

Graph entropy based on the number of spanning forests of c-cyclic graphs

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Research output: Contribution to journal > Article > Scientific > peer-review

Hyperbolic Function Theory in the Skew-Field of Quaternions

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Research output: Contribution to journal > Article > Scientific > peer-review

Non-destructive tree volume estimation through quantitative structure modelling: Comparing UAV laser scanning with terrestrial LIDAR

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Research output: Contribution to journal > Article > Scientific > peer-review

Fast fourier color constancy and grayness index for ISPA illumination estimation challenge

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Research output: Chapter in Book/Report/Conference proceeding > Conference contribution > Scientific > peer-review

Studying the inertias of LCM matrices and revisiting the Bourque-Ligh conjecture

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Research output: Contribution to journal > Article > Scientific > peer-review

On Computational Complexity Reduction Methods for Kalman Filter Extensions

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Research output: Contribution to journal > Article > Scientific > peer-review

Multiplierless filtered-OFDM transmitter for narrow-band IoT devices

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Research output: Contribution to journal > Article > Scientific > peer-review

The Graph Curvature Calculator and the curvatures of cubic graphs

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Research output: Contribution to journal > Article > Scientific > peer-review

Tomographic inversion of gravity gradient field for a synthetic Itokawa model

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Research output: Contribution to journal > Article > Scientific > peer-review

Hypermonogenic Plane Wave Solutions of the Dirac Equation in Superspace

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Research output: Contribution to journal > Article > Scientific > peer-review

Similar temperature sensitivity of soil mineral-associated organic carbon regardless of age

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Research output: Contribution to journal > Article > Scientific > peer-review

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Research output: Contribution to journal > Article > Scientific > peer-review

On the Structure of Octonion Regular Functions

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Research output: Contribution to journal > Conference article > Scientific > peer-review

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Research output: Contribution to journal > Article > Scientific > peer-review

Reduced Order Controller Design for Robust Output Regulation

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Research output: Contribution to journal > Article > Scientific > peer-review

Hosoya entropy of fullerene graphs

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Research output: Contribution to journal > Article > Scientific > peer-review

Approximate Controllability for Navier–Stokes Equations in 3D Rectangles Under Lions Boundary Conditions

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Research output: Contribution to journal > Article > Scientific > peer-review

An architectural understanding of natural sway frequencies in trees

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Research output: Contribution to journal > Article > Scientific > peer-review

Robust output regulation of counter-flow heat exchangers

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Research output: Chapter in Book/Report/Conference proceeding > Conference contribution > Scientific > peer-review

The internal model principle for boundary control systems with polynomially bounded exogenous signals

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Research output: Chapter in Book/Report/Conference proceeding > Conference contribution > Scientific > peer-review

Tree biomass equations from terrestrial LiDAR: A case study in Guyana

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Research output: Contribution to journal > Article > Scientific > peer-review

Algorithms and Logic as Programming Primers

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Gaussian Process Regression for Forest Attribute Estimation From Airborne Laser Scanning Data

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The shape of (7) Iris as evidence of an ancient large impact?

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Robust and Model Predictive Control for Boundary Control Systems

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Research output: Book/Report > Doctoral thesis > Collection of Articles

Closing the gap between Earth-based and interplanetary mission observations: Vesta seen by VLT/SPHERE

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Research output: Contribution to journal > Article > Scientific > peer-review

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Research output: Contribution to journal > Article > Scientific > peer-review

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Research output: Contribution to journal > Article > Scientific > peer-review

Finite element analysis of trees in the wind based on terrestrial laser scanning data

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Mathematical model order reduction in computational neuroscience

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Research output: Other conference contribution > Paper, poster or abstract > Scientific

A realistic, accurate and fast source modeling approach for the EEG forward problem

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Research output: Contribution to journal > Article > Scientific > peer-review

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Research output: Contribution to journal > Article > Scientific > peer-review

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Research output: Contribution to journal > Letter > Scientific > peer-review

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Quaternionic Hyperbolic Function Theory

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Simulating solar-induced chlorophyll fluorescence in a boreal forest stand reconstructed from terrestrial laser scanning measurements

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Software-defined radio prototype for fast-convolution-based filtered OFDM in 5G NR

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DISCUS – The Deep Interior Scanning CubeSat mission to a rubble pile near-Earth asteroid

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Research output: Contribution to journal > Article > Scientific > peer-review

(16) Psyche: A mesosiderite-like asteroid?

