Ubiquitous and Seamless Localization: Fusing GNSS Pseudoranges and WLAN Signal Strengths
Research output: Scientific - peer-review › Article

Linearity Challenges of LTE-Advanced Mobile Transmitters: Requirements and Potential Solutions
Research output: Scientific - peer-review › Article

Efficient fast-convolution based waveform processing for 5G physical layer
Research output: Scientific - peer-review › Article

Arguments of Innovative Antenna Design and Centralized Macro Sites for 5G
Research output: Scientific - peer-review › Article

Evaluation of a Heterogeneous Multicore Architecture by Design and Test of an OFDM Receiver
Research output: Scientific - peer-review › Article

Enhanced multicarrier techniques for narrowband and broadband PMR coexistence
Research output: Scientific - peer-review › Article

A Survey on Wireless Transmitter Localization Using Signal Strength Measurements
Research output: Scientific - peer-review › Review Article

Modeling and Joint Mitigation of TX and RX Nonlinearity Induced Receiver Desensitization
Research output: Scientific - peer-review › Article

Capacity Analysis of Joint Transmission CoMP With Adaptive Modulation
Research output: Scientific - peer-review › Article

Analytical performance estimation of network-assisted D2D communications in urban scenarios with rectangular cells
Research output: Scientific - peer-review › Article

Computing Platforms for Software-Defined Radio
Research output: Scientific - peer-review › Anthology
Conclusions
Research output: Scientific - peer-review › Chapter

Design and Implementation of IEEE 802.11a/g Receiver Blocks on a Coarse-Grained Reconfigurable Array
Research output: Scientific - peer-review › Chapter

Design Transformation from a Single-Core to a Multi-Core Architecture Targeting Massively Parallel Signal Processing Algorithms
Research output: Scientific - peer-review › Chapter

Efficient fast-convolution based implementation of 5G waveform processing using circular convolution decomposition
Research output: Scientific - peer-review › Conference contribution

Filtered multitone multicarrier modulation with partially overlapping sub-channels
Research output: Scientific - peer-review › Conference contribution

GNSS Vulnerabilities
Research output: Scientific - peer-review › Chapter

Introduction and Book Structure
Research output: Scientific - peer-review › Chapter

Mapping the Radio World to Find Us
Research output: Scientific - peer-review › Chapter

Multi-GNSS: Facts and Issues
Research output: Scientific - peer-review › Chapter

MULTI-POS: Lessons Learnt from Fellows and Supervisors
Research output: Scientific - peer-review › Chapter

MULTI-POS: Multi-Technology Positioning Professionals Training Network
Research output: Scientific - peer-review › Chapter
Multi-Technology Positioning
Research output: Scientific - peer-review › Anthology

Ninesilica: A Homogeneous MPSoC Approach for SDR Platforms
Research output: Scientific - peer-review › Chapter

Optimized fast convolution based filtered-OFDM processing for 5G
Research output: Scientific - peer-review › Conference contribution

Synchronization in NC-OFDM-Based Cognitive Radio Platforms
Research output: Scientific - peer-review › Chapter

The Evolution of Software-Defined Radio: An Introduction
Research output: Scientific - peer-review › Chapter

The Future of Software-Defined Radio: Recommendations
Research output: Scientific - peer-review › Chapter

The Impact of Galileo Open Service on Location Based Services Markets
Research output: Scientific - peer-review › Chapter

Understanding the GNSS Signal Model
Research output: Scientific - peer-review › Chapter

Rinne, J., Keskinen, J., Berger, P. R., Lupo, D. & Valkama, M. 2017 In : IEEE Access.
Research output: Scientific - peer-review › Article

In preparation towards future cellular networks: the detailed analysis of macro and micro site densification and sector densification
Research output: Scientific - peer-review › Article

Monitoring intrusion in an area using WIFI-enabled devices
Della Rosa, F. & Nurmi, J. 13 Dec 2016 9520041
Research output: Scientific › Patent

Active RF cancellation of nonlinear TX leakage in FDD transceivers
Digital predistortion for mitigating transmitter-induced receiver desensitization in carrier aggregation FDD transceivers
Research output: Scientific - peer-review › Conference contribution

Efficient Time-Domain Phase Noise Mitigation in mm-Wave Wireless Communications
Research output: Scientific - peer-review › Conference contribution

Fast-convolution filtered OFDM waveforms with adjustable CP length
Research output: Scientific - peer-review › Conference contribution

Methods for phase noise mitigation for DFT-S-OFDM waveforms
Research output: Scientific - peer-review › Conference contribution

Reference receiver enabled digital cancellation of nonlinear out-of-band blocker distortion in wideband receivers
Research output: Scientific - peer-review › Conference contribution

