



Technische
Universität
Braunschweig

Institut für Automobilwirtschaft
und Industrielle Produktion



Announcement of Seminars

Summer Term 2023

Seminars Summer Term 2023

Seminar topics

- Software Tools: System Dynamics
- Software Tools: Heuristics with Excel
- Sustainable Resource Policy and Management

Seminars Summer Term 2023

Registration

- Registration via Stud.IP
- When? 01/30/23 (07:00 am) to 02/01/23 (12:00 / noon)
- First come first serve
- Mandatory participation in the kick-off meeting of the seminar

Further Information

- Seminars are visible in Stud.IP for „Wintersemester 2022/23“
- Only register for one seminar! If you register to more than one seminar, then we will delete all registrations!
→ Notice: You can delete a registration in Stud.IP yourself
- If you are on a waiting list, then we will offer you another seminar

Softwaretools: System Dynamics

(Language of the seminar: German)

Subject

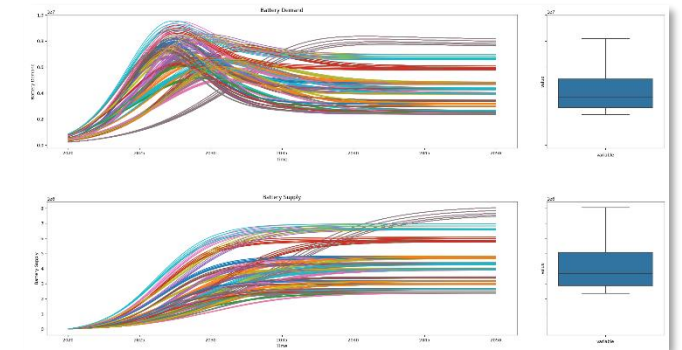
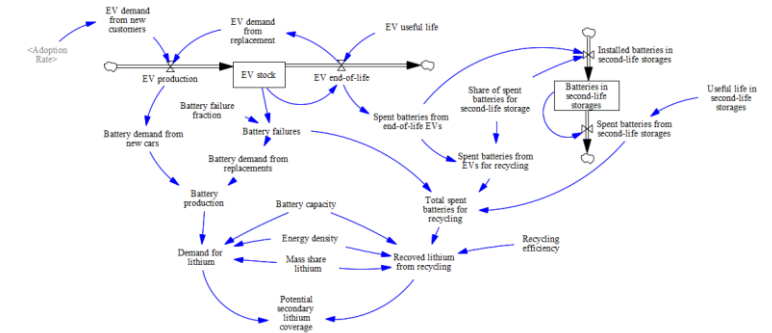
The analysis of strategic issues in the field of production and logistics requires a comprehensive understanding of the underlying socio-economic-technical systems. These systems are often characterized by dynamic-complex relationships and interactions that require the use of appropriate modeling techniques. In this seminar, a deeper examination of the modeling and simulation approach System Dynamics takes place.

Organization

- Independent preparation of a seminar paper in a seminar groups of 3 persons
- Kick-off: February 08th, 2023, 16:45-18:15, seminar room AIP
- Final presentations: July 17th, 2023, 09:00-16:00, seminar room AIP
- Limitation to 18 participants
- Mentoring: Raphael Ginster, Karen Ohmstede
- Registration: [Stud.IP](#)

Key Topics

- Theoretical and practical basics of the System Dynamics methodology
- Conceptual design and development of a system dynamic model
- Implementation and simulation of the system dynamic model in the software [Vensim PLE](#)
- Evaluation and interpretation of the simulation results



Software Tools: Heuristics with Excel

(Language of the seminar: German)