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Compute mindlessly. Not! map consciously

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Research output: Contribution to journal > Article > Scientific > peer-review

The impact crater at the origin of the Julia family detected with VLT/SPHERE?

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Research output: Contribution to journal › Article › Scientific › peer-review

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Research output: Contribution to journal › Article › Scientific › peer-review

Improvement of computational efficiency of a biochemical plasticity model

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Research output: Other conference contribution › Paper, poster or abstract › Scientific

On the complexity of rainbow coloring problems

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Research output: Contribution to journal › Article › Scientific › peer-review

A study of crown development mechanisms using a shoot-based tree model and segmented terrestrial laser scanning data

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Linear Model Predictive Control for Schrödinger Equation

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Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

A Partial Internal Model for Approximate Robust Output Regulation of Boundary Control Systems

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Light, Shape and Space: Direct and Inverse Problems of Individual Objects and Populations

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Research output: Book/Report › Doctoral thesis › Collection of Articles

Multigrid-Based Inversion for Volumetric Radar Imaging With Asteroid Interior Reconstruction as a Potential Application

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Asymptotic Behaviour of Coupled Systems in Discrete and Continuous Time

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Research output: Contribution to journal › Article › Scientific › peer-review

Quantitative Tree Reconstruction from Terrestrial Laser Scanning Data and Applications

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Research output: Book/Report › Doctoral thesis › Collection of Articles

The StarT Project Competition from the Perspective of Mathematics and Academic Literacy

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Research output: Contribution to journal › Article › Scientific › peer-review

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Uncertainty in multispectral lidar signals caused by incidence angle effects

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Distribution of shape elongations of main belt asteroids derived from Pan-STARRS1 photometry

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Analysis of common rail pressure signal of dual-fuel large industrial engine for identification of injection duration of pilot diesel injectors

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Research output: Contribution to journal › Article › Scientific › peer-review

Approximate Bayesian inference methods for stochastic state space models

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Research output: Book/Report › Doctoral thesis › Collection of Articles

Minimal Characterization of O-notation in Algorithm Analysis

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Research output: Contribution to journal › Article › Scientific › peer-review

Robust output tracking and disturbance rejection for a 2D heat equation

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Research output: Artistic and non-textual form › Digital or Visual Products › Scientific

Analysing and Improving Student's Mathematics Skills using ICT-tools

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On the spectral and Frobenius norm of a generalized Fibonacci r-circulant matrix

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Research output: Contribution to journal › Article › Scientific › peer-review

10 kA Joints for HTS Roebel Cables

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Research output: Contribution to journal > Article > Scientific > peer-review

A case study of focal bayesian EEG inversion for whitney element source spaces: Mesh-based vs. cartesian orientations

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Research output: Chapter in Book/Report/Conference proceeding > Conference contribution > Scientific > peer-review

Cauchy–Riemann Operators in Octonionic Analysis

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Research output: Contribution to journal > Article > Scientific > peer-review

Computing minimum rainbow and strong rainbow colorings of block graphs

Keranen, M. & Lauri, J., 2018, In : Discrete Mathematics and Theoretical Computer Science. 20, 1, 22.
Research output: Contribution to journal > Article > Scientific > peer-review

Engineering Mathematics Education in Finland: A Comparative Analysis of EU, Russia, Georgia and Armenia

Pohjolainen, S. & Myllykoski, T., 2018, *Modern Mathematics Education for Engineering Curricula in Europe*. Pohjolainen, S., Myllykoski, T., Mercat, C. & Sosnovsky, S. (eds.). Birkhäuser, p. 69-75 7 p.
Research output: Chapter in Book/Report/Conference proceeding > Chapter > Professional

Fair testing and stubborn sets

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Research output: Contribution to journal > Article > Scientific > peer-review

Far-Field Inversion for the Deep Interior Scanning CubeSat

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Research output: Contribution to journal > Article > Scientific > peer-review

Kehittämistutkimus: vuorovaikuteisten Matlab-opetusohjelmien vaikutus minäpystyvyyteen ja oppimistuloksiin yliopistomatematiikassa

Kaarakka, T. E., Ali-Löytty, S. & Huhtanen, M., 2018, In : FMSEJA Journal . 2, 1, p. 67-77 11 p.
Research output: Contribution to journal > Article > Scientific > peer-review