Wireless Optogenetic Neural Dust for Deep Brain Stimulation
Research output: Scientific - peer-review › Conference contribution

FPGA Implementation Issues of a Flexible Synchronizer Suitable for NC-OFDM-Based Cognitive Radios
Research output: Scientific - peer-review › Article

Energy Consumption and Outage Performance Analysis of Heterogeneous Network with Varying Inter-tier Dependence
Research output: Scientific - peer-review › Conference contribution

Compact inband full-duplex relays with beyond 100 dB self-interference suppression: Enabling techniques and field measurements
Research output: Scientific - peer-review › Article

Low-Complexity Subband Digital Predistortion for Spurious Emission Suppression in Noncontiguous Spectrum Access
Research output: Scientific - peer-review › Article

Terahertz band communications: Applications, research challenges, and standardization activities
Research output: Scientific - peer-review › Conference contribution
Feasibility and Fundamental Limits of Energy-Harvesting Based M2M Communications
Research output: Scientific - peer-review › Conference contribution

Integrating Printed and Silicon Electronics
Mäntysalo, M. & Kraft, T. Sep 2016 International Conference on Flexible and Printed Electroncis . Yonezawa, Japan
Research output: Professional › Conference contribution

Location Based Beamforming in 5G Ultra-Dense Networks
Research output: Scientific - peer-review › Conference contribution

Implementation and performance evaluation of graphene-based passive UHF RFID textile tags
Research output: Scientific - peer-review › Conference contribution

Random Triangle: A Baseline Model for Interference Analysis in Heterogeneous Networks
Samuylov, A., Moltchanov, D., Gaidamaka, Y., Andreev, S. & Koucheryavy, Y. 1 Aug 2016 In : IEEE Transactions on Vehicular Technology. 65, 8, p. 6778-6782
Research output: Scientific - peer-review › Article

Optimization of Flexible Filter Banks Based on Fast Convolution
Research output: Scientific - peer-review › Article

Performance Considerations for Positioning with Signals of Opportunity
Research output: Scientific - peer-review › Conference contribution

Multilevel outphasing power amplifier system with a transmission-line power combiner
Research output: Scientific - peer-review › Conference contribution

Analysis and Augmented Spatial Processing for Uplink OFDMA MU-MIMO Receiver With Transceiver I/Q Imbalance and External Interference
Research output: Scientific - peer-review › Article

Performance and Cramer-Rao Bounds for DoA/RSS Estimation and Transmitter Localization Using Sectorized Antennas
Research output: Scientific - peer-review › Article

MULTI-POS: Marie Curie Network in Multi-technology Positioning
Research output: Scientific - peer-review › Conference contribution
Data-Parallel Implementation of Reconfigurable Digital Predistortion on a Mobile GPU
Research output: Scientific - peer-review › Conference contribution

Sub-band Digital Predistortion for Noncontiguous Transmissions: Algorithm Development and Real-Time Prototype Implementation
Research output: Scientific - peer-review › Conference contribution

Analysis of a receiver-based reliable broadcast approach for vehicular networks
Research output: Scientific - peer-review › Article

An efficient indoor positioning particle filter using a floor-plan based proposal distribution
Research output: Scientific - peer-review › Conference contribution

Digitally Enhanced Wideband I/Q Downconversion Receiver With 2-Channel Time-Interleaved ADCs
Research output: Scientific - peer-review › Article

Hybrid Renewable Energy Routing for ISP Networks
Research output: Scientific - peer-review › Conference contribution

IEEE 802.11ac MIMO Transceiver Baseband Processing on a VLIW Processor
Research output: Scientific - peer-review › Article

Improving Disturbance Management with Combined Electricity and Mobile Network Situation Awareness System
Research output: Scientific - peer-review › Article

Internet of Things, Smart Spaces, and Next Generation Networks and Systems: 16th International Conference, NEW2AN 2016, and 9th Conference, ruSMART 2016, St. Petersburg, Russia, September 26-28, 2016, Proceedings
Research output: Scientific - peer-review › Anthology

Joint 3D Positioning and Network Synchronization in 5G Ultra-Dense Networks Using UKF and EKF
Research output: Scientific - peer-review › Conference contribution

Multicarrier modulation for HF communications
Research output: Scientific - peer-review › Conference contribution
Optimization of parallel processing intensive digital front-end for IEEE 802.11ac receiver
Research output: Scientific - peer-review › Conference contribution

Parallel processing intensive digital front-end for IEEE 802.11ac receiver
Research output: Scientific - peer-review › Conference contribution

