

Applied Electronics 2026

31st International Conference

Start	End	Duration	Program	Chairman	Location
Monday 7.9.2026					
8:00	9:00	1:00	Registration/Breakfast		Dinner Hall
09:00	09:15	00:15	Conference Opening	<i>Burian, P.</i>	Planetarium
09:15	09:55	00:40	Invited Lecture		
09:55	10:15	00:20	Planetarium Film Screening		
10:15	10:40	00:25	Coffee Break		Dinner Hall
10:40	12:20	01:40	Section 1 — EMC, RF, Communication	<i>Kubík, Z.</i>	Conference Hall
12:20	13:20	01:00	Lunch		Dinner Hall
13:20	15:00	1:40	Section 2 — Analogue and digital electronic systems	<i>Michal, V.</i>	Conference Hall
15:00	15:10	00:10	Group Photo		Amphitheatre
15:10	16:40	01:30	Poster Section / Welcome Drink		Amphitheatre
16:30	18:30	02:00	Free Tour of Techmania Science Center		Amphitheatre
Tuesday 8.9.2026					
08:45	09:20	00:35	Breakfast		Dinner Hall
09:20	10:40	01:20	Section 3 — Electronics in measurement and control	<i>Poupa, M.</i>	Conference Hall
10:40	11:00	00:20	Coffee Break		Dinner Hall
11:00	12:00	01:00	Section 4 — Electronics in industry and transport	<i>Roleček, J.</i>	Conference Hall
12:00	13:00	01:00	Lunch		Dinner Hall
13:00	14:40	01:40	Section 5 — Bio-medical electronics	<i>Friedemann, M.</i>	Conference Hall
14:40	15:00	00:20	Coffee Break		Dinner Hall
15:00	16:20	01:20	Section 6 — Electronics in physics and space	<i>Natal da Luz, H.</i>	Conference Hall
16:20	16:40	00:20	Closing Ceremony		Conference Hall
19:00	23:00		Social Dinner		Plzeňka Pub, Riegrova 7, Pilsen
Wednesday 9.9.2026					
9:00	12:00	03:00	Workshop on Ionizing Radiation Detection	<i>Holík, M.</i>	Faculty of EE, EK519
12:00	13:00	01:00	Lunch		University Canteen
13:00	15:00	02:00	Guided Tour of the Research and Innovation Centre (RICE) Laboratories and Research Facilities 1	<i>Tupa, J.</i>	RICE Labs, FEL UWB main entrance
15:00	17:00	02:00	Guided Tour of the Research and Innovation Centre (RICE) Laboratories and Research Facilities 2	<i>Tupa, J.</i>	RICE Labs, FEL UWB main entrance
All times are Central European Summer Time (UTC+2 hours)					

7 September 2026

Invited lectures	Planetarium	09:15 - 09:55	7 Sep 2026
Chairman: Burian, P.			
Hybrid Pixel Detectors as a Swiss-Army Knife Platform for Ionizing Radiation Imaging			[81]
Pichotka M.			
Section 1 - EMC, RF, Communication	Conference Hall	10:40 - 12:20	7 Sep 2026
Chairman: Kubík, Z.			
Design and implementation of LoRaWAN server emulator to test emerging application use-cases using Edge device models.			[38]
Peniak P., Bubenikova E., Kanalikova A.			
Standalone Antenna Measurement System			[57]
AL.DAHER AL-KHATIB I., Arkali E., Mutne R., Günel S.			
Magnetic Near Field Probe with Large Penetration Area for Shielding Effectiveness			[11]
Sedlacek J., Kubik Z.			
Experimental Characterization of Seam-Dominated RF Link Performance for IIoT Sensors in Metallic Enclosures			[29]
Riehl D., Pösnecker J., Gebhart P., Hofmann K.			
Analysing Digitization of Analog Signals for High-Performance Random Number Generators			[23]
Hammer P., Mottok J.			
Section 2 - Analogue and digital electronic systems	Conference Hall	13:20 - 15:00	7 Sep 2026
Chairman: Michal, V.			
STACKED BJT ON-CHIP THERMAL SENSING WITH 1ST ORDER LINEAR RESPONSE			[32]
MICHAL V.			
Analysis of Gate Drive Circuit Variations for Parallel MOSFET Operation			[74]
Krýsl P., NOVOTNÝ J., DRÁBEK P., Jára M.			
Novel third-order autonomous chaotic oscillator with nonlinear capacitor			[19]
Petrzela J.			
Bidirectional Resistor Sorting Method for Matching in Layout			[7]
Halaška M.			
ACDRC-ALDA: Connectivity Analysis Metric for Automatic Layout Design Automation in Integrated Circuits			[6]
Barri D., Barri D.			

