

Introduction to the Special Section on Sound Scene and Event Analysis

Acquiring respiration rate from photoplethysmographic signal by recursive bayesian tracking of intrinsic modes in time-frequency spectra

Adaptive and nonlinear control of discharge pressure for variable displacement axial piston pumps

Adaptive multiresolution method for MAP reconstruction in electron tomography

Alpha radiation-induced luminescence by am-241 in aqueous nitric acid solution

Ambient rf energy harvesting sensor device with capacitor-leakage-aware duty cycle control

Amplifier similariton laser with extra-broad bandwidth output pulse

An activity recognition framework deploying the random forest classifier and a single optical heart rate monitoring and triaxial accelerometer wrist-band

Binary Non-Negative Matrix Deconvolution for Audio Dictionary Learning

Bioimpedance Sensor Array for Long-Term Monitoring of Wound Healing from Beneath the Primary Dressings and Controlled Formation of H_2O_2 Using Low-Intensity Direct Current

Blind Separation of Audio Mixtures Through Nonnegative Tensor Factorization of Modulation Spectrograms

ClothFace

A Batteryless RFID-Based Textile Platform for Handwriting Recognition

Coupled dictionaries for exemplar-based speech enhancement and automatic speech recognition

Cysteine-tagged chimeric avidin forms high binding capacity layers directly on gold

Design and development of a novel passive wireless ultrasensitive RF temperature transducer for remote sensing

Designing, Manufacturing and Testing of a Piezoelectric Polymer Film In-Sole Sensor for Plantar Pressure Distribution Measurements

Detection and Classification of Acoustic Scenes and Events
Outcome of the DCASE 2016 Challenge

Detection of 3,4-methylenedioxymethamphetamine (MDMA, ecstasy) by displacement of antibodies

Development of a constant dilution sampling system for particulate and gaseous pollutant measurements

Development of Low Cost, Wireless, Inkjet Printed Microfluidic RF Systems and Devices for Sensing or Tunable Electronics

Environmental monitoring with distributed mesh networks
An overview and practical implementation perspective for urban scenario

Evaluation of dry electrodes in canine heart rate monitoring

Fluid Transmission Line Modeling Using a Variational Method

Fluorimetric oxygen sensor with an efficient optical read-out for in vitro cell models

Fusionsense

Emotion classification using feature fusion of multimodal data and deep learning in a brain-inspired spiking neural network

Gas-phase endstation of electron, ion and coincidence spectroscopies for diluted samples at the FinEstBeAMS beamline of the MAX IV 1.5 GeV storage ring

Highly directive radiation and negative refraction using photonic crystals

High performance corrosion resistant coatings by novel coaxial cold- and hot-wire laser cladding methods

Improving reliability for classification of metallic objects using a WTMD portal

In-flightwind field identification and prediction of parafoil systems

Inkjet printed, self powered, wireless sensors for environmental, gas, and authentication-based sensing

Joint-Space Kinematic Model for Gravity-Referenced Joint Angle Estimation of Heavy-Duty Manipulators

Low-cost inkjet-printed fully passive RFID tags for calibration-free capacitive/haptic sensor applications

M2M Communication Assessment in Energy-Harvesting and Wake-Up Radio Assisted Scenarios Using Practical Components

Measurement of sensitivity distribution map of a ferroelectret polymer film

Measurement of the refractive index dispersion of As_2Se_3 bulk glass and thin films prior to and after laser irradiation and annealing using prism coupling in the near- and mid-infrared spectral range

Methods for simultaneous robot-world-hand-eye calibration
A comparative study

Metrics for polyphonic sound event detection

Microwave assisted laser-induced breakdown spectroscopy at ambient conditions

Molecular dynamics simulation of the damage production in Al (110) surface with slow argon ions

New Evidence for the Mechanism of Action of a Type-2 Diabetes Drug Using a Magnetic Bead-Based Automated Biosensing Platform

Noncontact Respiration Monitoring during Sleep with Microwave Doppler Radar

Non-destructive and wireless monitoring of biodegradable polymers

Optimal emission enhancement in orthogonal double-pulse laser-induced breakdown spectroscopy

Passive Moisture Sensor Based on Conductive and Water-Soluble Yarns

Passive resonance sensor based method for monitoring particle suspensions

Piezoresistive natural rubber-multiwall carbon nanotube nanocomposite for sensor applications

Polarization control of the bound state of a vector soliton

Positioning information privacy in intelligent transportation systems
An overview and future perspective

Ranges and stopping power of KeV electrons in the solid hydrogens

Rapid and sensitive detection of norovirus antibodies in human serum with a bilayer interferometry biosensor

Restoration of low-dose digital breast tomosynthesis

RFID-based sensors for zero-power autonomous wireless sensor networks

RFID-Based Wireless Passive Sensors Utilizing Cork Materials

Round Robin computer simulation of ejection probability in sputtering

Screen-printed curvature sensors for soft robots

Secure and connected wearable intelligence for content delivery at a mass event
A case study

Sensitivity modeling of an RFID-based strain-sensing antenna with dielectric constant change

Sensor Fusion for Unobtrusive Respiratory Rate Estimation in Dogs

Separation of Moving Sound Sources Using Multichannel NMF and Acoustic Tracking

Sequential Collinear Photofragmentation and Atomic Absorption Spectroscopy for Online Laser Monitoring of Triatomic Metal Species

Spectral object recognition in hyperspectral holography with complex-domain denoising

Statistical evaluation of barkhausen noise testing (BNT) for ground samples

Structural characterization, spectroscopic, thermal, AC conductivity and dielectric properties and antimicrobial studies of $(C_8H_{12}N)_2[SnCl_6]$

