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Nota di contenuto	About the Special Issue Editor -- Preface to "Youth Studies" -- The Generational Dimension in Transitions: A Theoretical Review -- In Transition ... Where to? Rethinking Life Stages and Intergenerational Relations of Italian Youth -- Transitions to Adulthood and Generational Change in Portugal -- Age, Period, and Cohort Differences in Work Centrality and Work Values -- Media and Generations in Portugal -- A Generational Approach to Somatic Cultures: Modes of Attention to the Young Body in Contemporary Portuguese Society -- Young People's Critical Politicization in Spain in the Great Recession: A Generational Reconfiguration? -- Neoliberalism and the Unfolding Patterns of Young People's Political Engagement and Political Participation in Contemporary Britain -- Towards a Conceptualization of Young People's Political Engagement: A Qualitative Focus Group Study -- Young People Engaging in Volunteering: Questioning a Generational Trend in an Individualized Society -- Political Consumerism as a Neoliberal Response to Youth Political Disengagement -- Still Troubled: Tunisia's Youth During and Since the Revolution of 2011 -- A Global Generation? Youth Studies in a Postcolonial World.Application of AI methods for the integration of structural engineering knowledge in early planning phases -- Analysis of the early-design timber models for sound insulation analysis -- Framework proposal for automated generation of production layout scenarios: A parametric design technique to connect production planning and structural industrial building design -- Component-based machine learning for predicting

representative time-series of energy performance in building design -- A hybrid-model time-series forecasting approach for reducing the building energy performance gap -- Deep learning approach for predicting pedestrian dynamics for transportation hubs in early design phases -- Implementing Information Container for linked Document Delivery (ICDD) as a micro-service -- An explanatory use case for the implementation of Information Container for linked Document Delivery in Common Data Environments -- Automatic generation of ISO 19650 compliant templates based on standard construction contracts -- Graph-based version control for asynchronous BIM level 3 collaboration -- Image-documentation of existing buildings using a server-based BIM Collaboration Format workflow -- Unlocking the full potential of Building Information Modelling by applying the principles of Industry 4.0 and Data Governance such as COBIT -- Data Quality in Building Productivity Assessment -- the Case of Acute Care Environments -- An Approach for Cross-Data Querying and Spatial Reasoning of Tunnel Alignments -- Ontological reasoning in factory-BIM: An industrial case study for an automotive OEM -- IFCNet: A Benchmark Dataset for IFC Entity Classification -- IFC based Framework for Generating, Modeling and Visualizing Spalling Defect Geometries -- Automatic generation of IFC models from point cloud data of transport infrastructure environments -- A Proposed Ontology for Knowledge Representation in Designing Indoor Inspection Robot Systems -- Bidirectional coupling of Building Information Modeling and Building Simulation using ontologies -- Building Ontology for Preventive Fire Safety -- A Framework for Intelligent Building Information Spoken Dialogue System (iBISDS) -- A Design Recommender System: A Rules-based Approach to Exploit Natural Language Imprecision using Belief and Fuzzy Theories -- Towards the Adoption of Vision Intelligence for Construction Safety: Grounded Theory Methodology based Safety Regulations Analysis -- Concept to support the estimation of static load capacity on construction site using in-situ AR-based methods -- Using eye-tracking to compare the experienced safety supervisors and novice in identifying job site hazards under a VR environment -- Virtual Reality Platform for 3D Irregular Packing Problem -- Reference Architectural Model of Buildings for Virtual City Creator -- Data shortage for urban energy simulations? An empirical survey on data availability and enrichment methods using machine learning? -- End-to-End Framework in Support of Virtual Design-EngineeringManufacturing-Construction Space Exploration -- Accuracy Aspects when Transforming a Boundary Representation of Solids into a Tetrahedral Space Partition -- The influence of topology optimisation's design space-from shell to volume-on the generation of structural systems -- Qualifying spatial information for underground volumes -- An algorithmic BIM approach to advance concrete printing -- A methodological approach to generate robot control algorithms from BIMModels -- Multi-Level LoD Parametric Design Approach in AEC for Robot-Oriented Construction -- Design and implementation of an optimal sensor system as part of a Digital Twin for a rotary bending machine -- The Effects of Fracture Energy on the Interfacial Strength of Self-Healing Concrete -- A Performance Metric for the Evaluation of Thermal Anomaly Identification with Ill-Defined Ground Truth -- Areas of Interest -- Semantic description of component locations for damage assessment -- Deep Neural Networks for visual bridge inspections and defect visualisation in Civil Engineering -- Automated decision making in structural health monitoring using explainable artificial intelligence -- VOX2BIM -- A Fast Method for Automated Point Cloud Segmentation -- Automated Generation of Railway Track Geometric Digital Twins

(RailGDT) from Airborne LiDAR Data -- Deriving Digital Twin Models of Existing Bridges from Point Cloud Data Using Parametric Models and Metaheuristic Algorithms -- Building a balanced and well-rounded dataset for railway asset detection -- Panorama-to-digital twin registration using semantic features -- AI-based thermal bridge detection of building rooftops on district scale using aerial images -- Image Captioning in Chinese for Construction Activity Scenes Understanding Using a Pre-trained Cross-modal Language Model -- Process Pattern-based Hybrid Simulation for Emission Estimation of the Construction Processes -- Automatic image analysis of mineral construction and demolition waste (CDW) using machine learning methods and deep learning -- Fast Crack Detection Using Convolutional Neural Network -- An Integrated Computational GIS Platform for UAV-based Remote Building Facade Inspection -- A Computer Vision Approach for Building Facade Component Segmentation on 3D Point Cloud Models Reconstructed by Aerial Images -- Feasibility Study of Urban Flood Mapping Using Traffic Signs for Route Optimization -- Developing indicators for measuring the effectiveness of visualizations applied in construction safety management using eye-tracking -- Real-time LiDAR for Monitoring Construction Worker Presence Near Hazards and in Work Areas in a Virtual Reality Environment.

Sommario/riassunto

The 28th EG-ICE International Workshop 2021 brings together international experts working at the interface between advanced computing and modern engineering challenges. Many engineering tasks require open-world resolutions to support multi-actor collaboration, coping with approximate models, providing effective engineer-computer interaction, search in multi-dimensional solution spaces, accommodating uncertainty, including specialist domain knowledge, performing sensor-data interpretation and dealing with incomplete knowledge. While results from computer science provide much initial support for resolution, adaptation is unavoidable and most importantly, feedback from addressing engineering challenges drives fundamental computer-science research. Competence and knowledge transfer goes both ways.