



IRISH SIGNALS AND SYSTEMS
CONFERENCE 2012

NUI Maynooth
28-29th June 2012

0800	0900	Registration <i>Venue: Iontas Building Foyer</i>	
0900	0915	Opening Ceremony President of NUI Maynooth <i>Venue: Iontas Lecture Theatre</i>	
0915	1015	Plenary 1: Jonathan Blackledge Understanding the Basic Models used to Describe Signals and Images <i>Venue: Iontas Lecture Theatre</i>	
1030	1100	Poster Presentations (1-slide Overviews) <i>Venue: Iontas Lecture Theatre</i>	
1100	1130	Refreshments and Poster Session	
1130	1300	Session A1: Algorithms and DSP (Iontas Lecture Theatre)	Session B1: BioMedical Applications (Iontas Gnd Floor Seminar Room)
		(51). Shape Model Fitting Using non-Isotropic GMM <i>Claudia Arellano et al (Trinity College Dublin)</i>	(12). A system identification approach to baroreflex sensitivity estimation <i>Violeta McLoone et al (NUI Maynooth)</i>
		(19). Analysis of Wind Velocity Signals for Estimating the Wave Power Density of Ireland's Coastal Resource <i>Jonathan Blackledge et al (Dublin Institute of Technology)</i>	(55). The presence of regional accents in electrolarynx speech and the resultant effect on overall intelligibility. <i>Brian Maddeb et al (Dublin Institute of Technology)</i>
		(66). A Novel Concurrent Error Detection Technique for the Fast Fourier Transform <i>Pedro Reviriego (Universidad Nebrija)</i>	(14). A Wireless and Digital Electrode Bus Topology for Biopotential Measurement <i>Mark Nolan et al (Dublin Institute of Technology)</i>
		(20). Area Efficient Evaluation Based Coding of Shortened Reed-Solomon Codes for Memory Constrained Applications, <i>Shraddha Srivastava et al (UCC)</i>	(59). Sensorimotor-rhythm Modulation Feedback with 3D Vector-base Amplitude Panning - A Brain-Computer Interface Study <i>Karl A. McCreadie et al (Univ. Ulster – Magee)</i>
		(52). Simulation and Analysis of Stochastic Signals using the Kolmogorov-Feller Equation <i>Jonathan Blackledge (Dublin Institute of Technology)</i>	(41). Motion Detection using Device-free Passive Localisation <i>Gabriel Deak et al (University of Ulster)</i> <i>Daniel Deak (S.C. Centrul de Calcul Info98, Romania)</i>

1300	1400	Refreshments and Poster Session			
1400	1500	<p align="center">Plenary 2: Edward Jones Safety First: Image Processing for Driver Assistance in Cars <i>Venue: Iontas Lecture Theatre</i></p>			
1515	1645	Session A2: Image and Voice Analysis (Iontas Lecture Theatre)		Session B2: Communications (Iontas Gnd Floor Seminar Room)	
		(11).	A Statistical Approach to Place Recognition in SLAM <i>Okechukwu Ihemadu et al (Queen's University Belfast)</i>	(39).	Maximising spectral efficiency in LTE cells <i>Tony Keenan et al (NUI Maynooth)</i>
		(34).	Feature Selection Using Visual Saliency for Content-Based Image Retrieval <i>Zbigniew Zdziarski et al (Trinity College Dublin)</i>	(18).	Analysing Ireland's Interurban Communication Network using Call Data Records <i>Emmett Carolan et al (NUI Maynooth)</i>
		(42).	On Inpainting the Adress Algorithm <i>Derry Fitzgerald (Dublin Institute of Technology)</i>	(27).	DSP-based Implementation of a Half-Duplex Orthogonal Frequency Division Multiplexing System <i>Farhan Khan (Queen's University Belfast)</i>
		(17).	An FPGA based Stereoptic Image Capture System <i>Niall Murphy et al (Waterford Institute of Technology) Fearghal Morgan (NUI Galway)</i>	(32).	Experimental Analysis of Transmit-power for IEEE 802.15.4a UWB Ranging under Multipath Environment <i>Tingcong Ye et al (Tyndall National Institute)</i>
		(26).	Diagnosis of Breast Cancer by Optical Image Analysis <i>Jonathan Blackledge (Dublin Institute of Technology)</i>	(28).	Efficient Channelization for PMR+4G and GSM Re-Farming Base Stations <i>Alvaro Palomo (NUI Maynooth)</i>
1700	1800	<p align="center">ISSC Steering Committee Review of Conference Mission, Selection of ISSC2013 and 2014 Host Institutions <i>Venue: Iontas Gnd Floor Seminar Room</i></p>			
1900	2100	<p align="center">Conference Banquet and Prize Giving <i>Venue: Glenroyal Hotel, Maynooth</i></p>			