Performance Evaluation of Cyclostationary Based Cooperative Sensing Using Field Measurements
Research output: Scientific - peer-review › Article

Power amplifier effects on frequency localized 5G candidate waveforms
Research output: Scientific - peer-review › Conference contribution

Printed epidermal electronic system
Research output: Scientific › Paper, poster or abstract

Private cloud deployment model in open-source mobile robots ecosystem
Research output: Scientific - peer-review › Conference contribution

Remotely Powered Piezoresistive Pressure Sensor: Toward Wireless Monitoring of Intracranial Pressure
Research output: Scientific - peer-review › Article

Short range HF radio channel measurements: Search for one path channels
Research output: Scientific - peer-review › Conference contribution

Statistical Trilateration with Skew-t Distributed Errors in LTE Networks
Research output: Scientific - peer-review › Article

The Possibilities of Graphene-Based Passive RFID Tags in High humidity Conditions
Research output: Scientific - peer-review › Conference contribution

Unified Analysis of Cooperative Spectrum Sensing over Composite and Generalized Fading Channels
Research output: Scientific - peer-review › Article

Using Competing Bacterial Communication to Disassemble Biofilms
A New Approach to Sign-Bit-Based Parameter Estimation in OFDM Receivers
Research output: Scientific - peer-review › Article

Directional Antenna System-Based DoA/RSS Estimation, Localization and Tracking in Future Wireless Networks: Algorithms and Performance Analysis
Werner, J. 23 Nov 2015 Tampere University of Technology. 83 p. (Tampere University of Technology. Publication; vol. 1350)
Research output: Collection of articles › Doctoral Thesis

Combined architecture for multi-dimensional signal quality enhancements in GNSS receivers
Research output: Professional › Conference contribution

Biotelemetric wireless intracranial pressure monitoring: an in vitro study
Research output: Scientific - peer-review › Article

Investigations on mobility models and their impact on indoor positioning
Research output: Scientific - peer-review › Conference contribution

On the Impact of Intra-System Interference for Ranging and Positioning with Bluetooth Low Energy
Research output: Scientific - peer-review › Conference contribution

Room-level indoor positioning with Wi-Fi and RFID fingerprints
Research output: Scientific - peer-review › Conference contribution

Entropy and Channel Capacity under Optimum Power and Rate Adaptation over Generalized Fading Conditions
Research output: Scientific - peer-review › Article

Sectorized antenna-based DoA estimation and localization: Advanced algorithms and measurements
Research output: Scientific - peer-review › Article

SPMA: An innovative solution for future smart networks in macrocellular suburban environment
Research output: Scientific - peer-review › Conference contribution

Modeling and Digital Mitigation of Transmitter Imperfections in Radio Communication Systems
Kiayani, A. 27 Oct 2015 Tampere University of Technology. 97 p. (Tampere University of Technology. Publication; vol. 1332)
Novel Methods for Personal Indoor Positioning
Leppäkoski, H. 27 Oct 2015 Tampere University of Technology. 129 p. (Tampere University of Technology. Publication; vol. 1330)
Research output: Collection of articles › Doctoral Thesis

Nonlinear Distortion In Wideband Radio Receivers and Analog-to-Digital Converters: Modeling and Digital Suppression
Allen, M. 23 Oct 2015 Tampere University of Technology. 95 p. (Tampere University of Technology. Publication; vol. 1329)
Research output: Collection of articles › Doctoral Thesis

Signal strength readout and miniaturised antenna for metal-mountable UHF RFID threshold temperature sensor tag
Research output: Scientific - peer-review › Article

Capacity, Energy-Efficiency and Cost-Efficiency Aspects of Future Mobile Network Deployment Solutions
Yunas, S. F. 9 Oct 2015 Tampere University of Technology. 122 p. (Tampere University of Technology. Publication; vol. 1323)
Research output: Monograph › Doctoral Thesis

3GPP LTE-assisted WI-FI-direct: Trial Implementation of live D2D technology
Research output: Scientific - peer-review › Article

A non-repudiable negotiation protocol for security service level agreements
Research output: Scientific - peer-review › Article

Solutions to integrals involving the marcum Q-function and applications
Research output: Scientific - peer-review › Article

Analytic Hierarchy Process for assessing e-health technologies for elderly indoor mobility analysis
Research output: Scientific - peer-review › Conference contribution

Model-based design and implementation of an adaptive digital predistortion filter
Research output: Scientific - peer-review › Conference contribution

Achievable transmission rates and self-interference channel estimation in hybrid full-duplex/half-duplex MIMO relaying
Research output: Scientific - peer-review › Conference contribution

