All presentations held in the auditorium room will be available in interconnected rooms

	ROOM AUDITORIUM
Sept. 11, Mon. 9.00 - 10.00	**OPENING CEREMONY**

	PLENARY LECTURE **Alessandro De Angelis**
Sept. 11, Mon. 10.00 - 10.50	

	PRESENTATION OF FUTURE CONFERENCES
Sept. 11, Mon. 10.50 - 11.10	

	Coffee break
Sept. 11, Mon. 11.10 - 11.40	

	ROOM J **Session 1.1 - Under 35 Award** **Chair M. Volinia - G. Ferrarini**
Sept. 11, Mon. 11.40 - 12.00	#39 Insights on investigating the role of Subaerial Biofilms in Cultural Heritage conservation with Infrared Thermography J. Melada
Sept. 11, Mon. 12.00 - 12.20	#26 Defect Identification in thermographic nondestructive testing under cyclic heating Using SVD Thermo-Component Analysis S. Oiso
Sept. 11, Mon. 12.20 - 12.40	#47 Characterization of water content and delamination in thermal modified woods using terahertz time P. Zhu
Sept. 11, Mon. 12.40 - 13.00	#11 Thermographic Data Processing and Feature Extraction Approaches for Machine Learning-based Defect Detection A. Moskovchenko

	Lunch break
Sept. 11, Mon. 13.00 - 14.00	

	ROOM J **Session 1.2 - Under 35 Award** **Chair V. Raimondi - G. Cadelano**
Sept. 11, Mon. 14.00 - 14.20	#22 Improvement of anticorrosion coating thickness measurement using multi-wavelength lock-in infrared data processing T. Morimoto
Sept. 11, Mon. 14.20 - 14.40	#34 Development and application of a Rapid Scan technique for emissivity measurements of cooled down molten materials I. M. Ermini
Sept. 11, Mon. 14.40 - 15.00	#12 Tracking Long-Term Temperature Anomalies with Person Classification using Thermal Cameras: An Initial Step towards Disease Recognition L. Muzika
Sept. 11, Mon. 15.00 - 15.20	#80 Alzheimer Disease Detection from Raman Spectroscopy of the CerebroSpinal Fluid F. Conti
Sept. 11, Mon. 15.20 - 15.40	#23 Fatigue limit estimation based on dissipated energy of butt laser welded joints T. Yamamoto
Sept. 11, Mon. 15.40 - 16.00	#41 Detection and characterization of short fatigue cracks by conduction thermography E. D'Accardi
Sept. 11, Mon. 16.00 - 16.30	*Coffee break*

	ROOM J Session 1.3 - Under 35 Award Chair D. Moroni - P. Bison
Sept. 11, Mon. 16.30 - 16.50	#48 Contactless and nondestructive evaluation for residual stress in modified and pure HDPE materials using a novel terahertz method and line-scan thermographic technique P. Zhu
Sept. 11, Mon. 16.50 - 17.10	#20 Deterioration detection of heavy-duty anticorrosion coating using near-infrared hyperspectral imaging S. Haruna
Sept. 11, Mon. 17.10 - 17.30	#61 Near Infrared and Short wavelength infrared- based indices for the monitoring of soil moisture from satellite: a comparative analysis A. Gonnelli
Sept. 11, Mon. 17.30 - 17.50	#59 Comparison of local weather measurements versus online weather data for outdoor thermal infrared monitoring correction T. Toullier
Sept. 11, Mon. 17.50 - 18.10	#25 Spatial and time-series 4D infrared gas cloud imaging reconstructed from infrared images measured in multiple optical paths T. Aoki

	ROOM J **Session 2.1 - NDT** **Chair T. Sakagami - G. Ferrarini**
Sept. 12, Tue. 8.50 - 9.10	#9 Spatial Structure Analysis for Subsurface Defect Detection in Materials using Active Infrared Thermography and Adaptive Fixed-Rank Kriging S. Sfarra
Sept. 12, Tue. 9.10 - 9.30	#18 An examination of a method to reduce the effect of standing-wave heat generation in ultrasound-excited thermography inspection S. Takahashi
Sept. 12, Tue. 9.30 - 9.50	#51 Emissivity prediction of rough cast iron for laser thermography N. Scheuschner
Sept. 12, Tue. 9.50 - 10.10	#63 Comparison of inductive thermography and computer tomography results for short surface cracks B. Oswald-Tranta
Sept. 12, Tue. 10.10 - 10.30	#66 Laser thermography: an investigation of test parameters on detection and quantitative assessment in a finite crack G. Dell'Avvocato
Sept. 12, Tue. 10.30 - 10.50	#21 Study on Heat Generation at Defects in Sonic-IR Method Using Ultrasonic Wave Input via Water Y. Izumi
Sept. 12, Tue. 10.50 - 11.10	#10 Terahertz radiation in non-invasive defect inspection in alumina ceramics W. Swiderski
Sept. 12, Tue. 11.10 - 11.40	*Coffee break*

