

1. Record Nr.	UNINA9910986134803321
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Titolo	Collaborative Research Advancing Engineering Solutions for Real-World Challenges 2 : The 2024 Postgraduate Seminar in Esslingen / / edited by Andreas Öchsner
Pubbl/distr/stampa	Cham : , : Springer Nature Switzerland : , : Imprint : Springer, , 2025
ISBN	9783031790935 3031790936
Edizione	[1st ed. 2025.]
Descrizione fisica	1 online resource (323 pages)
Collana	Proceedings in Technology Transfer, , 2948-233X
Disciplina	670
Soggetti	Industrial engineering Production engineering Vehicles Mathematics - Data processing Mechanics, Applied Industrial and Production Engineering Vehicle Engineering Computational Mathematics and Numerical Analysis Engineering Mechanics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	On the Lightweight Characterization of Materials and Structures -- From Raw Data to Master Curve Improving the Time Temperature Superposition Process Using Geometrical Properties of Temperature Frequency Sweeps -- Development of a Lightweight Connection Rod for Motorbikes Fabricated with Hybrid Manufacturing -- Laser Polishing of PBF LB Fabricated AlSi10Mg Achievable Surface Quality and Implications on the Mechanical Properties Through Heat Input -- Concept for a Systematic Setup of a Hot Gas Welding Process for Glassfiber Reinforced Polyamides -- The Impact of Mesh Generation in Finite Element Simulations on Stress Gradient and Calculated Fatigue Strength -- Antibacterial Activity of Titanium Dioxide Composites for the Selective Laser Sintering Process -- Moth Eye Lens -- Quantifying the

Conversion Efficiency of a MW Plasma Reactor by Orienting a Vortex Gas Followed by a Downstream CDN Nozzle for Syngas Generation -- Buckling of Beams and Plates -- Theoretical Foundations for the Structural Analysis According to Eurocode 3 -- Researching an Assisted Injection Molding Process using Artificial Intelligence -- Thermal Anisotropy Using the Hot Disk Method.

Sommario/riassunto

This book presents the research outcomes from cooperative projects with industrial partners. It showcases the practical relevance of the research, which features the knowledge exchange. The papers cover a wide range of engineering disciplines, highlighting the impact of these collaborations in addressing real-world challenges and advancing technological developments.