Matematiikan oppimisen tukeminen teknillisessä yliopistokoulutuksessa

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Research output: Chapter in Book/Report/Conference proceeding > Chapter > Professional

Mathematics Education in EU for STEM Disciplines

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Research output: Chapter in Book/Report/Conference proceeding > Chapter > Scientific

Modern Mathematics Education for Engineering Curricula in Europe: A Comparative Analysis of EU, Russia, Georgia and Armenia

Pohjolainen, S. (ed.), Myllykoski, T. (ed.), Mercat, C. (ed.) & Sosnovsky, S. (ed.), 2018, Birkhäuser.
Research output: Book/Report > Anthology > Scientific > peer-review

On the fine-grained complexity of rainbow coloring

Kowalik, L., Lauri, J. & La, A. S., 2018, In : SIAM Journal on Discrete Mathematics. 32, 3, p. 1672-1705 34 p.

Research output: Contribution to journal › Article › Scientific › peer-review

Overview of the Results and Recommendations

Pohjolainen, S., Sosnovsky, S. & Mercat, C., 2018, *Modern Mathematics Education for Engineering Curricula in Europe: A Comparative Analysis of EU, Russia, Georgia and Armenia*. Pohjolainen, S., Myllykoski, T., Mercat, C. & Sosnovsky, S. (eds.). Switzerland: Birkhäuser, p. 185-196 12 p.

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Projektityöskentelyn kehittäminen yläkoulun matematiikan opetuksessa

Viro, I. E. & Joutsenlahti, J., 2018, In : *FMSERA Journal* . 2, 1, p. 90-99 10 p.

Research output: Contribution to journal › Article › Scientific › peer-review

Robust Regulation of Infinite-Dimensional Port-Hamiltonian Systems

Humaloja, J-P. & Pauranen, L., 2018, In : *IEEE Transactions on Automatic Control*. 63, 5

Research output: Contribution to journal › Article › Scientific › peer-review

Wearable RFID perspiration sensor tags for well-being applications – From laboratory to field use

Mulholland, K., Virkki, J., Raunonen, P. & Merilampi, S., 2018, *EMBECE and NBC 2017 - Joint Conference of the European Medical and Biological Engineering Conference EMBEC 2017 and the Nordic-Baltic Conference on Biomedical Engineering and Medical Physics, NBC 2017*. Springer Verlag, p. 1012-1015 4 p. (IFMBE Proceedings; vol. 65).

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

What's inside a rubble pile asteroid? DiSCUS - A tomographic twin radar Cubesat to find out

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Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Yliopistomatematiikan sähköisten tehtävien ja matemaattisen ajattelun kehittäminen

Myllykoski, T. J., Mattila, P., Ali-Löytty, S., Kaarakka, T. & Viro, E., 2018, In : *FMSERA Journal* . 2, 1, p. 46-56 11 p.

Research output: Contribution to journal › Article › Scientific › peer-review

A Reduced-Order Two-Degree-of-Freedom Composite Nonlinear Feedback Control for a Rotary DC Servo Motor

Pyrhönen, V-P., Koivisto, H. & Vilkkö, M., 12 Dec 2017, *Proceedings of the 56th IEEE Conference on Decision and Control*. Melbourne, Australia, p. 2065-2071 7 p.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

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Turunen, E., 27 Nov 2017, In : *Data Science and Engineering*. 2, 3, p. 224-231 8 p.

Research output: Contribution to journal › Article › Scientific › peer-review

Estimation of above-ground biomass of large tropical trees with terrestrial LiDAR

Gonzalez de Tanago, J., Lau, A., Bartholomeus, H., Herold, M., Avitabile, V., Raunonen, P., Martius, C., Goodman, R., Disney, M., Manuri, S., Burt, A. & Calders, K., 13 Nov 2017, In : *Methods in Ecology and Evolution*. 12 p.

Research output: Contribution to journal › Article › Scientific › peer-review

Adaptive optics and lightcurve data of asteroids: Twenty shape models and information content analysis

Viikinkoski, M., Hanuš, J., Kaasalainen, M., Marchis, F. & Āurech, J., 1 Nov 2017, In : *Astronomy and Astrophysics*. 607, A117.