	ROOM J **Session 2.2 - Sensors** **Chair M. Strojnik - P. Martyniuk**
Sept. 12, Tue. 11.40 - 12.00	#68 Optical centroid efficiency in infrared sensors M. Strojnik
Sept. 12, Tue. 12.00 - 12.20	#56 VLWIR > 18 µm T2SLs InAs/InAsSb GaAs immersed photodetectors for HOT conditions P. Martyniuk
Sept. 12, Tue. 12.20 - 12.40	#15 Compact thermographic device with built-in active reference element for increased measurement accuracy M. Svantner
Sept. 12, Tue. 12.40 - 13.00	#69 The effect of detector-pixel size and aberration on the optical centroid efficiency in infrared sensors M. Strojnik
Sept. 12, Tue. 13.00 - 14.00	*Lunch break*

Sept. 12, Tue. 14.00 - 14.30	**POSTER SESSION**
	#52 P. Bison Train pulses with spatial random distribution to measure in-plane thermal diffusivity
	#43 S. Hesam Enhancing Thermal Inspection of Buildings Using Texture Analysis
	#53 G. Cadelano Method for the quantitative assessment of moisture content of porous building materials based on measurement of thermal inertia with active infrared thermography
	#55 P. Bison Thermal diffusivity of biochar coating deposited on heat exchanger
	#77 B. Yousefi Diagnostic Biomarker for Breast Cancer applying Rayleigh Low-Rank Embedding Thermography
	#54 P. Bison Monitoring moisture diffusion after contact sponge application

	ROOM J **Session 2.3 - Image processing** **Chair X. Maldague - D. Moroni**
Sept. 12, Tue. 14.30 - 14.50	#8 Thermal Cooling Simulation On Woven Polyester by finite elements G. Steenackers
Sept. 12, Tue. 14.50 - 15.10	#13 Simultaneous Multi-Frequency Thermography: a novel active thermography scheme S. Laureti
Sept. 12, Tue. 15.10 - 15.30	#40 Thermal data augmentation approach for the detection of corrosion in pipes using deep learning and finite element modelling X. Maldague
Sept. 12, Tue. 15.30 - 15.50	#73 A review of mathematical methods for the evaluation of defects in a layered specimen by means of active thermography: Perturbation theory, linearization, reciprocity gap G. Inglese
Sept. 12, Tue. 15.50 - 16.10	#49 Simulation-aided infrared thermography with decomposition-based noise reduction for detecting defects in ancient polyptychs H. Zhang
Sept. 12, Tue. 16.10 - 16.40	*Coffee break*

13, Sept.	WEDNESDAY

	ROOM J **Session 3.1 - Remote sensing** **Chair V. Raimondi - M. Strojnik**
Sept. 13, Wed. 9.30 - 9.50	#57 Data simulations of a compressive sensing multispectral imager in the mid infrared and its performances for the monitoring of high temperature events D. Guzzi
Sept. 13, Wed. 9.50 - 10.10	#78 Study of structural damage of leaves over the infrared narrow bands R. Barragan
Sept. 13, Wed. 10.10 - 10.30	#64 The impact of spatial resolution on active fire monitoring by multispectral satellite imagery A. Gonnelli
Sept. 13, Wed. 10.30 - 10.50	#74 FLORIS: an Innovative Spectrometer for the Fluorescence measurement and its synergy with OLCI and SLSTR P. Coppo
Sept. 13, Wed. 10.50 - 11.10	#65 Exploring the potential of compressive sensing payloads for Earth Observation from geostationary platform: an instrumental concept for fire monitoring D. Borrelli
Sept. 13, Wed. 11.10 - 11.40	*Coffee break*

	ROOM J **Session 3.2 - Biomedical** **Chair G. Steenackers - G. Lazzini**
Sept. 13, Wed. 11.40 - 12.00	#35 Identification of thyroid papillary carcinoma and adenoma through thermal imaging: preliminary results D. Perpetuini
Sept. 13, Wed. 12.00 - 12.20	#14 Grading of Melanoma Tissues by Raman Spectroscopy M. D'Acunto
Sept. 13, Wed. 12.20 - 12.40	#16 Analysis of volatile metabolites using vibrational spectroscopy K. Maiti
Sept. 13, Wed. 12.40 - 13.00	#50 Preliminary findings on the use of infrared thermal imaging for the detection of reactive hyperemia in the upper limb on vasculopathic patients D. Perpetuini
Sept. 13, Wed. 13.00 - 14.00	*Lunch break*

	ROOM J **Session 3.3 - NDT** **Chair P. Bison - G. Cadelano**
Sept. 13, Wed. 14.00 - 14.20	#44 On the detection of hidden text in ancient books by pulsed termography G. Caruso
Sept. 13, Wed. 14.20 - 14.40	#56 Non-destructive fatigue evaluation through thermophysical properties using lock-in thermography R. Fujita
Sept. 13, Wed. 14.40 - 15.00	#70 Transient thermal characterization of small particles in fluidic or acoustic levitation J. C. Batsale
Sept. 13, Wed. 15.20 - 15.40	#19 IR thermography for non-destructive monitoring of moisture in cultural heritage E. Guolo
Sept. 13, Wed. 15.40 - 16.00	#31 Development of a New Lubricant Degradation Monitoring Technique Using Terahertz Electromagnetic Waves H. Kawano
Sept. 13, Wed. 16.00 - 16.20	#58 Exploring the correlation between thermal diffusivity and ultimate tensile strength in Usibor®1500 through laser thermography G. Dell'Avvocato
Sept. 13, Wed. 16.20-16.30	*AITA UNDER 35 AWARD CEREMONY*
Sept. 13, Wed. 16.30	*Farewell cocktail*