

1. Record Nr.	UNINA9910337653003321
Titolo	Residual Stress, Thermomechanics & Infrared Imaging, Hybrid Techniques and Inverse Problems, Volume 7 : Proceedings of the 2018 Annual Conference on Experimental and Applied Mechanics // edited by Antonio Baldi, Simon Quinn, Xavier Balandraud, Janice M. Dulieu-Barton, Sven Bossuyt
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2019
ISBN	3-319-95074-6
Edizione	[1st ed. 2019.]
Descrizione fisica	1 online resource (125 pages)
Collana	Conference Proceedings of the Society for Experimental Mechanics Series, , 2191-5652
Disciplina	620.1124
Soggetti	Mechanics, Applied Solids Thermodynamics Heat engineering Heat transfer Mass transfer Spectrum analysis Engineering mathematics Engineering - Data processing Acoustical engineering Solid Mechanics Engineering Thermodynamics, Heat and Mass Transfer Spectroscopy Mathematical and Computational Engineering Applications Engineering Acoustics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Chapter1: Comparison between 0D and 1D Heat Source Reconstruction for Fatigue Characterization -- Chapter2: Analysis of the Thermomechanical Response of Granular Materials by Infrared

Thermography -- Chapter3: Inverse Identification of the Loading Applied by a Tire on a Landing Gear Wheel -- Chapter4: Fatigue Properties Assessment of API 5L Gr. B Pipeline Steel using Infrared Thermography -- Chapter5: Determination of Constitutive Parameters in Inverse Problem using Thermoelastic Data -- Chapter6: Experimental Investigation of Emissivity Influence to Obtain Thermal Field by Near Infrared Thermography -- Chapter7: Experimental Validation of the Energy Balance Equation in the Presence of Acoustic Emission -- Chapter8: Model Based Inversion for Pulse Thermography -- Chapter9: Experimentally Enhanced Computations: Calibration Methodology for an Anisotropic Metal, Part I – Traditional Approach -- Chapter10: Mechanical Response and Energy Stored During Deformation of Crystallizing TPU -- Chapter11: Measuring Strain-induced Crystallinity in Rubbers from IR Thermography -- Chapter12: Mechanical and Thermomechanical Characterization of Different Leathers -- Chapter13: Experimentally Enhanced Computations: Calibration Methodology for an Anisotropic Metal, Part II – Novel Approach/ Validation -- Chapter14: Multi-instrumentation of Very High Temperature Tests -- Chapter15: Detection of Damage during Quasi-Static Loading of a Single Stringer Panel using Passive Thermography and Acoustic Emission -- Chapter16: The Effect of Chamber Temperature on Residual Stresses of FDM Parts -- Chapter17: System Identification of Structures with Incomplete Modal Information -- Chapter18: Towards Integrating Imaging Techniques to Assess Manufacturing Features and In-service Damage in Composite Components -- Chapter19: Image-based Stress Field Reconstruction in Complex Media -- Chapter20: Infrared Thermography for Material Characterization at Intermediate Strain Rates -- Chapter21: Evaluation of Fatigue Damage in Short Carbon Fiber Reinforced Plastics Based on Thermoelastic Stress and Phase Analysis -- Chapter22: Thermoelastic Stress Field Investigation of a Multiply-Loaded Disk -- Chapter23: Fatigue Limit Estimation for Single Bead-on-plate weld Based on Dissipated Energy Measurement -- Chapter24: Thermoelastic Measurement Techniques Enabled by Self-Reference.

---

### Sommario/riassunto

Residual Stress, Thermomechanics & Infrared Imaging, Hybrid Techniques and Inverse Problems, Volume 7 of the Proceedings of the 2018 SEM Annual Conference & Exposition on Experimental and Applied Mechanics, the seventh volume of eight from the Conference, brings together contributions to this important area of research and engineering. The collection presents early findings and case studies on a wide range of areas, including: Inverse Problems/Hybrid Techniques Material Characterizations Using Thermography Thermoelastic Stress Analysis Fatigue & Damage Evaluation Using Infrared Thermography Integration of Infrared Thermography & DIC Thermographic Non-Destructive Evaluation (NDE).

---