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Nota di contenuto	Future Challenges of Advanced M&S Technology -- Hyperbolic quantum computing based on quantum bit algebra QBA -- On Building Communication Maps in Subterranean Environments -- Combat UGVs support of company task force operations -- M&S driven experimentation for concept development on combined manned and unmanned vehicles in urban environment: simulation design -- UAV based Vehicle Detection with Synthetic Training: Identification of Performance Factors using Image Descriptors and Machine Learning -- Combining Epidemiological and Constructive Simulations for Robotics and Autonomous Systems supporting Logistic Supply in Infectious Diseases affected Areas -- M&S of Intelligent Systems – R&D and Application -- Numerical experiment on optimal control for the Dubins car model -- M&S based test bed to support V&V of Autonomous Resources Task Coordinator -- Replacement Possibilities of the Medium-Size Truck Transport Capabilities by UAVs in the Disturbed Logistics Infrastructure -- Experimental Leg Inverse Dynamics Learning of Multi-Legged Walking Robot -- Multi-UAV Mission Efficiency: First Results in an Agent-based Simulation -- The GRASP Metaheuristic for the Electric Vehicle Routing Problem -- Stereo Camera Simulation in Blender -- Vision-based Localization for Multi-rotor Aerial Vehicle in Outdoor Scenarios -- AxS/AI in Context of Future Warfare and Security

Environment -- Model of Surveillance in Complex Environment using a Swarm of Unmanned Aerial Vehicles -- Initial Solution Constructors for Capacitated Green Vehicle Routing Problem -- Artificial Intelligence in the Defence Sector -- Artificial Intelligence and Robotics addressing COVID-19 Pandemic's Challenges -- ORB-SLAM2 Based Teach-and-Repeat System.

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Sommario/riassunto

This book constitutes the thoroughly refereed post-conference proceedings of the 7th International Conference on Modelling and Simulation for Autonomous Systems, MESAS 2020, held in Prague, Czech Republic, in October 2020.\* The 19 full papers included in the volume were carefully reviewed and selected from 26 submissions. They are organized in the following topical sections: future challenges of advanced M&S technology; M&S of intelligent systems – R&D and application; and AxS/AI in context of future warfare and security environment. \*The conference was held virtually.

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