1. Record Nr.   UNINA9910841872703321

   Titolo   Dynamic Data Driven Applications Systems : 4th International
                        Conference, DDDAS 2022, Cambridge, MA, USA, October 6–10, 2022,
                        Proceedings / / edited by Erik Blasch, Frederica Darema, Alex Aved

   Pubbl/distr/stampa   Cham : , : Springer Nature Switzerland : , : Imprint : Springer, , 2024

   ISBN   3-031-52670-8

   Edizione   [1st ed. 2024.]

   Descrizione fisica   1 online resource (434 pages)

   Collana   Lecture Notes in Computer Science, , 1611-3349 ; ; 13984

   Disciplina   005.7

   Soggetti   Computer simulation
                        Computers, Special purpose
                        Quantitative research
                        Dynamics
                        Nonlinear theories
                        Computer Modelling
                        Special Purpose and Application-Based Systems
                        Data Analysis and Big Data
                        Applied Dynamical Systems

   Lingua di pubblicazione   Inglese

   Formato   Materiale a stampa

   Livello bibliografico   Monografia

   Nota di bibliografia   Includes bibliographical references and index.

   Nota di contenuto   DDDAS2022 Main-Track Plenary Presentations -- Aerospace I --
                        Generalized multifidelity active learning for Gaussian-process-based
                        reliability analysis -- Essential Properties of a Multimodal Hypersonic
                        Object Detection and Tracking System -- Aerospace II -- Dynamic
                        Airspace Control via Spatial Network Morphing -- Towards the formal
                        verification of data-driven flight awareness: Leveraging the Cramér-Rao
                        lower bound of stochastic functional time series models -- Coupled
                        Sensor Configuration and Path-Planning in a Multimodal Threat Field --
                        Space Systems -- Probabilistic Admissible Region Based Track
                        Initialization -- Radar cross-section modeling of space debris -- High
                        Resolution Imaging Satellite Constellation -- Network Systems --
                        Reachability Analysis to Track Non-cooperative Satellite in Cislunar
                        Regime -- Physics-Aware Machine Learning for Dynamic, Data-Driven
                        Radar Target Recognition -- DDDAS for Optimized Design and

Management of Wireless Cellular Networks -- Systems Support Methods -- DDDAS-based Learning for Edge Computing at 5G and Beyond 5G -- Monitoring and Secure Communications for Small Modular Reactors -- Data Augmentation of High-Rate Dynamic Testing via a Physics-Informed GAN Approach -- Unsupervised Wave Physics-Informed Representation Learning for Guided Wavefield Reconstruction -- Passive Radio Frequency-based 3D Indoor Positioning System via Ensemble Learning -- Deep Learning - I -- Deep Learning Approach for Data and Computing Efficient Situational Assessment and Awareness in Human Assistance and Disaster Response and Damage Assessment Applications -- SpecAL: Towards Active Learning for Semantic Segmentation of Hyperspectral Imagery -- Multimodal IR and RF based sensor system for real-time human target detection, identification, and Geolocation -- Deep Learning - II -- Learning Interacting Dynamic Systems with Neural Ordinary Differential Equations -- Relational Active Feature Elicitation for DDDAS -- Explainable Human-in-the-loop Dynamic Data-Driven Digital Twins -- Tracking -- Transmission Censoring and Information Fusion for Communication-Efficient Distributed Nonlinear Filtering -- Distributed Estimation of the Pelagic Scattering Layer using a Buoyancy Controlled Robotic System -- Towards a data-driven bilinear Koopman operator for controlled nonlinear systems and sensitivity analysis -- Security -- Tracking Dynamic Gaussian Density with a Theoretically Optimal Sliding Window Approach -- Dynamic Data-Driven Digital Twins for Blockchain Systems -- Adversarial Forecasting through Adversarial Risk Analysis within a DDDAS Framework -- Distributed Systems -- Power Grid Resilience: Data Gaps for Data-Driven Disruption Analysis -- Attack-resilient Cyber-physical System State Estimation for Smart Grid Digital Twin Design -- Applying DDDAS Principles for Realizing Optimized and Robust Deep Learning Models at the Edge -- Keynotes -- Keynotes Overview -- DDDAS for Systems Analytics in Applied Mechanics -- Computing for Emerging Aerospace Autonomous Vehicles -- From genomics to therapeutics: Single-cell dissection and manipulation of disease circuitry -- Data Augmentation to Improve Adversarial Robustness of AI-Based Network Security Monitoring -- Improving Predictive Models for Environmental Monitoring using Distributed Spacecraft Autonomy -- Towards Continual Unsupervised Data Driven Adaptive Learning -- DDDAS2022 Main-Track: Wildfires Panel -- Wildfires Panel Overview -- Using Dynamic Data Driven Cyberinfrastructure for Next Generation Disaster Intelligence -- Simulating large wildland & WUI fires with a physics-based weather-fire behavior model: Understanding, prediction, and data-shaped products -- Autonomous Unmanned Aerial Vehicle systems in Wildfire Detection and Management-Challenges and Opportunities -- Role of Autonomous Unmanned Aerial Systems in Prescribed Burn Projects -- Towards a Dynamic Data Driven Wildfire Digital Twin (WDT): Impact on Deforestation, Air Quality and Cardiopulmonary Disease -- Earth System Digital Twin for Air Quality -- Dynamic Data Driven Applications for Atmospheric Monitoring and Tracking -- Workshop on Climate, Life, Earth, Planets -- Dynamic Data-Driven Downscaling to Quantify Extreme Rainfall and Flood Loss Risk -- DDDAS 2022 Conference Agenda -- Agenda, DDDAS 2022, October 6-10. -- .

| Sommario/riassunto | This book constitutes the refereed proceedings of the 4th International Conference on Dynamic Data Driven Applications Systems, DDDAS 2022, which took place in Cambridge, MA, USA, during October 6–10, 2022. The 31 regular papers in the main track and 5 regular papers from the Wildfires panel, as well as one workshop paper, were carefully reviewed and selected for inclusion in the book. They were organized in |

following topical sections: DDAS2022 Main-Track Plenary Presentations; Keynotes; DDDAS2022 Main-Track: Wildfires Panel; Workshop on Climate, Life, Earth, Planets.