Research output: Contribution to journal › Article › Scientific › peer-review

Opiskelijoiden oppimistyökalujen käyttö tietokoneavusteisessa Matematiikkajumppa -tukiopetuksessa

Myllykoski, T., Ali-Löytty, S. S. & Pohjolainen, S., 31 Oct 2017, *2017: Proceedings of the annual FMSERA symposium 2016* . p. 54-65 12 p. (Proceedings of the FMSERA annual symposium).

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

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Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Sähköisen matematiikan tentin toteuttaminen ja opiskelijoiden kokemukset sähköisestä tentistä

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Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Substanssiosaamisen integroinnin vaikutus asenteisiin ja motivaatioon yliopistomatematiikassa

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Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

FIB: Squeezing loop invariants by interpolation between forward/backward predicate transformers

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Research output: Patent › Scientific

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Research output: Contribution to journal › Article › Scientific › peer-review

3D shape of asteroid (6) Hebe from VLT/SPHERE imaging: Implications for the origin of ordinary H chondrites

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Research output: Contribution to journal › Article › Scientific › peer-review

How management intensity and neighborhood composition affect the structure of beech (*Fagus sylvatica* L.) trees

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Order reduction for a signaling pathway model of neuronal synaptic plasticity

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Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

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Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

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The effect of hardware-computed travel time on localization accuracy in the inversion of experimental (acoustic) waveform data

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Research output: Contribution to journal > Article > Scientific > peer-review

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Volumes and bulk densities of forty asteroids from ADAM shape modeling

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Research output: Chapter in Book/Report/Conference proceeding > Conference contribution > Scientific > peer-review

The logics taught and used at high schools are not the same

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A Mixed Finite Element Method to Solve the EEG Forward Problem

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Comparison of wood volume estimates of young trees from terrestrial laser scan data

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Research output: Contribution to journal > Article > Scientific > peer-review

Meeting a deadline: shortest paths on stochastic directed acyclic graphs with information gathering

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Research output: Contribution to journal > Article > Scientific > peer-review

Complexity of Rainbow Vertex Connectivity Problems for Restricted Graph Classes

Lauri, J., 11 Mar 2017, In : *Discrete Applied Mathematics*. 219, p. 132-146 14 p.

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Shape model of asteroid (130) Elektra from optical photometry and disk-resolved images from VLT/SPHERE and NIRC2/Keck

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Forward and Inverse Effects of the Complete Electrode Model in Neonatal EEG

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Research output: Contribution to journal › Article › Scientific › peer-review

The Congruences Below Fair Testing with Initial Stability

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Research output: Chapter in Book/Report/Conference proceeding › Chapter › Scientific

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Research output: Chapter in Book/Report/Conference proceeding › Chapter › Scientific

Stop it, and be stubborn!

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Asymptotics for infinite systems of differential equations

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Computational Model for Simulating Multifocal Imaging in Optical Projection Tomography

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Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Context Awareness for Semantic Mobile Computing

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Research output: Chapter in Book/Report/Conference proceeding > Chapter > Scientific > peer-review

General Integral Formulas for k-hyper-mono-genic Functions

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Research output: Contribution to journal > Article > Scientific > peer-review

Independent Loops Search in Flow Networks Aiming for Well-Conditioned System of Equations

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Research output: Chapter in Book/Report/Conference proceeding > Conference contribution > Scientific > peer-review

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Research output: Contribution to journal > Article > Scientific > peer-review

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Kullback-Leibler Divergence Approach to Partitioned Update Kalman Filter

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Research output: Contribution to journal > Article > Scientific > peer-review

LEADER: fast estimates of asteroid shape elongation and spin latitude distributions from scarce photometry

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Research output: Contribution to journal > Article > Scientific > peer-review

Matematiikan Perustaitojen Testi: Testin tehtävien ja vuosien 2010-2016 tulosten analyysi

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Research output: Working paper > Professional

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Research output: Contribution to journal > Article > Scientific > peer-review

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NP-completeness results for partitioning a graph into total dominating sets

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Research output: Contribution to journal › Article › Scientific › peer-review

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Research output: Other conference contribution › Paper, poster or abstract › Scientific

Robust controllers for regular linear systems with infinite-dimensional exosystems

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Research output: Contribution to journal › Article › Scientific › peer-review

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Research output: Contribution to journal › Article › Scientific › peer-review

