

2016 International Conference on Military Communications and Information Systems (ICMCIS 2016)

**Brussels, Belgium
23 – 24 May 2016**



**IEEE Catalog Number: CFP1613Y-POD
ISBN: 978-1-5090-0472-0**

**Copyright © 2016 by the Institute of Electrical and Electronics Engineers, Inc
All Rights Reserved**

Copyright and Reprint Permissions: Abstracting is permitted with credit to the source. Libraries are permitted to photocopy beyond the limit of U.S. copyright law for private use of patrons those articles in this volume that carry a code at the bottom of the first page, provided the per-copy fee indicated in the code is paid through Copyright Clearance Center, 222 Rosewood Drive, Danvers, MA 01923.

For other copying, reprint or republication permission, write to IEEE Copyrights Manager, IEEE Service Center, 445 Hoes Lane, Piscataway, NJ 08854. All rights reserved.

******This publication is a representation of what appears in the IEEE Digital Libraries. Some format issues inherent in the e-media version may also appear in this print version.***

IEEE Catalog Number:	CFP1613Y-POD
ISBN (Print-On-Demand):	978-1-5090-0472-0
ISBN (Online):	978-1-5090-1777-5

Additional Copies of This Publication Are Available From:

Curran Associates, Inc
57 Morehouse Lane
Red Hook, NY 12571 USA
Phone: (845) 758-0400
Fax: (845) 758-2633
E-mail: curran@proceedings.com
Web: www.proceedings.com

CURRAN ASSOCIATES INC.
proceedings
.com

TABLE OF CONTENTS

A RATIONAL MULTIPARTY INFORMATION EXCHANGE MODEL USING EXTENSIVE GAMES	1
<i>Alberto Campos ; Viet Pham</i>	
RSS-BASED SECRET KEY GENERATION FOR INDOOR AND OUTDOOR WBANS USING ON-BODY SENSOR NODES	9
<i>Thijs Castel ; Patrick Van Torre ; Hendrik Rogier</i>	
ROBUST SPECTRUM SENSING ALGORITHMS UNDER NOISE UNCERTAINTY	14
<i>Xavier Leturc ; Christophe J. Le Martret ; Philippe Ciblat</i>	
MULTICARRIER MODULATION FOR HF COMMUNICATIONS	21
<i>Juha Yli-Kaakinen ; Markku Renfors ; Hannu Tuomivaara</i>	
JOINT PROTECTION OF A MILITARY FORMATION USING HETEROGENEOUS SENSORS IN A MOBILE AD HOC NETWORK: CONCEPT AND FIELD TESTS	28
<i>Julian Hörst ; Felix Govaers ; Berthold Rehbein ; Christoph Barz ; Peter Sevenich</i>	
LEARNING MULTI-CHANNEL POWER ALLOCATION AGAINST SMART JAMMER IN COGNITIVE RADIO NETWORKS	36
<i>Feten Slimeni ; Bart Scheers ; Vincent Le Nir ; Zied Chtourou ; Rabah Attia</i>	
PERFORMANCE OF DISTRIBUTED CHANNEL SELECTION FOR COGNITIVE MANET IN THE PRESENCE OF INTENTIONAL JAMMING	43
<i>Grzegorz Szmit ; Jerzy Dolowski ; Jerzy Łopatka</i>	
COMPLEX EVENT PROCESSING FOR CONTENT-BASED TEXT, IMAGE, AND VIDEO RETRIEVAL	49
<i>Elizabeth K Bowman ; Barbara D Broome ; V Melissa Holland ; Douglas Summers-Stay ; Raghuvveer M Rao ; John Duselis ; Jonathan Howe ; Bhopinder K Madahar ; Anne-Claire Boury-Brisset ; Bruce Forrester ; Peter Kwantes ; Gertjan Burghouts ; Jasper van Huis ; Adem Yaşar Mülâyim</i>	
DYNAMIC CHANNEL AND TRANSMIT-POWER ADAPTATION OF WIFI MESH-NETWORKS IN SEARCH AND RESCUE OPERATIONS	55
<i>Muhammad Hafeez Chaudhary ; Bart Scheers</i>	
RESA-OLSR: RESOURCES-AWARE OLSR-BASED ROUTING MECHANISM FOR MOBILE AD-HOC NETWORKS	63
<i>Janusz Romanik ; Adam Kraśniewski ; Edward Golan</i>	
RECEIVER DESIGN FOR NON-LINEAR SATELLITE CHANNELS: EQUALIZER TRAINING AND SYMBOL DETECTION ON THE COMPRESSED CONSTELLATION	69
<i>M. Bauduin ; S. Massar ; F. Horlin</i>	
SENSOR NETWORKING AND INTEGRATION: A PROOF-OF-CONCEPT EXPERIMENT	75
<i>Ketil Lund ; Eirik Skjelbreid Grimstvedt ; Morten Aronsen ; Erlend Larsen ; Robert MacDonald</i>	
TOWARDS A TACTICAL SOFTWARE DEFINED NETWORK	82
<i>Jon Spencer ; Olwen Worthington ; Robert Hancock ; Eleanor Hepworth</i>	
ELECTROMAGNETIC INFLUENCE OF A BALLISTIC PROTECTION STRUCTURE AROUND AN ARMORED INFANTRY VEHICLE ON ITS JAMMING PERFORMANCE	89
<i>Ir Thi My Dung Tran ; Thierry Gilles</i>	
INFLUENCE OF THE FREQUENCY STABILITY ON THE EMITTER POSITION IN SDF METHOD	96
<i>Jan M. Kelner ; Cezary Ziolkowski ; Piotr Marszałek</i>	
SOFTWARE-DEFINED WIRELESS COMMUNICATIONS AND POSITIONING DEVICE FOR IOT DEVELOPMENT	102
<i>Muhammad Hafeez Chaudhary ; Bart Scheers</i>	
AN ADAPTABLE MULTIMODAL CREW ASSISTANCE SYSTEM FOR NATO GENERIC VEHICLE ARCHITECTURE	110
<i>Manas Pradhan ; Daniel Ota</i>	
A MODEL FOR USABILITY TESTING IN CHALLENGING ENVIRONMENTS	118
<i>Riku Luostarinen ; Risto Järvinen ; Juho Määtä ; Jukka Manner</i>	
EMITTER SIGNAL SORTING BASED ON FRACTAL DIMENSIONS OF PULSE ENVELOPE'S FRONT EDGE	124
<i>Qixiang Fu ; Cheng Li ; Feiyang Cai ; Wei Wang ; Shunping Xiao</i>	
SHORT RANGE HF RADIO CHANNEL MEASUREMENTS: SEARCH FOR ONE PATH CHANNELS	129
<i>Harri Saarnisaari ; Veikko Hovinen ; Hannu Tuomivaara ; Juha Yli-Kaakinen</i>	