Abstracting Application Development for Resource Constrained Wireless Sensor Networks
Laukkarinen, T. 4 Sep 2015 Tampere: Tampere University of Technology. 104 p. (Tampere University of Technology, Publication; vol. 1306)
Research output: Collection of articles › Doctoral Thesis
Frequency Response Mismatches in 4-channel Time-Interleaved ADCs: Analysis, Blind Identification, and Correction
Research output: Scientific - peer-review › Article

High-Efficiency Device Localization in 5G Ultra-Dense Networks: Prospects and Enabling Technologies
Research output: Scientific - peer-review › Conference contribution

Securing Network-Assisted Direct Communication: The Case of Unreliable Cellular Connectivity
Research output: Scientific - peer-review › Conference contribution

You are AllRing too Much: Assessing the Privacy of Users in Crowdsourcing Environmental Data
Research output: Scientific - peer-review › Conference contribution

Transceiver I/Q Imbalance and Widely-Linear Spatial Processing in Large Antenna Systems
Research output: Scientific - peer-review › Conference contribution

Evaluation of SPMA and higher order sectorization for homogeneous SIR through macro sites
Research output: Scientific - peer-review › Article

Performance analysis of IoT-enabling IEEE 802.11ah technology and its RAW mechanism with non-cross slot boundary holding schemes
Research output: Scientific - peer-review › Conference contribution

Molecular Communication Modeling of Antibody-Mediated Drug Delivery Systems
Research output: Scientific - peer-review › Article

Prioritized centrally-controlled resource allocation in integrated multi-RAT HetNets
Research output: Scientific - peer-review › Conference contribution

Wideband self-adaptive RF cancellation circuit for full-duplex radio: Operating principle and measurements
Research output: Scientific - peer-review › Conference contribution

Electro-textiles – The enabling technology for wearable antennas in wireless body-centric sensing systems
Incorporating Bacterial Properties for Plasmid Delivery in Nano Sensor Networks

Performance Evaluation of Wearable Passive RFID Tag for Human Indoor Positioning

Digital Self-Interference Cancellation under Nonideal RF Components: Advanced Algorithms and Measured Performance

Indoor Positioning Technology Assessment using Analytic Hierarchy Process for Pedestrian Navigation Services

Received Signal Strength models for WLAN and BLE-based indoor positioning in multi-floor buildings

Receiver Architecture for Cognitive Positioning with CDMA and OFDM signals

Systematic search for design contradictions in systems' architecture: Toward a computer aided analysis

Feasibility study of the THz band for communications between wearable electronics

Performance comparison of selected wired and wireless networks on chip architectures

A molecular noise model for THz channels

Distributed power allocation over indoor multi-pico stations
Efficient Wireless Microphone sensing: Subband energy detector principle and measured performance
Research output: Scientific - peer-review › Conference contribution

Frequency response mismatch analysis in time-interleaved analog I/Q processing and ADCs
Research output: Scientific - peer-review › Article

On feasibility of coding-based 3GPP LTE coverage enhancements for MTC
Research output: Scientific - peer-review › Conference contribution

5G Multi-RAT LTE-WiFi Ultra-Dense Small Cells: Performance Dynamics, Architecture, and Trends
Research output: Scientific - peer-review › Article

Are all the Access Points necessary in WLAN-based indoor positioning?
Research output: Scientific - peer-review › Conference contribution

Applicability of Frequency Selective Surfaces to Enhance Mobile Network Coverage in Future Energy-Efficient Built Environments
Research output: Scientific - peer-review › Conference contribution

Technologies for Ambient Assisted Living: Ambient Communication and Indoor Positioning
Kivimäki, T. 22 May 2015 Tampere University of Technology. 54 p. (Tampere University of Technology. Publication; vol. 1295)
Research output: Collection of articles › Doctoral Thesis

Integer-to-integer complex extended lapped transform
Research output: Scientific - peer-review › Conference contribution

Recent advances in antenna design and interference cancellation algorithms for in-band full duplex relays
Research output: Scientific - peer-review › Article

Analysis, Blind Identification, and Correction of Frequency Response Mismatch in Two-Channel Time-Interleaved ADCs
Research output: Scientific - peer-review › Article

Achievable rate regions and self-interference channel estimation in hybrid full-duplex/half-duplex radio links
Research output: Scientific - peer-review › Conference contribution
Spectrum Sensing under RF Non-Linearties: Performance Analysis and DSP-Enhanced Receivers
Research output: Scientific - peer-review › Article

Measuring angular information by inertial unit arranged to wheel
Collin, J. 4 Apr 2015 FI125167
Research output: Scientific › Patent

Bit error rate of underlay decode-and-forward cognitive networks with best relay selection
Research output: Scientific - peer-review › Article