8 September 2026

Section 3 - Electronics in measurement and control		Conference Hall	09:20 - 10:40	8 Sep 2026
		Chairman: Poupa, M.		
Time-Domain Uncertainty Analysis of State-Space Systems under Open-Loop Optimal Control		[67]		
Rath G., Harker M., Handler J.				
PLL resonance control circuit for a 500 kHz resonator		[30]		
Voigt S., al Mogahed W., Le P., Friedemann M., Dienel M., Mehner J.				
Comparative Evaluation of FCS-MPC and Sliding Mode-Based FCS-MPC for Grid- Connected Inverters Using HIL simulation		[16]		
Modolo de Souza E., Gomes Andrade G., Frizera Encarnação L.				
Differential Method of Measurement of Signal Distortion		[10]		
Matoušek D., Brtník B.				
Section 4 - Electronics in industry and transport		Conference Hall	11:00 - 12:00	8 Sep 2026
		Chairman: Roleček, J.		
IoT System SmartRack for real-time Structural Condition Monitoring and Collision Detection in Industrial Racking Systems		[18]		
Dobrovolný M., Rozsival P., Roleček J., Fikejz J.				
Improved Super-Twisting Sliding Mode and Proportional Integral Control for Output Voltage Fluctuation Reduction in Dynamic Wireless Charging		[66]		
Yenil V., Uysal E., Koyuncu S.				
Power Electronics Lab Concept for Converters Grid Codes Development and Testing		[65]		
Kosan T., Talla J., Dragoun J., Straka M.				
Section 5 - Bio-medical electronics		Conference Hall	13:00 - 14:40	8 Sep 2026
		Chairman: Friedemann, M.		
Fiber-optic temperature probe for distributed sensing in hyperthermia thermometry		[26]		
Friedemann M., Voigt S., Niebling K., Müller A., Schöpe M., Klautke G., Mehner J.				
Physics-Informed Neural Networks for Conductivity Map Reconstruction in Electrical Impedance Tomography		[49]		
Mikulka J., Fojtík J., Vaněk R.				
Improving Electromagnetic Tracking Accuracy via Multi-Dipole Field Reconstruction		[47]		
Chuang H., Yu S., Liu Z.				
External evaluation of fine-tuned wav2vec2.0 for Parkinson’s disease detection		[15]		
Klempíř O.				
An Engineering Framework for Electrical Stimulation Experiment Design		[8]		
Plíva Z., Richter A., Lindauer V., Petržílka L.				
Section 6 - Electronics in physics and space		Conference Hall	15:00 - 16:20	8 Sep 2026
		Chairman: Natal da Luz, H.		
Gaseous detectors with Timepix readout		[78]		
Natal da Luz H.				
HardPix: Modular Timepix3-Based Radiation Monitor with On-Board Data Processing for Space Applications		[77]		
Malich M.				
A Compact Silicon Photomultiplier Array Readout Board for Energy Resolution		[22]		
Hlavinka M., Matěj Z., Čulen J.				
Integrated Plugin-Based Image Processing for Timepix3 Data with Katherine Generation 2 Readout		[61]		
Krabec D., Farkaš M., Burian P.				

Poster section	Amphitheatre Chairman: Burian, P.	15:00 - 16:40 7 Sep 2026
Trading Silicon for Gas: Timepix-Based Detector Developments Basnet S., Natal da Luz H., Burian P., Růžička O., Garcia F., Jelinkova E., Marques D.		[79]
Galvanically Isolated Front-End for PT100 Temperature Measurement Novotný J., Drábek P., TYRPEKL M., Jára M.		[75]
Architecture of a Modular Energy Management System for Hybrid Power Systems Tyrpekl M., NOVOTNÝ J., DRÁBEK P., BEDNÁŘ B.		[73]
Linearity Characterization of the picoTDC-Based NIM Module for the AFP Timing System in ATLAS Bartůněk D., Komárek T., Georgiev V.		[72]
A Distributed Timepix3-Based Detector Network for Continuous Radiation Monitoring Biskup B., Petr B., Pavel B., Martin F., David K., Petr M., Petr S.		[70]
New SEPIC Converter Topologies with High Step-Up and Step-Down Capability for Electric Vehicle Applications Drábek P., BHAJANA V., Biswal P.		[62]
Local Trigger Board replacement for the Atlas Forward Proton Project Kulhánek T., Zich J., Georgiev V.		[60]
Compact 90° Branch-Line Coupler Using Folded Microstrip Lines for UHF Applications Jahanbakhshi M., Vertat I.		[56]
Comparison of Ferrite Core Materials for High-Frequency GaN-Based DC-DC Converters Starman S.		[55]
Design and Simulation of a Wideband Mirrored Enhanced Howland Current Source for High-Impedance Electrical Impedance Tomography Vaněk R., Rous M., Mikulka J.		[54]
A Sub-500 mV Relaxation Oscillator for Energy Harvesting Startup Circuits Urminský D., Arbet D., Kováč M., Stopjaková V.		[53]
A Modular Edge-Computing Device for Wearable Raw-Data Processing and Activity Recognition Arm J., Šramota J., Beneš V., Burget R., Hubálek J., Rosa M.		[50]
Framework for Processing and Labeling WAMS Data for Power System State and Events Recognition Kubík M., Noháč K., Jiříčková J.		[46]
Energy Consumption Forecasting in Smart Grids Using Machine Learning HOSSEINI S., Shahbaz M.		[44]
S-Band Backup Telemetry Antenna for Embedding within a main Deployable X-Band Reflectarray of 3U CubeSats. fotsing njondung c., vertat i.		[43]
Low-dropout high-accuracy output-node current sensing for operational amplifiers and current conveyors: a virtual-ground replica approach MICHAL V.		[41]
A Resistance-to-Current Converter for Low-Power Sensing Applications Gergely T., Arbet D., Kováč M., Stopjaková V.		[40]
Using a Raspberry Pi to Control a 5-Axis Industrial Robot Model Jirsa J., Niesyt J., Dvořák J.		[39]
Improved High-Gain Zeta Converter Configurations for Electric Vehicle Applications Drábek P., BHAJANA V., Biswal P.		[36]
Privacy-Preserving Edge AI System for In-Home Elderly Activity Monitoring Using Pose Estimation and Lightweight Classification Urban T.		[21]
Analytical CCS-MPC for Grid-Connected Rectifiers with LCL Filter Modolo de Souza E., Frizera Encarnação L., Wanderley França B., Gomes Andrade G., Jovcic D.		[17]
Validity Conditions and Applications of the Effective Resistance Length 1/3 Rule in MOSFET Metal Interconnection and Gate Resistance Calculation VACULA P.		[14]
Electric Field Distribution During ESD Testing per IEC 61000-4-2 Sedlacek J., Kubik Z.		[12]