RELIABLE FULL MOTION VIDEO SERVICES IN DISADVANTAGED TACTICAL RADIO NETWORKS.....	135
<i>James Nightingale ; Qi Wang ; Jose M. Alcaraz Calero ; Ian Owens ; Frank Trethan Johnsen ; Trude Hafsoe Bloebaum ; Marco Manso</i>	
SOFTWARE-DEFINED NETWORKING FOR LOW-LATENCY 5G CORE NETWORK.....	144
<i>Jérémy Pagé ; Jean-Michel Dricot</i>	
EXTENDING OLSRV2 FOR TACTICAL APPLICATIONS	151
<i>Christoph Barz ; Christoph Fuchs ; Jonathan Kirchhoff ; Julia Niewiejska ; Henning Rogge</i>	
A NOVEL OFDM SENSING METHOD BASED ON CAF-MAX FOR HYBRID DETECTORS ARCHITECTURE.....	159
<i>Krzysztof Kosmowski ; Marek Suchański ; Józef Pawelec ; Mateusz Kustra</i>	
ADAPTING STANDARD TACTICAL APPLICATIONS FOR A MILITARY DISRUPTION-TOLERANT NETWORK.....	163
<i>M. Malowidzki ; T. Dalecki ; P. Bereziński ; M. Mazur ; P. Skarżyński</i>	
A REVIEW OF MODELING TOOLBOX FOR BIGDATA	168
<i>Hadi Hashem ; Daniel Ranc</i>	
ON THE CREATION OF A SINGLE MISSION-WIDE INFORMATION DOMAIN IN MILITARY OPERATIONS: APPLICATION OF THE INFORMATION CLEARING HOUSE AND RELEASE GATEWAY AT NATO EXERCISE TRIDENT JUNCTURE 2015.....	174
<i>Michael Rudack ; Cristina Palacios-Camarero ; Hermann Wiegreffe</i>	
RADIATED RADIO-FREQUENCY HAZARDS WITH ELECTRIC DETONATORS: INFLUENCE OF WIRING CONFIGURATION, DIPOLE VS V-ANTENNA	181
<i>C. Tsigros ; T. Gilles ; M. Piette</i>	
A REALISTIC MILITARY SCENARIO AND EMULATION ENVIRONMENT FOR EXPERIMENTING WITH TACTICAL COMMUNICATIONS AND HETEROGENEOUS NETWORKS.....	188
<i>Niranjan Suri ; Anders Hansson ; Jan Nilsson ; Piotr Lubkowski ; Kelvin Marcus ; Mariann Hauge ; King Lee ; Boyd Buchin ; Levent Mısırhoğlu ; Markus Peuhkuri</i>	
ROTATIONAL MOTION ESTIMATION OF HIGH-RESOLUTION ISAR IMAGING FOR MANEUVERING TARGETS.....	196
<i>Gang Xu ; Lei Yang ; Song Zhou ; Guoan Bi</i>	
EVOLVING MILITARY BROADBAND WIRELESS COMMUNICATION SYSTEMS: WIMAX, LTE AND WLAN	201
<i>P. Fraga-Lamas ; L. Castedo-Ribas ; A. Morales-Méndez ; J. M. Camas-Albar</i>	
COMPENSATION OF IMPERFECT CHANNEL RECIPROCITY THROUGH MMSE PREDICTION FOR PHYSICAL-LAYER CONFIDENTIALITY ENHANCEMENT.....	209
<i>Hao Li ; Xianbin Wang ; Helen Tang</i>	
ON THE INTERNET OF NANO THINGS IN HEALTHCARE NETWORK.....	215
<i>Jacek Jarmakiewicz ; Krzysztof Parobczak ; Krzysztof Maślanka</i>	
ON BOX-OPERATIONS FOR L-VALUES AND THEIR APPLICABILITY TO SOFT-DECISION ALGORITHMS	221
<i>M. Adrat ; M. Tschauner ; N. Bebawi ; M. Antweiler ; B. Eschbach ; P. Vary</i>	
ANALYZING THE APPLICABILITY OF INTERNET OF THINGS TO THE BATTLEFIELD ENVIRONMENT	226
<i>Niranjan Suri ; Mauro Tortonesi ; James Michaelis ; Peter Budulas ; Giacomo Benincasa ; Stephen Russell ; Cesare Stefanelli ; Robert Winkler</i>	
A METHOD OF NETWORK WORKLOAD GENERATION FOR EVALUATION OF INTRUSION DETECTION SYSTEMS IN SDN ENVIRONMENT	234
<i>Damian Jankowski ; Marek Amanowicz</i>	
THE INFINITE SOURCE OF RANDOM SEQUENCES FOR CLASSIFIED CRYPTOGRAPHIC SYSTEMS	241
<i>Mariusz Borowski</i>	
ASSESSING NATO POLICY ALIGNMENT THROUGH TEXT ANALYSIS: AN INITIAL STUDY	247
<i>P. T. Eles ; B. Pennell ; M. Richter</i>	
SWEEP JAMMING HIT RATE ANALYSIS FOR FREQUENCY AGILE COMMUNICATIONS.....	254
<i>Harri Saarnisaari</i>	
ANALYSIS OF COOPERATIVE RELAYING IN AN URBAN SCENARIO	260
<i>Gunnar Eriksson ; Sara Linder</i>	
DELAY ANALYSIS OF STDMA IN GRID WIRELESS SENSOR NETWORKS	265
<i>Ichrah Amdouni ; Cedric Adjih ; Pascale Minet ; Thierry Plesse</i>	