Research output: Scientific - peer-review › Article

Context-awareness and the smart grid: Requirements and challenges
Research output: Scientific - peer-review › Article

The internet of Bio-Nano things
Research output: Scientific - peer-review › Article

LTE indoor MIMO performances field measurements
Research output: Scientific - peer-review › Conference contribution

Enhanced Spectrum Sensing Techniques for Cognitive Radio Systems
Dikmese, S. 13 Feb 2015 Tampere University of Technology. 86 p. (Tampere University of Technology. Publication; vol. 1280)
Research output: Collection of articles › Doctoral Thesis

Communication challenges in high-density deployments of wearable wireless devices
Research output: Scientific - peer-review › Article

Coarse-grained model of protein interaction for bio-inspired nano-communication
Research output: Scientific - peer-review › Conference contribution

Enhanced OFDM for fragmented spectrum use in 5G systems
Research output: Scientific - peer-review › Article
Analytic Symbol Error Rate Evaluation of M-PSK Based Regenerative Cooperative Networks Over Generalized Fading Channels
Research output: Scientific - peer-review » Conference contribution

Analyzing Assisted Offloading of Cellular User Sessions onto D2D Links in Unlicensed Bands
Research output: Scientific - peer-review » Article

An Analytical Approach to SINR Estimation in Adjacent Rectangular Cells
Research output: Scientific - peer-review » Conference contribution

A Novel Transform for Secret Key Generation in Time-varying TDD Channel under Hardware Fingerprint Deviation
Research output: Scientific - peer-review » Conference contribution

Antennas in Body-Centric Sensor Network Devices
Research output: Scientific - peer-review » Chapter

Application of the nonuniform filterbank for spectrum sensing in a cognitive radio: The European Commission 7th Framework Programme (FP7) project ICT-318362-EMPhATiC deliverable D8.1
Research output: Professional » Commissioned report

Area under ROC Curve of Energy Detection over Generalized Fading Channels
Research output: Scientific - peer-review » Conference contribution

A Spectrum Sensing Algorithm for Constant Modulus Primary Users Signals
Research output: Scientific - peer-review » Article

Assisted Handover Based on Device-to-Device Communications in 3GPP LTE Systems
Research output: Scientific - peer-review » Conference contribution

AUC study of energy detection based spectrum sensing over η-µ and α-µ fading channels
Research output: Scientific - peer-review » Conference contribution
Cache storage attacks
Brumley, B. B. 2015 Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics). Springer Verlag, p. 22-34 13 p. (Lecture Notes in Computer Science; vol. 9048)
Research output: Scientific - peer-review › Conference contribution

Channel Estimation and Equalization in Multi-User Uplink OFDMA and SC-FDMA Systems Under Transmitter RF Impairments
Research output: Scientific - peer-review › Article

Characterizing Fading in Wearable Communications Channels using Composite Models
Research output: Scientific - peer-review › Conference contribution

Coexistence of LTE and WLAN in Unlicensed Bands: Full-Duplex Spectrum Sensing
Research output: Scientific - peer-review › Conference contribution

Combined Electricity and Mobile Network Situation Awareness System for Disturbance Management
Research output: Scientific - peer-review › Conference contribution

Coexistence of LTE and WLAN in Unlicensed Bands: Full-Duplex Spectrum Sensing
Research output: Scientific - peer-review › Conference contribution

Comparison of Detection Techniques for Multipath Propagation of Pseudolite Signals Used in Dense Industrial Environments
Research output: Scientific - peer-review › Article

Compressive Identification of Active OFDM Subcarriers in Presence of Timing Offset
Research output: Scientific - peer-review › Conference contribution

Cooperative Radio Resource Management in Heterogeneous Cloud Radio Access Networks
Research output: Scientific - peer-review › Article

Covariance-based OFDM spectrum sensing with sub-Nyquist samples
Research output: Scientific - peer-review › Article

Data Rate Performance of Droplet Microfluidic Communication System
Research output: Scientific - peer-review › Conference contribution

Delayed key exchange for constrained smart devices
Research output: Scientific - peer-review › Conference contribution
Design and Implementation of a Power-aware FFT Core for OFDM-based DSA-enabled Cognitive Radios
Research output: Scientific - peer-review › Article

Design of a Hybrid Multicore Platform for High Performance Reconfigurable Computing
Research output: Scientific - peer-review › Conference contribution

Digital correction of frequency response mismatches in 2-channel time-interleaved ADCs using adaptive I/Q signal processing
Research output: Scientific - peer-review › Article

Digital Mitigation of Transmitter-Induced Receiver Desensitization in Carrier Aggregation FDD Transceivers
Research output: Scientific - peer-review › Article