Subject

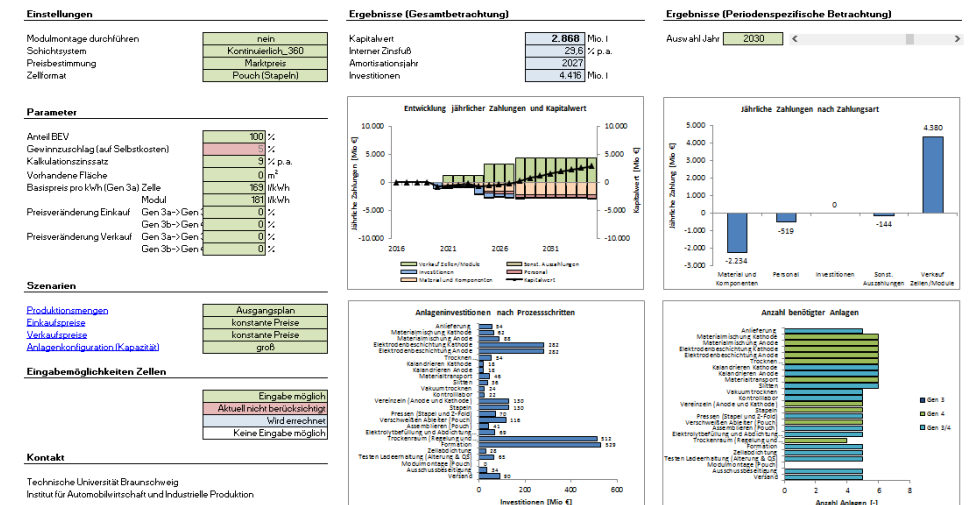
In the context of business management planning of individual production and logistics systems or entire supply chains, complex interrelationships arise that must be mapped in a problem-adequate manner. This can be achieved by using mathematical optimization. Due to the high complexity of planning problems in industrial practice, however, an exact solution can only be derived with high solution times. Therefore, heuristics are often used to find good solutions in a short time. In this seminar the script language "Visual Basic for Application" (VBA) is used to implement such heuristics.

Organization

- Independent preparation of a seminar paper in a seminar groups of 3 persons
- Kick-off: 02.02.2023, 16:45-18:15, seminar room AIP
- Final presentations: 18.07.2023
- Limitation to 18 participants
- Mentoring: Patrick Schumacher, Christian Scheller
- Registration: [Stud.IP](#)

Key Topics

- Basics of decision making by means of optimization
- Modeling of mathematical optimization models
- Development of heuristics for the solution of planning problems
- Implementation of those heuristics using Excel and VBA



Sustainable Resource Policy and Management

(Language of the seminar: German)

Honorary professor

Prof. Dr. Dr. Mario Tobias, Executive manager of the Chamber of Industry and Commerce (IHK) Potsdam

Organization

- Limitation to 15 participants
- One two-day-course (lecture) at the beginning, and one two-day-course at the end of summer term 2022:
- First course 20-21/04, second course 06-07/07, both 9am – 5 pm, venue: NFF
- First course day: 20/04, 9am – 5 pm, NFF (Hermann-Blenk-Str. 42, 38108 Braunschweig)
- Acquisition of a seminar topic, preparation of a seminar paper and presentation
- Mentoring on behalf of AIP-PL: Cora Buchenberger
- Registration: [Stud.IP](#)



Key Topics

- Interactive work on topics of international environmental and resource policy
- Fundamentals of material flow management and innovation technologies in theory and up-to-date case studies
- Insights into lobby processes and the work of industry committees, associations and politics (including electronic waste, energy transition, geoengineering)
- Development and implementation of two short simulation games in a team
- Digression “Resource Personnel” at the end of seminar

Sustainable Resource Policy and Management

(Language of the seminar: German)

Prof. Dr. rer. pol. Dr. rer. nat. Mario Tobias

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|-------------|---|
| 1997 | <ul style="list-style-type: none">▪ Diploma Degree in Biology, Technische Universität Braunschweig▪ Referent in the department of building planning of the municipality of Vechelde |
| 2000 | <ul style="list-style-type: none">▪ Completion of Doctoral Degree PhD (Biology), Technische Universität Braunschweig▪ Business Manager of Environment and Sustainability in Bundesverband Informations-Telekommunikation und neue Medien (BITKOM), Berlin (www.bitkom.org) |
| 2002 | <ul style="list-style-type: none">▪ Diploma Degree in Business Administration, Technische Universität Braunschweig |
| 2005 – 2010 | <ul style="list-style-type: none">▪ Executive board member with responsibility in business area Technologies and Services of BITKOM |
| 2006 | <ul style="list-style-type: none">▪ Interim manager of „Deutschland sicher im Netz e.V.“ |
| 2007 | <ul style="list-style-type: none">▪ Completion of Doctoral Degree PhD (Business Administration), Freie Universität Berlin |
| 2008 – 2010 | <ul style="list-style-type: none">▪ Trade fair events CeBIT Green IT, Broadband und Cloud Computing |
| 2011 – 2014 | <ul style="list-style-type: none">▪ Secretary general of Institute for Advanced Sustainability Studies (www.iass-potsdam.de) |
| since 2014 | <ul style="list-style-type: none">▪ Executive manager of the Chamber of Industry and Commerce (IHK) Potsdam (www.ihk-potsdam.de) |
| since 2015 | <ul style="list-style-type: none">▪ Honorary professor at the Institute of Automotive Management and Industrial Production, Technische Universität Braunschweig▪ Publications, international conferences and communication consulting |

