

CORNET Call for Proposals: international Collective Research
--- Partner Profile ---

Organisation:	Fraunhofer-Institute for Machine Tools and Forming Technology (IWU)
Website address:	www.iwu.fraunhofer.de
Organisation typology:	Research Centre
Sector/field of specialisation:	Production technologies, Construction, Automation & Monitoring, Industry 4.0
Expertise offered:	<p><u>Automation & Monitoring / Industry 4.0:</u></p> <ul style="list-style-type: none"> - development of industrial automation solutions and kernel functions for industrial control systems (Motion Control, CNC, PLC, Robot control) - application of machine learning methods in industrial applications and development of software for highly parallelised data processing and sensor-data fusion & big-data analysis - inline inspection systems for different part types (sheet metal parts, coating, thin films, plastics, wood, ..) with multi-sensor or image processing systems - condition monitoring and monitoring of production systems <p><u>Production technologies:</u></p> <ul style="list-style-type: none"> - forming and press applications: tool & process design, hot and cold forming, incremental forming, high speed forming, material characterisation, simulation, ... - cutting technologies: grinding, honing, milling, cryonic machining, numerical simulation, optimisation of CNC machining operation, CAM-systems, ... - assembly systems and joining technologies, metal foams <p><u>Machine tools:</u></p> <ul style="list-style-type: none"> - property characterisation and optimisation (thermal behaviour, dynamic & static properties, energy consumption) - development of parallel and serial machine tool kinematics, design and optimisation of hydraulic and servo-electric forming machines, robot applications and design of adaptronic systems
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