Digital Signal Transmission in Magnetic Induction Based Wireless Underground Sensor Networks
Research output: Scientific - peer-review › Article

Distance-based Interpolation and Extrapolation Methods for RSS-based Localization with Indoor Wireless Signals
Research output: Scientific - peer-review › Article

Dynamic and Flexible Spectrum Use with Frequency Localized Waveforms under Transmitter Nonidealities
Research output: Scientific - peer-review › Conference contribution

Efficient Energy Detection Methods for Spectrum Sensing under Non-Flat Spectral Characteristics
Research output: Scientific - peer-review › Article

Efficient Fast-Convolution Implementation of Filtered CP-OFDM Waveform Processing for 5G
Research output: Scientific - peer-review › Conference contribution

Embroidered Textile Antennas for Wireless Body-Centric Communication and Sensing
Research output: Scientific - peer-review › Conference contribution

Energy and delay performance of machine-type communications (MTC) in long-term evolution-advanced (LTE-A)
Research output: Scientific - peer-review › Chapter
Energy Detection of Unknown Signals over Cascaded Fading Channels
Research output: Scientific - peer-review › Article

Energy-Efficiency Analysis of Regenerative Cooperative Systems Under Spatial Correlation
Research output: Scientific - peer-review › Conference contribution

Exact Error Analysis and Energy-Efficiency Optimization of Regenerative Relay Systems under Spatial Correlation
Fikadu, M., Sofotasios, P., Valkama, M., Cui, Q. & Karagiannidis, G. 2015 In : IEEE Transactions on Vehicular Technology. 65, 7, p. 4973-4992
Research output: Scientific - peer-review › Article

Fast-convolution implementation of filter bank multicarrier waveform processing
Research output: Scientific - peer-review › Conference contribution

Faster Binary Curve Software: A Case Study
Research output: Scientific - peer-review › Conference contribution

Feasibility analysis of ITU-T P.1201 Amd.2 standard for video on demand services
Research output: Scientific - peer-review › Conference contribution

Flexible Digital Predistortion for Future Spectrally-Agile Waveforms and 5G Radio Systems
Research output: Scientific - peer-review › Conference contribution

Flexible fast-convolution implementation of single-carrier waveform processing for 5G
Research output: Scientific - peer-review › Conference contribution

Hybrid WLAN-RFID Indoor Localization Solution Utilizing Textile Tag
Research output: Scientific - peer-review › Article

Implementation of IEEE-802.11a/g receiver blocks on a coarse-grained reconfigurable array
Research output: Scientific - peer-review › Conference contribution

Interference Analysis and Performance Evaluation of 5G Flexible-TDD based Dense Small-Cell System
Research output: Scientific - peer-review › Conference contribution
Multimode, non-uniform filterbank: The European Commission 7th Framework Programme (FP7) project ICT-318362-EMPhAtiC deliverable D2.2
Research output: Professional › Commissioned report

Network-Assisted Device-to-Device Connectivity: Contemporary Vision and Open Challenges
Research output: Scientific - peer-review › Conference contribution

Novel Indoor Positioning Mechanism via Spectral Compression
Research output: Scientific - peer-review › Article

On capacity of active relaying in magnetic induction based wireless underground sensor networks
Research output: Scientific - peer-review › Conference contribution

On Capturing Spatial Diversity of Joint M2M/H2H Dynamic Uplink Transmissions in 3GPP LTE Cellular System
Research output: Scientific - peer-review › Conference contribution

On Predicting Video Quality Expectations of Mobile Users
Research output: Scientific - peer-review › Conference contribution

On the Effects of UE Transceiver Non-Reciprocity in Coordinated TDD Multi-Cell MIMO Network
Research output: Scientific - peer-review › Conference contribution

On the efficiency of spatial channel reuse in ultra-dense THz networks
Research output: Scientific - peer-review › Conference contribution

On the RSS biases in WLAN-based Indoor Positioning
Research output: Scientific - peer-review › Conference contribution

On the Solution of the Steiner Tree NP-Hard Problem via Physarum BioNetwork
Research output: Scientific - peer-review › Article

Optimized burst truncation in fast-convolution filter bank based waveform generation
Research output: Scientific - peer-review › Conference contribution
Outage Probability Analysis of Dual-hop Full-Duplex Decode-and-Forward Relaying over Generalized Multipath Fading Conditions
Research output: Scientific - peer-review › Conference contribution

Outage Probability Analysis of Full-Duplex Regenerative Relaying over Generalized Asymmetric Fading Channels
Research output: Scientific - peer-review › Conference contribution

