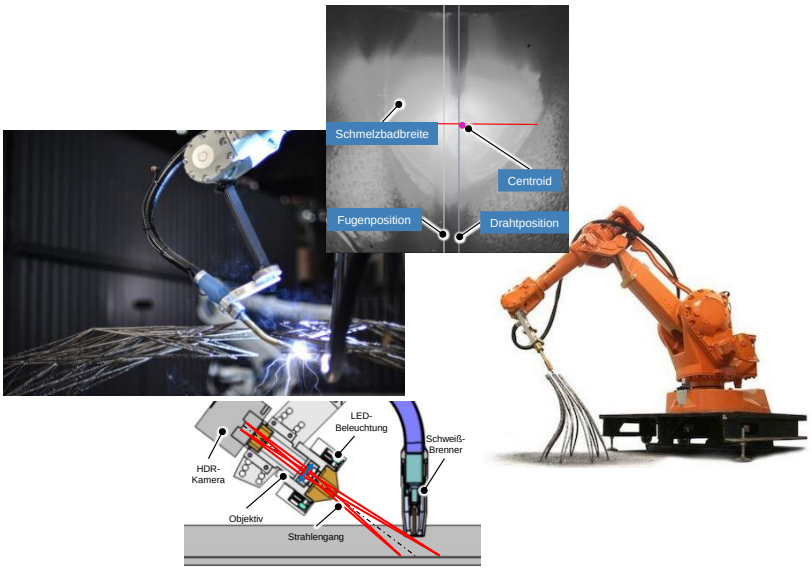
Bachelor-, Project-, Mini- and Masterthesises

Subject: In-situ robotic path planning and adoption based on incoming sensor data



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Type of Thesis:

Bachelorthesis	x	Experiments	x
Projectthesis	x	Konstruction	
Minithesis		Theoretical	
Masterthesis	x	Literatureresearch	x

Begin: now

Department:
Mechanical Engineering / Material science

Qualifications: Basic knowledge in material science

Topic / scope of tasks:

Adjusting the welding path of the robot to process disturbances such as weld distortion is a important step to develop intelligent production processes. In this thesis a method is to be implemented to give the possibility of in-situ adjusting the path of the robot, based on incom-ing sensor data. Software that will be used is Rhino with Grashopper add-on together with KUKA | parametric robot control for data transfer. A connection link has to be implemented between Labview, which is used for sensor implementation and KUKA|prc. Programing skills (Python, java or c++) required.
What you will learn: Basics of wire and arc based additive manufacturing, deep knowledge on parametric robot control, measurement and control systems based on labview and gas metal arc welding.