0900	1000	<p align="center">Plenary 3: Colin Lyden Title to be confirmed <i>Venue: Iontas Lecture Theatre</i></p>			
1000	1115	<p align="center">Session A3: High Speed Circuits (Iontas Lecture Theatre)</p>		<p align="center">Session B3: Digitally Controlled Systems (Iontas Gnd Floor Seminar Room)</p>	
		(4).	A 10Gb/s Linear Burst-Mode Receiver <i>Peter Ossieur (Tyndall National Institute)</i>	(53).	Nonlinear Mechanism for Spur Generation in a Fractional-N Frequency Synthesizer <i>Vahideh Sadeghi et al (Babol University of Technology, Iran)</i> <i>Sohail Imran Saeed et al (Linkoping University, Sweden)</i> <i>Michael Peter Kennedy (University College Cork)</i>
		(13).	A variable gain amplifier with fast feedforward dc-offset compensation for 10Gb/s burst-mode receiver applications <i>Anil Jain et al (Tyndall National Institute)</i>	(21).	Cartesian Pre-distortion using a Sigma Delta Modulator for Multi-Standard RF Power Amplifiers <i>Keith Finnerty et al (NUI Maynooth)</i>
		(1).	12 MHz to 5800 MHz Fully Integrated, Dual Path Tuned, Low Jitter, LC-PLL Frequency Synthesizer <i>Grzegorz Szczepkowski et al (NUI Maynooth)</i> <i>Aidan Keady (Xilinx)</i>	(6).	A bias and control circuit for gain stabilization in avalanche photodiodes <i>Shijie Deng et al (University College Cork)</i>
		(5).	A 56Gb/s PAM-4 VCSEL driver circuit <i>Nasir Abdul Quadir et al (Tyndall National Institute)</i>	(48).	Primary-side sensing for a flyback converter in both continuous and discontinuous conduction mode <i>Tue Vu et al (NUI Maynooth)</i> <i>Seamus O'Driscoll (Texas Instrument)</i>
1115	1145	<p align="center">Refreshments and Poster Session</p>			

1115	1145	Refreshments and Poster Session			
1145	1315	Session A4: RF and Transceiver Circuits (Iontas Lecture Theatre)		Session B4: Digital Systems and Applications (Iontas Gnd Floor Seminar Room)	
		(3).	60-GHz Transceivers in Nano-scale CMOS Technology for WirelessHD Standard Applications <i>Domenico Pepe (Tyndall National Institute)</i> <i>Domenico Zito (University College Cork)</i>	(40).	Modelling and Implementation of an Accumulator-based ADPLL on a Virtex-5 <i>Francesco Brandonisio et al (Tyndall National Institute)</i> <i>Michael Peter Kennedy (University College Cork)</i> <i>Davide Guerra et al (University of Naples)</i>
		(37).	IC Design of Area Efficient Voltage Controlled Oscillators for UWB Wireless Systems <i>Robert O'Leary et al (University College Cork)</i>	(23).	Dealing with the Over-pessimism in ASIC Physical Design Flow <i>Rashid Iqbal (Intel)</i>
		(2).	350 mV, 0.5 mW, 5 GHz, 130 nm CMOS Class-C VCO Design Using Open Loop Analysis <i>Grzegorz Szczepkowski et al (NUI Maynooth)</i>	(58).	Mixed Signal Verification Incorporating Analog Behavioural Modeling and Advanced Digital Verification Techniques <i>Fachna Healy, Paul McSherry & Andrea Bonelli, (ON Semiconductor)</i>
		(16).	An Educational Tool for RF LNA Analysis Based on an Implementation of the Smith Chart in Excel <i>Kevin McCarthy (University College Cork, Ireland)</i>	(67).	Design of a Novel Flexible 4-moduli RNS and Reverse Converter <i>Marcin Wesolowski et al (Wroclaw University of Technology)</i>
1315	1330	Closing Ceremony <i>Venue: Iontas Lecture Theatre</i>			

Poster Presentations (Page 1/3)

(7). A Consistency Regulation Algorithm for Client-Server-based Multiplayer Computer Games

Seamus McLoone et al (NUI Maynooth)

(8). A High-Speed Fourth-Order Nested Bus-Splitting Error Feedback Modulator

Hongjia Mo et al (University College Cork)