COMPARING THE CAPACITY OF COOPERATIVE BROADCAST TO SPATIAL REUSE TDMA IN AD HOC NETWORKS.....	273
<i>Arwid Komulainen ; Jimmi Grönkvist ; Jan Nilsson</i>	
ATTACK-TOLERANT NETWORKED CONTROL SYSTEM IN PRESENCE OF THE CONTROLLER HIJACKING ATTACK	280
<i>Amer Atta Yaseen ; Mireille Bayart</i>	
LABELLING FOR INTEGRITY AND AVAILABILITY.....	288
<i>John Melrose ; Konrad Wrona ; Thomas Guenther ; Raymond Haakseth ; Nils Nordbotten ; Lars Westerdahl</i>	
TACTICS TSI ARCHITECTURE: A EUROPEAN REFERENCE ARCHITECTURE FOR TACTICAL SOA.....	296
<i>Anne Diefenbach ; Tobias Ginzler ; Sam McLaughlin ; Joanna Śliwa ; Thorsten A. Lampe ; Christoph Prasse</i>	
THE ITALIAN ARMY C2 EVOLUTION: FROM THE CURRENT SIACCON2 LAND COMMAND & CONTROL SYSTEM TO THE LC2EVO USING ¿¿¿AGILE¿¿¿ SOFTWARE DEVELOPMENT METHODOLOGY	304
<i>Angelo Messina ; Franco Fiore</i>	
MICRO-DOPPLER PERIOD ESTIMATION FROM BALLISTIC TARGETS WITH PRECESSION.....	312
<i>Xiao-yi Pan ; Qi-xiang Fu ; Zhao-yu Gu ; Yong-cai Liu ; Wei Wang</i>	
DEVELOPING A NATO BYOD SECURITY POLICY	318
<i>Alessandro Armando ; Gabriele Costa ; Alessio Merlo ; Luca Verderame ; Konrad Wrona</i>	
RECOMMENDATIONS FOR REALIZING SOAP PUBLISH/SUBSCRIBE IN TACTICAL NETWORKS.....	324
<i>Trude H. Bloebaum ; Frank T. Johnsen ; Marianne R. Brannsten ; Jose Alcaraz-Calero ; Qi Wang ; James Nightingale</i>	
ASSISTED CONTENT-BASED LABELLING AND CLASSIFICATION OF DOCUMENTS.....	332
<i>Konrad Wrona ; Sander Oudkerk ; Alessandro Armando ; Silvio Ranise ; Riccardo Traverso ; Lisa Ferrari ; Richard McEvoy</i>	
Author Index	