Parameterized Sets of Dataflow Modes And Their Application to Implementation of Cognitive Radio Systems
Research output: Scientific - peer-review › Article

Performance analysis of energy detection over mixture gamma based fading channels with diversity reception
Research output: Scientific - peer-review › Conference contribution

Relaxed direct position estimation as strategy for open-loop GNSS receivers
Research output: Scientific - peer-review › Conference contribution

Resource Management Schemes for Network Assisted Device-to-Device Communication for an Integrated OFDMA Cellular System
Research output: Scientific - peer-review › Conference contribution

Service Failure and Interruption Probability Analysis for Licensed Shared Access Regulatory Framework
Research output: Scientific - peer-review › Conference contribution

Signal Processing Algorithms for FFT-based GNSS Receivers
Soltanian, B. 2015 Tampere: Tampere University of Technology. 107 p. (Tampere University of Technology. Publication; vol. 1321)
Research output: Monograph › Doctoral Thesis

Simplified probabilistic modelling and analysis of enhanced distributed coordination access in IEEE 802.11
Research output: Scientific - peer-review › Article

Simultaneous Transmission and Spectrum Sensing in OFDM Systems Using Full-Duplex Radios
Research output: Scientific - peer-review › Conference contribution

Smart home gateway system over Bluetooth low energy with wireless energy transfer capability
Galini, O., Mikhailov, K., Andreev, S., Turlikov, A. & Koucheryavy, Y. 2015 In : Eurasip Journal on Wireless Communications and Networking. 2015, 1, 178
Research output: Scientific - peer-review › Article

**Software simulations and experiments: The European Commission 7th Framework Programme (FP7) project ICT-318362-EMPhAtiC deliverable D9.2**


Research output: Professional › Commissioned report

Spectrum sensing in generalized multipath fading conditions using square-law combining


Research output: Scientific - peer-review › Conference contribution

Start-up and Frequency Stability Analysis using Time-Varying Root Locus

Jain, S. & Tchamov, N. 2015 In : IEICE Electronics Express. 12, 22, 12.20150661

Research output: Scientific - peer-review › Article

Statistical Sensor Fusion of Ultra Wide Band Ranging and Real Time Kinematic Satellite Navigation


Research output: Scientific - peer-review › Conference contribution

Study of the Duty Cycle Challenges for Short Range Devices Deployment Based on the IEEE 802.11ah in M2M and IoT Network


Research output: Scientific › Article

Subband Energy Based Reduced Complexity Spectrum Sensing under Noise Uncertainty and Frequency-Selective Spectral Characteristics


Research output: Scientific - peer-review › Article

Techno-Economical Comparison of Dynamic DAS and Legacy Macrocellular Densification: Capacity and Cost-Efficiency Analysis of Alternative Deployment Solutions for Outdoor Service Provisioning


Research output: Scientific - peer-review › Article

The effects of RF impairments in Vehicle-to-Vehicle Communications


Research output: Scientific - peer-review › Conference contribution

The η − µ / Inverse Gamma Composite Fading Model


Research output: Scientific - peer-review › Conference contribution

The κ − µ / Inverse Gamma Fading Model


Research output: Scientific - peer-review › Conference contribution

Training design and algorithms for channel estimation: The European Commission 7th Framework Programme (FP7) project ICT-318362-EMPhAtiC deliverable D3.1
Understanding Practical Limitations of Network Coding for Assisted Proximate Communication

Understanding the IoT connectivity landscape: a contemporary M2M radio technology roadmap

Unified Analysis of Cooperative Spectrum Sensing over Generalized Multipath Fading Channels

User's happiness in numbers: Understanding mobile YouTube quality expectations

WarmPie: A bare-bones implementation of message passing interface for embedded many-cores

Wireless Authentication using OPACITY Protocol

Vehicle Positioning
Collin, J. 15 Dec 2014 FI124697B

Efficient User, Service, or Content Representation for Device Communication

Precoded Massive MU-MIMO Uplink Transmission under Transceiver I/Q Imbalance

Method and Apparatus for Communicating with Smart Objects
Savolainen, T., Reunamäki, J. & Silverajani, B. 9 Oct 2014 US8838147

Method and apparatus for determining environmental context utilizing features obtained by multiple radio receivers
Interference suppression with antenna arrays in OFDM systems under transceiver I/Q imbalance
Research output: Scientific - peer-review › Conference contribution

Reconfigurable antenna based DOA estimation and localization in cognitive radios: Low complexity algorithms and practical measurements
Research output: Scientific - peer-review › Conference contribution

Co-modeling of embedded networks using systemc and SDL: From theory to practice
Research output: Scientific - peer-review › Chapter

