the University of Miami (2014)
- Chair, Faculty Senate Committee on University Athletics (2012 - 2013)
- Member of the University Athletics Committee (2010 - 2012)
- Co-prepared a proposal for a Masters program in Supply Chain Management (2013)
- Faculty Advisor, UImprove project on Inventory Management of Surgical Supplies at the Miller School of Medicine; project estimated to save \$0.67M annually (2013).
- Represented UM SBA at community events and met with industry visitors on campus, Fall 2013
- Management Department School Council Representative (stand-in), 2013
- Developed a spreadsheet-based optimization model to help the Office of Undergraduate Research and Community Outreach assign judges for student poster presentations at the UM Research, Creativity, Innovation Forum.
- School of Business Administration Faculty Banner Marshal, Graduate School, Fall 2011 Commencement
- Department representative at SBA Ph. D. orientation (Fall 2011)

- Co-organized the **MSOM seminar** at the University of Miami (2003-2006) – a joint seminar series of the Management and Management Science departments.
- Member of the School of Business's Web 2.0 committee
- Actively engaged in department recruiting efforts for multiple faculty positions.
- Participated in UM Commencement and inauguration ceremonies as part of the Stage Party on several occasions.