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Contributing Authors

Janet K. Allen  
The Georgia Institute of Technology, Atlanta, Georgia

Daniel Bowman  
Pittiglio, Rabin, Todd & McGrath (PRTM), Waltham, Massachusetts

Jordan J. Cox  
Brigham Young University, Provo, Utah

Olivier L. de Weck  
Massachusetts Institute of Technology, Cambridge, Massachusetts

Ryan Fellini  
The University of Michigan, Ann Arbor, Michigan

Sebastian Fixson  
The University of Michigan, Ann Arbor, Michigan

Kikuo Fujita  
Osaka University, Osaka, Japan

Johannes I. M. Halman  
University of Twente, The Netherlands

Adrian P. Hofer  
Hofer & Partner, Wollerau, Switzerland
Contributing Authors

Tobias Holmqvist
Chalmers University of Technology, Göteborg, Sweden

Katja Hölttä-Otto
MIT Center for Innovation in Product Development, Cambridge, Massachusetts and Helsinki University of Technology, Espoo, Finland

Jianxin (Roger) Jiao
Nanyang Technological University, Singapore

Harshavardhan Karandikar
ABB Corporate Research Center, Ladenburg, Germany

Harrison M. Kim
University of Illinois Urbana-Champaign, Urbana, Illinois

Michael Kokkolaras
The University of Michigan, Ann Arbor, Michigan

Tucker M. Marion
The Pennsylvania State University, University Park, Pennsylvania

Farrokh Mistree
The Georgia Institute of Technology, Atlanta, Georgia

Manojkumar Natarajan
University of Oklahoma, Norman, Oklahoma

Srinivas Nidamarthi
ABB Corporate Research Center, Ladenburg, Germany

Kevin Otto
Robust Systems and Strategy, LLC, Watertown, Massachusetts

Panos Y. Papalambros
The University of Michigan, Ann Arbor, Michigan

Jaeil Park
The Pennsylvania State University, University Park, Pennsylvania

Magnus Persson
Chalmers University of Technology, Göteborg, Sweden
Shaligram Pokharel  
Nanyang Technological University, Singapore

Gregory M. Roach  
Brigham Young University Idaho, Rexburg, Idaho

David W. Rosen  
The Georgia Institute of Technology, Atlanta, Georgia

Steven B. Shooter  
Bucknell University, Lewisburg, Pennsylvania

Zahed Siddique  
University of Oklahoma, Norman, Oklahoma

Timothy W. Simpson  
The Pennsylvania State University, University Park, Pennsylvania

Henri J. Thevenot  
The Pennsylvania State University, University Park, Pennsylvania

Karin Uller  
Infotiv, Göteborg, Sweden

Wim van Vuuren  
KPMG Advisory Services, Malta

Christopher B. Williams  
The Georgia Institute of Technology, Atlanta, Georgia

Lianfeng Zhang  
Nanyang Technological University, Singapore

Yiyang Zhang  
Nanyang Technological University, Singapore
To compete in today’s global marketplace, many companies are utilizing product families to increase variety, improve customer satisfaction, shorten lead-times, and reduce costs. The key to a successful product family is the platform from which it is derived. In the past decade, there has been a flurry of activity to develop methods and tools to facilitate platform-based product family development, and this book showcases the efforts of more than thirty experts in academia and industry who are working to bridge the gap between (i) planning and managing families of products and (ii) designing and manufacturing them. Front-end issues related to platform-driven product development, platform planning, platform selection and evaluation, platform leveraging, and product family positioning are discussed along with methods for optimizing product platforms and product families. Back-end issues related to the realization of product families, including techniques for estimating production costs, planning process platforms, and commonalizing shapes to facilitate manufacturing are also presented. Industrial applications are also included to demonstrate how platform-based product development can impact product definition, product design, and process design.
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