Stubborn set intuition explained

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Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Teollinen internet ja semanttinen mallinnus

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The arithmetic Jacobian matrix and determinant

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Research output: Contribution to journal › Article › Scientific › peer-review

Two-Sided Hypergenic Functions

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Research output: Contribution to journal › Article › Scientific › peer-review

RS-BL-algebras are MV-algebras

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Research output: Contribution to journal › Article › Scientific › peer-review

Distribution of spin-axes longitudes and shape elongations of main-belt asteroids

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Research output: Contribution to journal › Article › Scientific › peer-review

A New Cauchy Type Integral Formula for Quaternionic k-hypermonogenic Functions

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Electroencephalography (EEG) forward modeling via H(div) finite element sources with focal interpolation

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Chasing the Rainbow Connection: Hardness, Algorithms, and Bounds

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Research output: Book/Report › Doctoral thesis › Collection of Articles

Projektipankki yläkoulun matematiikkaan

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Research output: Contribution to journal › Article › Professional

Identifying weak ties from publicly available social media data in an event

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Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Resurssitehokkaampi ja ilmastoneutraalimpi energiajärjestelmä, mutta miten? Suomalaiset avaintoimijat vastaavat

Lehtonen, P., Toivanen, P., Aalto, P., Björkqvist, T., Hakkarainen, M., Harsia, P., Holttinen, H., Järventausta, P., Jaakkola, I., Kallioharju, K., Kojo, M., Mylläri, F. & Oksa, A. M., 11 Oct 2016, *EL-TRAN Analyysi*. 11 p.

Research output: Book/Report › Commissioned report › Professional

Students' Use of Learning Tools and Tool Types: Solving Self-Study Assignments on an Online Platform

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Developing Learning and Teaching in Engineering Mathematics with and without Technology

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Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Application and theory of Petri nets and other models of concurrency: Special issue of selected papers from Petri Nets 2015

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Research output: Contribution to journal › Editorial › Scientific

Interval decomposition lattices are balanced

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Research output: Contribution to journal › Article › Scientific › peer-review

MathCheck: a tool for checking math solutions in detail

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Research output: Contribution to journal › Article › Scientific › peer-review

Safety Property-Driven Stubborn Sets

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Heiliö, M., Lähivaara, T., Laitinen, E., Mantere, T., Merikoski, J., Pohjolainen, S., Raivio, K., Silvennoinen, R., Suutala, A., Tarvainen, T., Tiihonen, T., Tuomela, J., Turunen, E. & Vauhkonen, M., 31 Jul 2016, Switzerland: Springer International Publishing. 242 p.

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Research output: Contribution to journal › Article › Scientific › peer-review

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Research output: Contribution to journal › Article › Scientific › peer-review

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Research output: Contribution to journal › Article › Scientific › peer-review

Moodlen työpaja: Vertaisarviointi osana opetusta yliopistomatematiikan ensimmäisellä peruskurssilla

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Research output: Contribution to journal > Article > Professional

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Research output: Contribution to journal > Article > Scientific > peer-review

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Research output: Chapter in Book/Report/Conference proceeding > Conference contribution > Scientific > peer-review

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Research output: Contribution to journal > Article > Scientific > peer-review

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Research output: Contribution to journal > Article > Scientific > peer-review

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Research output: Contribution to journal > Article > Scientific > peer-review

Moodlen työpaja: Vertaisarviointi osana opetusta matematiikan ensimmäisellä peruskurssilla

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Research output: Other conference contribution > Paper, poster or abstract > Professional

CytoSpectre: A tool for spectral analysis of oriented structures on cellular and subcellular levels

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Research output: Contribution to journal > Article > Scientific > peer-review

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Research output: Contribution to journal > Article > Scientific > peer-review

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Research output: Contribution to journal › Article › Professional

Tampereen matemaattisten aineiden aineenopettajakoulutus

Translated title of the contribution: : Mathematics and science subject teacher training at the University of Tampere
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Research output: Book/Report › Anthology › Scientific › peer-review

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Research output: Chapter in Book/Report/Conference proceeding > Chapter > Scientific > peer-review

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Research output: Chapter in Book/Report/Conference proceeding > Conference contribution > Scientific > peer-review

Equal Opportunities in Education of Science, Mathematics and Technology

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Motion Model for Positioning with Graph-Based Indoor Map

