STUDENT OPPORTUNITIES.

INNOVATION & INDUSTRY 4.0 IN LOGISTICS.

Dr. Thomas Irrenhauser
Innovation and Industry 4.0 in Logistics
WHAT WE STAND FOR.

OUR MISSION

We enable the Use of Autonomous, Connected and Intelligent Logistics Solutions in our Plants.
Innovation and Industry 4.0 in Logistics - Dr. Thomas Irrenhauser

LOGISTICS ROBOTICS.

Mission:
Automation of all manual steps in our plant logistics through the use of robotics.

SortBot 2019
- Stacking of empty containers
  - Product generation
  - International rollout

SplitBot 2019
- Separation of full small load carriers
  - Series integration Dingolfing
  - Product optimisation

PickBot 2019
- Automated order picking / sequencing
  - Series integration Leipzig
  - CE Certification

PlaceBot 2019
- Production line supply (assembly line)
  - Pilot Leipzig
  - CE Certification

AI Pipeline
- Infrastructure development
- Automated optimization of neural networks
- Object detection to increase robustness

Human- Robot-Interaction
- Conception and construction of first mock-ups
  - Validation
- Series integration Sort- and SplitBot
AUTONOMOUS TRANSPORTS OUTDOOR.

AutoTrailer

- Autonomous Traileryards.

AutoBox

- Milk-Runs of the future.

AutoUnit

- Forklift 4.0.

Railway crossing

- Detection of moving, stopping and restarting trains.
- Compliance with legal requirements.
- Possibility of operation with mixed traffic (AGVs, manual vehicles, pedestrians).
- Detection of trains with thermal imaging cameras and Rail2X communication.

Level crossing 4.0 for unrestricted material flow.
WHY TV-2-I.

Shaping the Future of Logistics with disruptive Innovations.

Flat Hierarchy in the Department.
Company-internal Start-Up.
High Responsibility for Students.
Young Team.

Possibility of Internships, Bachelor Thesis, Master Thesis, PhD and Fast-Lane Program.
OPPORTUNITIES.

**Internship.**
- Benefit from valuable financial Support.
- Explore different Career Options.
- Real Hands-on Experience in 6 Months Duration.

**Bachelor or Master Thesis.**
- Working on real Life Experiments within the Department.
- Technical support by Experts.
- Practical Relevance of your Thesis.

**PhD Program “ProMotion“. [subsequent to Internship, Bachelor or Master Thesis]**
- Experienced personal Mentors.
- Excellent Training and Development Opportunities.
- Networking Possibilities at BMW.
EDUCATIONAL BACKGROUND.

Artificial Intelligence
Cyber-Security
Computer-and Data Science
Industrial Engineering
Big Data Engineering
Engineering
Industrial Design
Interactive and Visual Design
BMW Group
Niklas Gutheil
Project Innovation and Industry 4.0
Email: Niklas.Gutheil@bmw.de