



## Faculty - Cynthia Barnhart

### Faculty

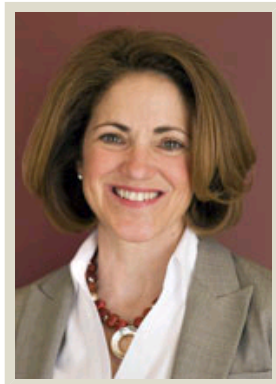
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### Cynthia Barnhart

Chancellor

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### Education

- B.S. 1981, University of Vermont
- S.M. 1985, MIT
- Ph.D. 1988, MIT

### Research Interests

Professor Barnhart specializes in developing models, optimization methods and decision support systems for large-scale transportation problems.

### Teaching Interests

The focus of my teaching has been on the development and application of optimization models and algorithms to the design, management and operation of transportation systems. Two of the most recently taught courses are: Airline Operations Research, the Global Airline Industry, and Transportation Operations, Planning and Control.

### Selected Publications

1. Barnhart, C., Hane, C.A., and \*Vance, P.H., " Using Branch-and-Price-and-Cut to Solve Origin-Destination Integer Multicommodity Flow Problems," Operations Research, Vol. 48, No., 2, pp.318-326, March-April 2000.
2. \*Armacost, A., Barnhart, C., and Ware, K., " Composite Variable Formulations for Express Shipment Service Network Design," Transportation Science, Focused issue on freight transportation, Vol. 36, No. 1, pp. 1-20, February 2002
3. Barnhart, Cynthia, Belobaba, Peter, and Odoni, Amedeo R., " Applications of Operations Research in the Air Transport

- Industry," Transportation Science, Vol. 37, No. 4, November 2003.
4. Ball, Michael, Barnhart, Cynthia, Nemhauser, George, and Odoni, Amedeo, " Managing Air Traffic and Airline Operations for Schedule Reliability," Operations Research Handbook on Transportation, Gilbert Laporte and Cynthia Barnhart (co-editors), Dec.2006.



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