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Soggetti	Application software Computers, Special purpose User interfaces (Computer systems) Human-computer interaction Robotics Computer and Information Systems Applications Special Purpose and Application-Based Systems User Interfaces and Human Computer Interaction
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Nota di contenuto	Keynote Paper -- Augmented Reality in Assembly Systems: State of the Art and Future Perspectives -- Assembly Design and Planning -- Application of a Standardized Design Procedure in the Development of Automated Micro-Assembly Processes -- Towards the Automated Coverlay Assembly in FPCB Manufacturing: Concept and Preliminary Tests -- Resource Interface Matchmaking as a Part of Automatic Capacity Matchmaking -- Investigation on the Convergence of the Genetic Algorithm of an Aerodynamic Feeding System due to the Enlargement of the Solution Space -- Assembly Operations -- Indirect System Condition Monitoring using Online Bayesian Changepoint Direction -- Strategies for Dealing with Problems in Robotised Unscrewing Operations -- Improving Automated Insertion Task in

Robotics by Reducing Registration Error -- Assembly Cells and Systems -- Development of a Sensitive Winding Application Based on a Serial Robot and Integrated Torque Sensors -- High-Load Titanium Drilling using anAccurate Robotic Machining System -- Application of Advanced Simulation Methods for the Tolerance Analysis of Mechanical Assemblies -- Development of a Low-Cost, High Accuracy, Flexible Panel Indexing Cell with Modular, Elastic Architecture -- Context-Aware Plug and Produce for Robotic Aerospace Assembly -- Data Capture and Visualisation on a Shoestring: Demonstrating the Digital Manufacturing on a Shoestring Project -- Digital Innovation Hubs for Enhancing the Technology Transfer and Digital Transformation of the European Manufacturing Industry -- Plenoptic Inspection System for Automatic Quality Control of MEMS and Microsystems -- Human Centred Assembly -- Automated Information Supply of Worker Guidance Systems in Smart Assembly Environment -- Towards Human and Robot Collaborative Ergonomic Handling of Long Parts with a Loose Grip -- Human and Workcell Event Recognition and its Application Areas in Industrial Assembly -- Cognitive Acceptance to Support Maintenance and Assembly Tasks: Results on Technology Acceptance of a Head-Mounted Device -- Usability Study of Learning-Based Pose Estimation of Industrial Objects from Synthetic Depth Data -- Assistance Methods in Assembly -- Assistance Needs in Production Environments: A Contextual Exploration of Workers' Experiences and Work Practices -- Attention Analysis for Assistance in Assembly Processes -- Live Video Assistance Systems for Assembly Processes -- Orchestration and Situation Awareness in an Assistance System for Assembly Task -- Safety as Bad Cop of Physical Assistance Systems? -- The Consideration of Job Satisfaction in the Design of Assistance Systems in Production.

Sommario/riassunto

This open access book constitutes the refereed post-conference proceedings of the 9th IFIP WG 5.5 International Precision Assembly Seminar, IPAS 2020, held virtually in December 2020. The 16 revised full papers and 10 revised short papers presented together with 1 keynote paper were carefully reviewed and selected from numerous submissions. The papers address topics such as assembly design and planning; assembly operations; assembly cells and systems; human centred assembly; and assistance methods in assembly.