Report of President 2012/2013 - School of Mathematical Sciences

>> Book Chapters

**Dr Miguel Bustamante**


**Dr Claire Gormley**


**Mr Damien McParland**


**Dr Andrew Parnell**


Books Edited

**Dr Eugene Kashdan**


Peer Reviewed Journals

**Dr Pierre Alquier**


Dr Vincent Astier


Dr Norma Bargary


Dr Christopher Boyd


Dr Miguel Bustamante


J. Harris, C. Connaughton, M. D. Bustamante (2013) 'Percolation transition in the


**Dr Marc Casals**


**Professor Frederic Dias**


Carbone, F; Dutykh, D; Dudley, J.M; Dias, F (2013) 'Extreme wave run-up on a vertical cliff'. *Geophysical Research Letters*.

Viotti, C; Dutykh, D; Dudley, J.M; Dias, F (2013) 'Emergence of coherent wave groups in deep-water random sea'. *Physical Review E*.

Godin, T; Wetzel, B; Sylvestre, T; Larger, L; Kudlinski, A; Musso, A; Ben Salem, A; Zghal, M; Genty, G; Dias, F; & Dudley, J.M (2013) 'Real time noise and wavelength correlations in octave-spanning supercontinuum generation'. *Optics Express*.

Stefanakis, T; Xu, S; Dutykh, D; Dias, F (2013) 'Run-up amplification of transient long waves'. *Quarterly of Applied Mathematics*.


**Dr Denys Dutykh**

C.Viotti, D.,Dutykh, J; Dudley, F.;Dias, F (2013) 'The emergence of coherent wave groups in deep-water random sea'. *Physical Review E*, 87 (6).


Professor Nial Friel

Professor Stephen Gardiner

Dr Marius Ghergu

Dr Faruk Gologlu
Gologlu, F (2012) 'A Note on Differential Properties of $x \to x^{2^t-1}$'. *IEEE Transactions on Information Theory*.
Bracken, C; Gologlu, F (2012) 'A non-cyclic triple-error-correcting BCH-like code and some minimum distance results'. *Designs Codes and Cryptography*.

Dr Robert Granger
Granger (2013) 'Could, or should the ancient Greeks have discovered the Lucas-Lehmer test?'. *The Mathematical Gazette*.

Dr Marcus Greferath

Ms Mary Hall

Dr Kevin Hutchinson
Hutchinson (2013) 'A refined Bloch group and the third homology of SL_2 of a

**Dr Eugene Kashdan**


**Dr Gabrielle E Kelly**


Cummings AB, Cummings BK, Kelly GE (2013) 'Predictability of corneal flap thickness in laser in situ keratomileusis using a 200 kHz femtosecond laser'. *Journal of Cataract and Refractive Surgery*.


**Professor Peter Lynch**


**Dr Michael Mackey**


**Ms Myrto Manolaki**


**Professor Gary McGuire**

Hernando, Fernando; McGuire, Gary (2012) 'Proof of a conjecture of Segre and Bartocci on monomial hyperovals in projective planes'. *Designs Codes and Cryptography*.

**Dr Pauline Mellon**


**Professor Thomas Murphy**

Gollini, I. and Murphy, T.B. (2013) 'Mixture of Latent Trait Analyzers for Model-Based Clustering of Categorical Data'. *Statistics and Computing*.


**Dr Paul Nolan**


**Dr Robert Osburn**


**Professor Adrian Ottewill**


**Dr Andrew Parnell**


**Dr Hermann Render**


**Dr Emiliano Renzi**


**Dr Helena Smigoc**


**Dr Richard Smith**


**Dr Conor Sweeney**


Dr Thomas Unger


Dr Claudio Viotti


Dr Niels Warburton

Warburton,N; Barack, L; Sago, N (2013) 'Isofrequency pairing of geodesic orbits in Kerr geometry'. Phys Rev D.