(9). A Physics-Aware Dead Reckoning Technique for Entity State Updates in Distributed Interactive Applications

Seamus McLoone et al (NUI Maynooth)

(10). A Probability Based Handover Mechanism For Multi-Homed Heterogeneous Networking Environments

Sheila Fallon (Athlone Institute of Technology)

(15). ALARM – Autonomic Logic Algorithm For Reconfiguration And Mediation Of Unlicensed Wireless Access Networks

Enda Fallon (Athlone Institute of Technology, Ireland)

(61). An Architecture for the Java VST Wrapper that supports the Implementation of Digital Sound Synthesis Algorithms in an Educational Environment

Joseph Timoney et al (NUI Maynooth)

(65). Ascertaining Age from Mobile Phone Usage

Ronan Farrell (NUI Maynooth)

(22). Comparison of Time- and Frequency-domain Based LF-model Fitting Methods for Voice Source Parametrisation

Haoxuan Li et al (Dublin City University)

(24). Delivering HD Video for Wireless In-Flight Entertainment with IEEE 802.15.3c

Sandra Scott-Hayward et al (Queen's University Belfast)

Poster Presentations (Page 2/3)

(25). Design of Fractional Order Differentiator Using Feedback System
Xiaoli Yang et al (University College Cork)

(29). Embedded CPU/FPGA Architecture for Pedestrian Detection in Automotive Infrared Images
Patrick Hurney et al (NUI Galway), Peter Waldron (Intel Shannon)

(30). Evaluating and overcoming the challenges in utilizing smart mobile phones and standalone accelerometer for gait analysis
Herman Chan (University of Ulster)

(31). Evaluation of a Local Path-Planning Algorithm for a Hospital Located Autonomous Mobile Robot
Conor McGinn et al (Trinity College Dublin)

(33). Feasibility and Challenges of a 95-GHz SoC Radiometer for W-Band Passive Imaging
Lorenzo Mereni et al (Tyndall National Institute)

(35). Feature Sets for Automatic Classification of Dimensional Affect
Ailbhe Cullen et al (Trinity College Dublin)

(36). Frequency Tracking of a Sampled Grating Distributed Bragg Reflector (SG-DBR) Laser After a Switching Event
James Mountjoy et al (University College Dublin), Barry Cardiff (S3 Group)

(63). Gene Tagging and the Data Hiding Rate
Félix Balado et al (University College Dublin)

(38). Investigation of events in the EEG signal correlated with changes in both oxygen and glucose in the brain
Sabrina Valente et al (NUI Maynooth)

(43). On Using Fuzzy Logic for Grading Highly Subjective Assessment Material – a Case Study
Seamus McLoone (NUI Maynooth)

(45). Performance evaluation of storing and querying spatial data on mobile devices for offline location based services
Ricky Jacob (NUI Maynooth)

Poster Presentations (Page 3/3)

(46). Potential for Extended Battery Life in Mobile Healthcare with Bluetooth Low Energy and Signal Compression
Darren Craven (NUI Galway)

(60). Power Estimation for Wireless Sensor Networks based on Modular Quantitative Analysis
Guojun Qin et al (CEOL & University College Cork)

(44). P-RASP: An Efficient Packet Reassembly and Segmentation Protocol for Bluetooth Low Data Rate Applications
Jiangchuan Wen (University of Limerick)

(47). Predicting The Noise Floor At The Output Of A Memoryless Piecewise-Linear Nonlinearity Driven By A Digital Delta-Sigma Modulator
Omar Lakhali et al (University College Cork)

(62). Reconfigurable Adaptive Wireless Sensor Node
Rentao Wang et al (Waterford Institute of Technology)

(49). Runtime Characterisation of Triple Stores: An Initial In-vestigation
Long Cheng et al (NUI Maynooth), Spyros Kotoulas et al (IBM Research Ireland)

(50). Scaling Modular Exponentiation Hardware to the Minimum
Maire O'Neill (Queen's University Belfast)

(54). The Design and Implementation of a Wireless Mesh Sensor Network for a Housing Community
Seamus McLoone et al (NUI Maynooth)

(64). Towards a Quantitative Model of Mobile Phone Usage
Ronan Farrell (NUI Maynooth)

(56). Visible Light Communication by Using Commercial Phosphor based White LEDs
Jiabin Tuo et al (Tyndall National Institute)

(57). Vocal Separation using Nearest Neighbours and Median Filtering
Derry Fitzgerald (Dublin Institute of Technology)