A blind frequency response mismatch correction algorithm for 4-channel Time-Interleaved ADC
Research output: Scientific - peer-review › Conference contribution

Adaptive mobile tracking in unknown non-line-of-sight conditions with application to digital TV networks
Research output: Scientific - peer-review › Article

Analysis and Rate Optimization of OFDM-Based Cognitive Radio Networks Under Power Amplifier Nonlinearity
Research output: Scientific - peer-review › Article

Analysis of Channel Non-Reciprocity Due to Transceiver and Antenna Coupling Mismatches in TDD Precoded Multi-User MIMO-OFDM Downlink
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Analysis of Oscillator Phase-Noise Effects on Self-Interference Cancellation in Full-Duplex OFDM Radio Transceivers
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Analytic Expressions and Bounds for Special Functions and Applications in Communication Theory
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Analytic performance evaluation of M-QAM based decode-and-forward relay networks over enriched multipath fading channels
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Analytic solutions to a Marcum Q-function-based integral and application in energy detection of unknown signals over multipath fading channels

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Analyzing Impacts of Coexistence between M2M and H2H Communication on 3GPP LTE System

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Analyzing the overload of 3GPP LTE system by diverse classes of connected-mode MTC devices

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Antibody-based molecular communication for targeted drug delivery systems

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A PET project from Finland: Automating GNSS receiver testing

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A roadmap for traffic engineering in software defined networks

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A routing framework for energy harvesting wireless nanosensor networks in the Terahertz Band

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A statistical-physical model of interference in diffusion-based molecular nanonetworks

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Capturing Spatial Randomness of Heterogeneous Cellular/WLAN Deployments With Dynamic Traffic

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Cell planning for outdoor distributed antenna systems in dense urban areas

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Cellular traffic offloading onto network-assisted device-to-device connections

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Closed-form Analysis of Channel Non-Reciprocity Due to Transceiver and Antenna Coupling Mismatches in Multi-user Massive MIMO Network
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Delay-based Congestion Control Mechanism for Video Services: Mechanism including Backward Loading and Real-time Modes
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Delivering uniform connectivity and service experience to converged 5G wireless networks
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Digital post-processing based wideband receiver linearization for enhanced spectrum sensing and access
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Digital Suppression of Power Amplifier Spurious Emissions at Receiver Band in FDD Transceivers
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Distance-aware multi-carrier (DAMC) modulation in Terahertz Band communication
Research output: Scientific - peer-review › Conference contribution

DSP-Based Suppression of Spurious Emissions At RX Band in Carrier Aggregation FDD Transceivers
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Effects of Radio Front-end PLL Phase Noise on GNSS Baseband Correlation
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Efficient Estimation and Compensation of Transceiver Non-Reciprocity in Precoded TDD Multi-User MIMO-OFDM Systems
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Efficient Estimation and Pilot-Free Online Re-Calibration of I/Q Imbalance in Broadband Direct-Conversion Transmitters
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End-to-end propagation noise and memory analysis for molecular communication over microfluidic channels
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Feasibility of in-band full-duplex radio transceivers with imperfect RF components: Analysis and enhanced cancellation algorithms
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Femtosecond-long pulse-based modulation for terahertz band communication in nanonetworks
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Graphene-based plasmonic nano-transceiver for terahertz band communication
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Improving network connectivity in the presence of heavy-tailed interference
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Intelligent access network selection in converged multi-radio heterogeneous networks
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Internet of Things, Smart Spaces, and Next Generation Networks and Systems. 14th International Conference, NEW2AN 2014 and 7th Conference, nuSMART 2014, St. Petersburg, Russia, August 27-29, 2014. Proceedings
Research output: Scientific - peer-review › Anthology

Joint Mitigation of Nonlinear RF and Baseband Distortions in Wideband Direct-Conversion Receivers
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Lifetime analysis of wireless sensor nodes in different smart grid environments
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LOS and NLOS channel modeling for terahertz wireless communication with scattered rays
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Low-complexity digital predistortion for reducing power amplifier spurious emissions in spectrally-agile flexible radio
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Low power implementation of digital predistortion filter on a heterogeneous application specific multiprocessor
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Molecular communication noise and capacity analysis for particulate drug delivery systems

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Multiuser frequency allocation with wideband power amplifier models

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On receiver design for diffusion-based molecular communication

On the Optimal Assisted Rate Allocation in N-Tier Multi-RAT Heterogeneous Networks

Optimal energy-throughput efficiency for magneto-inductive underground sensor networks

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Optimizing energy efficiency of a multi-radio mobile device in heterogeneous beyond-4G networks

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Topology analysis of wireless sensor networks for sandstorm monitoring
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