ICTS4eHealth 2026

6th edition of the IEEE Conference on ICT Solutions for eHealth

Vilamoura, Algarve (Portugal)

Final Program of ICTS4eHealth

(All times are reported with reference to the Portugal time zone)

Day 1 – **Tuesday, June 23**

13.30 – 14.00
Registration (all day)

14.15 – 15.30
Session 1: **Image and Data Processing**
Session Chair: **Daniele Ravì**

	Welcome to ICTS4eHealth 2026
Annisa Sugiarti	BioSpecular: A Benchmark of Specular Reflection Removal on Tissue Images
Ciro Russo	Impact of Cytology Preparation on Deep Learning for Cervical Cancer Screening
Kian Anderson	Automated Cleaning of Radiographic Images for Deep Learning Applications

15.30 – 16.00
Coffee Break

16.00 – 17.40
Session 2: **AI and Data Science for Smart Healthcare**
Session Chair: **Giovanni Lonia**

Kyoko Sawamura	Clustering Health-Care Institutions Based on the Dynamic Time Warping Similarity of Frequent Medical Orders
Rosario Napoli	Graph Data Science for Multi-Omics: Revealing Hidden Cancer Biomedical Patterns Through Global and Local Centrality
Matteo Große-Kampmann	Securing Brain-Computer Interfaces in Healthcare: A Systematic Review of Threats, Defenses, and Regulatory Challenges
Patrick Sello	From Digital Models to Intelligent Twins: A Maturity-Driven CPS Framework for Trauma Readmission in Healthcare
Daniele Ravì	Abdominal Compliance Optimization for Laparoscopy Surgery in Pediatric Patients Using Swarm Intelligence

Day 2 – **Wednesday, June 24**

08.30 – 09.00
Registration (all day)

09.00 – 10.30
Session 3: **Clinical Data, Privacy, and Interoperability**
Session Chair: **Patrick Sello**

Mario Dantas	EHR-EHealth: A Proposal Environment Supporting Clinical Information Exchange
Teresa Conte	FHIR-Based Management of Patient-Generated Health Data and Granular Consent
Meghana Byalalu Krishnadevarajeurs	Privacy-Preserving Stroke Detection from Facial Videos via Federated ResNet-BiGRU
Stefano Silvestri	Toward Semantic HL7 FHIR-Based Interoperability of Italian Clinical Documents Using AI and Domain Terminologies

10.30 – 11.00
Coffee Break

11.00 – 12.10
ISCC Welcome and Keynote

Prof. Aurel Lazar
Building the Foundations of Natural Olfactory Intelligence

Session Chair: **TBA**

12.10 – 13.10
Session 4: **AI for Neurodegenerative and Speech Disorders**
Session Chair: **Laura Verde**

Anja Lowit	Staircase Classification with Acoustic Representations for ALS Severity Recognition
Antonio Scardace	A Quantitative Analysis of Multimodal Biomarkers in Alzheimer's Disease
Diane Woodbridge	Automated Pronunciation Evaluation for Korean Toddler Speech Using Speech Diarization and Self-Supervised Learning

13.10 – 14.00
Lunch

14.00 – 15.40

Session 5: **Image Analysis: Segmentation and Detection in Clinical Applications**
Session Chair: **Hesam Hakimnejad**

Ettore Lanzarone	Impact of task-informed data augmentation on U-Net-based kidney segmentation performance
Maximo Rodriguez Herrero	OsteoCAD: An eHealth Framework for Deep Learning-Based Large Bone Tumor Segmentation
Salvatore Giugliano	Saliency-Guided Regularization Framework for Enhancing Multiple Sclerosis Lesion Segmentation
Tess Watt	Improving the Quality of Skin Lesion Data for Training Vision-Language Models
Nhung Thi Hong Tran	ReMark: Augmented Reality and Image Matching for Skin Lesion Re-Identification

15.40 – 16.10
Coffee Break

16.10 – 17.50

Session 6: **Large Language Models for Health**
Session Chair: **Hasan F. Ates**

Francesco Di Serio	Parameter-Efficient Adaptation of Vision-Language Models for Medical Visual Question Answering
Shreyas Ramachandran	PULSE8: A ChatGPT-Driven Personalized Wellness App
Salvatore Giugliano	Influence of Speech Disfluencies and Prompt Optimization on LLM-Based Alzheimer's Disease Classification
Patrick Sello	A Hybrid Regex-Transformer Model for Enhanced Readmission Risk Detection from Clinical Text
Francesco Mercaldo	A Method for Explainable Multi-Modal Medical Image-Text Visual Question Answering Task

Day 3: **Thursday, June 25**

08.30 – 09.00
Registration (all day)

09.00 – 10.40
Session 7: **Explainable and Interpretable AI in Clinical Applications**
Session Chair: **Saber Sami**

Artid Boonrerng	Explainable ICD-10 Coding Support for Thai Clinical Text via Graph-Grounded Retrieval
Francesco Mercaldo	A Method for Explainable Multi-Modal Medical Image-Text Alignment Task
Hasan F. Ates	ATF-Attention: Attention-Based Fusion for Multi-Model Dental Object Detection in Panoramic Radiographs
Antonio Della Cioppa	Interpretable Evolutionary Models for Outcome Prediction in Pediatric Intracerebral Hemorrhage

10.40 – 11.10
Coffee Break

11.10 – 12.20
ICTS4eHealth Keynote

Prof. Francisco Martínez Álvarez
Quantum Machine Learning for eHealth: Foundations, Opportunities, and Emerging Applications

Session Chair: **Giovanna Sannino**

12.20 – 14.00
Lunch

14.00 – 15.40
Session 8: **Generative AI for Next-generation e-Health**
Session Chair: **Alessia Saggese**

Giuseppe Placidi	Synthetic Labeled MRI Brain Volumes via 2.5D Deep Learning
Hyder Abbas	Transfer Learning Based on Generative Adversarial Network for Tissue-Specific Virtual Staining
Martino Giaquinto	A Conditional Diffusion Model for Motor Imagery EEG Data Augmentation
Hesam Hakimnejad	StainFlow: Virtual Staining of Label-Free Tissue via Flow-Based Generative Models
Francesco Gargiulo	Sustainable Agentic AI in Medicine: Toward Energy-Aware, Equitable, and Responsible Architectures

15.40 – 16.10
Coffee Break

16.10 – 18.00

Session 9: **Signals and Motion Analysis for Healthcare**
Session Chair: **Daniele Ravì and Laura Verde**

Summer Fleck	Exploratory Study to Assess Muscle Fatigue and Recovery Using Thermal Imaging, Surface Electromyography and Goniometry
Ciro Nespolino	Towards an EEG-Based Method for Anaesthesia Monitoring: A Focus on Feature Extraction
Landoline Bonnin	A Reliability-Centred Benchmark for AI-Based Motion Analysis and Motor Biomarker Extraction
Giovanni Lonia	Quantitative Lower-Limb Motion Analysis for Tele-Rehabilitation: A Mixed Reality Approach in a Cloud-Edge Environment
Bisma Naeem	Physics-Constrained Hybrid Generative Modeling for MammoWave Based Breast Cancer Classification
	Best paper announcement
	Conclusions