Third order nonlinear optical response of TTF-based molecular corners

Tuning plasmon induced reflectance with hybrid metasurfaces

160W single-frequency laser based on active tapered double-clad fiber amplifier

5G new radio evolution towards sub-THz communications

Advancements in Solution Processable Devices using Metal Oxides For Printed Internet-of-Things Objects

A Framework for Using Radar Measurements of Unknown Targets in Hierarchical Classification

A novel technique for analysis of postural information with wearable devices

Automatic detection of water inside concrete slabs using ground penetrating radar

Automatic numerical differentiation by maximum likelihood estimation of a linear Gaussian state space model

Charge Storage Level Sensor RFID Tag
Impedance Matching and Experimental Characterisation

Chipless graphene tag and dual-CP reader for Internet of Things

Circularly Polarized Corner-Truncated and Slotted Microstrip Patch Antenna on Textile Substrate for Wearable Passive UHF RFID Tags

Circularly polarized shorted ring slot rectenna with a mesh design for optimized inkjet printing on paper substrate

Circularly Polarized Textile Tag Antenna for Wearable Passive UHF RFID Systems

Comparison of Human Head Phantoms with Different Complexities for Implantable Antenna Development

Composite nonlinear feedback control of a JIB trolley of a tower crane behaviors

Dark solitons in nematic liquid crystals

Detection of KC1 and KOH using collinear photofragmentation and atomic absorption spectroscopy

Developing curiosity and multimedia skills with programming experiments

Dilute nitride SOAs for high-speed data processing in variable temperature conditions

Directional selectivity through the subwavelength slit in metallic gratings

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Double-side pumped membrane external-cavity surface-emitting laser (MECSEL) with increased efficiency emitting > 3 W in the 780 nm region

Electromagnetism and cross-disciplinary problems

Energy Detection-Based Spectrum Sensing over Fisher-Snedecor F Fading Channels

Error analysis of NOMA-based user cooperation with SWIPT

Evaluating transparent liquid screen overlay as a haptic conductor
Method of enhancing touchscreen based user interaction by a transparent deformable liquid screen overlay

Exploiting the Momentary Dependence of Radar Observations for Non-Cooperative Target Recognition

Fabrication and reliability evaluation of passive UHF RFID T-shirts

Frequency Comb Generation in a Continuous-Wave Pumped Second-Order Nonlinear Waveguide Resonator

Frequency domain penetration loss in the terahertz band

Headband Antenna for Wireless Power Transfer to Millimeter-Sized Neural Implants with Minimal Misalignment Effects

High power fiber lasers

High-Q resonance train in a plasmonic metasurface

Humidity passive sensors based on UHF RFID using cork dielectric slabs

Impact of Different Concrete Types on Radio Propagation
Fundamentals and Practical RF Measurements

Improved Session Continuity in 5G NR with Joint Use of Multi-Connectivity and Guard Bandwidth

Incorporating Aircraft Kinematics and Radar Cross Section into the Performance Prediction of Air Surveillance

Inertial Odometry on Handheld Smartphones

Inertial Sensor-Based State Estimation of Flexible Links Subject to Bending and Torsion

Inkjet-printed dual microfluidic-based sensor integrated system

Light beam hysteresis in liquid crystals

Location-based beamforming architecture for efficient farming applications with drones

Low-cost microfluidics-enabled tunable loop antenna using inkjet-printing technologies

Measurements of Reflection and Penetration Losses in Low Terahertz Band Vehicular Communications

Methods for long-term GNSS clock offset prediction

Monitoring pH, temperature and humidity in long-term stem cell culture in CO₂ incubator

Multifrequency Pulsar Image Classification Using Dual-Band 1D Convolutional Neural Networks

Multimode waveguides in nematic liquid crystals

Nematicon routing in liquid crystal light valve

Observation of defect formation in metamaterials

On prediction of DCT-based denoising efficiency under spatially correlated noise conditions

Open data based value networks
Finnish examples of public events and agriculture

Optical Frequency Comb Photoacoustic Spectroscopy

Optimization of RFID-Based Tunnel Access Monitoring System Antenna Reading Areas

Passive RFID-based Textile Touchpad

Path Loss Characterization for Intra-Vehicle Wearable Deployments at 60 GHz

Position Estimation for Drones based on Visual SLAM and IMU in GPS-denied Environment

Protective Coating Methods for Glove-Integrated RFID Tags - A Preliminary Study

Real-time and Robust Collaborative Robot Motion Control with Microsoft Kinect ® v2

Role-based visualization of industrial IoT-based systems

Routing light with nematicons
Light localization and steering in liquid crystals

Secure environmental monitoring for industrial internet of things
From framework to live implementation

Self-assembled monolayers (SAMs) of porphyrin deposited inside solid-core photonic crystal fibre (SCPCF)

Single KTiOPO₄ nanocrystals for nonlinear probing of local optical fields and interaction with a metallic nanostructure

Soliton self-deflection via power-dependent walk-off

Spatial solitons carrying phase singularities in nematic liquid crystals

Spatial solitons in a self-focusing medium with tunable nonlinearity

Strain Reliability of Embroidered Passive UHF RFID Tags on 3D-printed Substrates

Texture region detection by trained neural network

The educators' telescope to the future of technology

Theory of near-IR metatronic nanocircuits using transparent conducting oxides (TCO)

The variation of air and surface temperatures in London within a 1km grid using vehicle-transect and ASTER data

Third harmonic generation enhancement in nematic liquid crystals via nonlocal solitons propagation

Today is the future of yesterday; What is the future of today?

Towards Asteroid Tomography
Modellings and Measurements Using an Analogue Model

User Positioning in mmW 5G Networks Using Beam-RSRP Measurements and Kalman Filtering