Dr Barry Wardell


Dr Jason Wyse


Dr Jens Zumbragel


Dr Lennon O'Naraigh


Other Journals

Professor Peter Lynch


Dr Barry Wardell


Conference Publications

Dr Pierre Alquier

Dr Eimear Byrne

Eimear Byrne (2013) On Network Coding Bounds International Workshop on Coding and Cryptography,

Professor Frederic Dias

Sarkar, D; Renzi, E; Dias, F (2013) Wave-power extraction by an oscillating wave surge converter in random seas 32nd International Conference on Ocean, Offshore and Arctic Engineering, OMAE13,
Renzi E; Dias F (2013) Mathematical model of a flap-type wave energy converter 32nd International Conference on Ocean, Offshore and Arctic Engineering, OMAE 2013,
Renzi, E; Dias, F (2013) Wave-power extraction from a finite array of Oscillating Wave Surge Converters 28th International Workshop on Water Waves and Floating Bodies,
Dias, F; Renzi, E (2012) Hydrodynamic modelling of the Oscillating Wave Surge Converter 3emes Journees de l'Hydrodynamique,
Renzi, E; Dias, F (2012) Mathematical modelling of an array of flap-type wave energy converters European Fluid Mechanics Conference EFMC9,
Renzi, E; Abdolali, A; Bellotti, G; Dias, F (2012) Mathematical and numerical modelling of a flap-type wave energy converter in a channel 33rd Conference on Hydraulics and Hydraulic Structures, IDRA 2012,

Dr Denys Dutykh


Professor Nial Friel

N. Friel (2012) Bayesian inference for Gibbs random fields using composite likelihoods Proceedings of the 2012 Winter Simulation Conference,

Professor Stephen Gardiner


Dr Marius Ghergu


Dr Robert Granger

Faruk Gologlu, Robert Granger, Gary McGuire and Jens Zumbragel (2013) On the Function Field Sieve and the Impact of Higher Splitting Probabilities: Application to Discrete Logarithms in $F_{2^{1971}}$ and $F_{2^{3164}}$ Advances in
Cryptology - CRYPTO 2013,

**Dr Russell Higgs**


**Professor Gary McGuire**


Gologlu, F; Granger, R; McGuire, G; Zumbragel, J (2013) Solving a 6120-bit DLP on a Desktop Computer *Selected Areas in Cryptography--SAC 2013*,

**Dr Hermann Render**


**Dr Emiliano Renzi**

Sarkar, D; Renzi, E; Dias, F (2013) Wave-power extraction by an oscillating wave surge converter in random seas *32nd International Conference on Ocean, Offshore and Arctic Engineering, OMAE13*,

Renzi E; Dias F (2013) Mathematical model of a flap-type wave energy converter *32nd International Conference on Ocean, Offshore and Arctic Engineering, OMAE 2013*,

Renzi, E; Dias, F (2013) Wave-power extraction from a finite array of Oscillating Wave Surge Converters *28th International Workshop on Water Waves and Floating Bodies*,


Renzi, E; Abdolali, A; Bellotti, G; Dias, F (2012) Mathematical and numerical modelling of a flap-type wave energy converter in a channel *33rd Conference on Hydraulics and Hydraulic Structures, IDRA 2012*,

Renzi, E; Dias, F (2012) Mathematical modelling of an array of flap-type wave energy converters *European Fluid Mechanics Conference EFMC9*,

**Dr James Sweeney**


**Dr Jens Zumbragel**


Gologlu, F; Granger, R; McGuire, G; Zumbragel, J (2013) Solving a 6120-bit DLP on a Desktop Computer *Selected Areas in Cryptography--SAC 2013*,
Other Publications

**Dr Claire Gormley**


**Dr Rupert Levene**


**Mr Damien McParland**


**Professor Thomas Murphy**


**Dr Andrew Parnell**


**Dr James Sweeney**


**Dr Masha Vlasenko**
