

## Principal Investigators

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## Contact

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(all information as of February 2016)



GEORG-AUGUST-UNIVERSITÄT  
GÖTTINGEN



## DFG Research Training Group 1703

### “Resource Efficiency in Interorganizational Networks”

Planning Methods to Utilize Renewable Resources



**DFG** Deutsche  
Forschungsgemeinschaft

## Research Focus of RTG 1703

The main focus of the research training group (RTG) is to develop methods for configuring and optimizing resource efficient value networks for renewable resources. Research will focus on examining and improving the interaction of existing methods from scientific fields such as agriculture, forestry, materials sciences (specifically process technology), business administration, business information systems and mathematics, and on developing new concepts and methods to improve resource efficiency in corporate networks.

This research takes into consideration three levels of decisions of the value chain and two steering crossdivisional functions: On the first level, the producers of products containing renewable resources must decide which product combinations they can offer based on price and intended use, quality and availability of the products. On the second level, customers and refiners focus on planning efficient production. The products' acceptance and sales potential as well as the hybrid services offered by wholesalers and end users constitute the third level. A network perspective should be used to find an efficient solution for recurrent planning and distribution problems for all participants as part of efforts to find the best possible solution for the network as a whole. Adopting an information management viewpoint raises the question of how to provide individual members, as well as the network as a whole, with crucial information using familiar and enhanced methods of business information systems.

## Successfully Completed PhDs

**Shanna Appelhanz:** Tracking & Tracing Systems in Value-Generating Networks for the Industrial Material Utilization or Renewable Resources (2015)

**Dr. Marco Bender:** Randomized Approximation and Online Algorithms for Assignment Problems (2015)

**Dr. Jonas Ide:** Concepts of Robustness for Uncertain Multi-Objective Optimization (2014)

**Dr. Ingo Karschin:** Development of a Network-Location-Model for the Economic Optimization of Local Heating Systems (2015)

**Dr. Sebastian Ludorf:** Specific Features of Products from Renewable Resources and Their Impact on the Choice of Efficient Coordination Mechanisms in Business-to-Business Relationships (2015)

**Dr. Victoria-Sophie Osburg:** Products consisting of Materials based on Renewable Resources: Drivers of Purchase Intention, Consumers' Information Needs and Target Groups (2015)

**Dr. Morten Tiedemann:** Online Resource Management (2015)

**Dr. Simon Trang:** Adoption, Value Co-Creation, and Governance of Inter-Organizational Information Technology in Wood Networks (2015)

## Doctoral Researchers



**Annette Becker, M.A.**

An Agent-Based Modeling Approach to Efficient Supply Chain Management in the Wood Industry since 2015  
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**Shahril Anuar Bin Bahari, M.Sc.**

Development of Thermoplastic Composites Based on Bamboo Fibres  
2012–2015, associated  
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**Yağmur Bütün**

Supply Chain and Contamination Assessment of Recovered Wood for Particleboard Production since 2015  
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**Francesco Castellani, M.Sc.**

Assessment of Supply Chain Sustainability of Bio-Composite Materials since 2015  
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**Matthias Garbs, M.Sc.**

Multi-Criteria Decision Support for Hierarchical Process Planning in Recycling Cascades since 2013  
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**Dipl.-Holzwirt. Felix Haiduk**

Pre-Utilization of Wood and Other Renewable Resources through the Extraction of Chemical Raw Materials 2012–2015  
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**Willy Hesselbach, M.Sc.**

Increasing the Resource Efficiency within the Value Chain of Low-Value Sorts for Chosen Hardwoods from Sustainable Managed Mixed Stands since 2015  
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**Tim Koddenberg, M.Sc.**

Investigation and Imaging of Untreated and Treated Wood by Means of Modern Imaging Methods since 2014  
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**Corinna Krüger, M.Sc.**

Regularization Robustness for Multi-Objective Problems since 2014  
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## Doctoral Researchers



**Markus Mandrella, M.Sc.**

IT-Based Value Co-Creation in Inter-Organizational Networks for the Utilization of Renewable Resources since 2015  
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**Muhammad Raheel, MBA**

Design and Implementation of a Relationship Management System for Steering Resource Efficiency in Interorganizational Network since 2016  
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**Fabian Renatus, M.Sc.**

Multi-Criteria Decision Support for Corporate Environmental Management Information Systems 2012–2015, associated  
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**Tim Schröder, M.Sc.**

Planning of Location, Capacity and Configuration of a Biorefinery Using Heuristics and Exact Optimization since 2014, associated  
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**Mohammad Sadegh Taskhiri, M.Sc.**

Modelling Logistics Networks for Wood Products from By-Products and Cascade Utilisation 2012–2015  
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**Laura Teuber, M.Eng.**

Investigation of the Influence of Production and Processing Mechanisms on the Wood Component of Wood Plastic Composites (WPC) 2012–2015  
laura.teuber@forst.uni-goettingen.de



**Lisa Thom, M.Sc.**

Robust Multi-Objective Optimization in Networks since 2015  
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**Nils Thonemann, M.A.**

Life Cycle Assessment of Renewable Resources from By-Products and Cascade Utilization since 2015  
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**Sebastian Zander, M.Sc.**

Development and Evaluation of a Relationship Management Approach in Interorganizational Networks for Renewable Resources since 2013  
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