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Research output: Contribution to journal > Article > Scientific > peer-review

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Research output: Contribution to journal > Article > Scientific > peer-review

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Research output: Contribution to journal › Article › Scientific › peer-review

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Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Ostinato: The Exploration-Automation Cycle of User-Centric, Process-Automated Data-Driven Visual Network Analytics

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Research output: Chapter in Book/Report/Conference proceeding › Chapter › Scientific › peer-review

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Research output: Contribution to journal › Article › Scientific › peer-review

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Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

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Research output: Contribution to journal › Article › Professional

Quantitative structure tree models from terrestrial laser scanner data

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Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Professional

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Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Professional

Robustness of strong stability of discrete semigroups

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Research output: Contribution to journal › Article › Scientific › peer-review

Robust Regulation of SISO Systems: The Fractional Ideal Approach

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Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

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Research output: Contribution to journal › Article › Scientific › peer-review

Bagdad - matematiikkaa täältä ikuisuuteen matematiikkanäyttely

Translated title of the contribution: : Bagdad - matematiikkaa täältä ikuisuuteen matematiikkanäyttely

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Change Detection of Tree Biomass with Terrestrial Laser Scanning and Quantitative Structure Modelling

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Research output: Chapter in Book/Report/Conference proceeding > Conference contribution > Scientific > peer-review

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Research output: Chapter in Book/Report/Conference proceeding > Conference contribution > Scientific > peer-review

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Research output: Contribution to journal > Article > Scientific > peer-review

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Research output: Patent > Scientific

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Research output: Contribution to journal > Article > Scientific > peer-review

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Research output: Contribution to journal > Article > Scientific > peer-review

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Research output: Chapter in Book/Report/Conference proceeding > Conference contribution > Scientific > peer-review

Robustness of strong stability of semigroups

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Research output: Contribution to journal > Article > Scientific > peer-review

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Research output: Contribution to journal > Article > Scientific > peer-review

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Research output: Contribution to journal > Article > Scientific > peer-review

Taivaalliset projektiot: terapiaa imversio-ongelmalliselle

Translated title of the contribution: : Taivaalliset projektiot: terapiaa imversio-ongelmalliselle

Kaasalainen, M., 2014, In : *Arkhimedes*. 4, p. 25-31 7 p.

Research output: Contribution to journal > Article > Professional

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Research output: Contribution to journal > Article > Scientific > peer-review

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The Role of Exosystems in Output Regulation

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Tree Root System Characterization and Volume Estimation by Terrestrial Laser Scanning and Quantitative Structure Modeling

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Research output: Chapter in Book/Report/Conference proceeding > Conference contribution > Scientific > peer-review

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A Hyperbolic Dirac Operator and its Kernels

Translated title of the contribution: : A Hyperbolic Dirac Operator and its Kernels

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Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Bayesian analysis of GUHA hypotheses

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Research output: Contribution to journal › Article › Scientific › peer-review

Challenges in Heterogeneous Web Data Analytics - Case Finnish Growth Companies in Social Media

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Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

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Research output: Contribution to journal › Article › Scientific › peer-review

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Research output: Contribution to journal › Article › Scientific › peer-review

Estimating Above Ground Biomass from Terrestrial Laser Scanning in Australian Eucalypt Open Forest

Calders, K., Newnham, G., Herold, M., Murphy, S., Culvenor, D., Raunonen, P., Burt, A., Armston, J., Avitabile, V. & Disney, M., 2013, *13th International Conference on LiDAR Applications for Assessing Forest Ecosystems, SilviLaser 2013, 9.-11.10.2013. Beijing, China*. Beijing, China: Silvilaser Beijing 2013, p. 1-7 7 p. (International Conference on LiDAR Applications for Assessing Forest Ecosystems).

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

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Research output: Chapter in Book/Report/Conference proceeding › Chapter › Scientific › peer-review

Estimation of the Mechanical Power of a Kite Wind Generator

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Fast Automatic Method for Constructing Topologically and Geometrically Precise Tree Models from TLS Data

Raunonen, P., Casella, E., Disney, M., Åkerblom, M. & Kaasalainen, M., 2013, *7th International Conference on Functional-Structural Plant Models, FSPM2013, 9.-14.6.2013, Saariselkä, Finland*. Sievänen, R., Nikinmaa, E., Godin, C., Lintunen, A. & Nygren, P. (eds.). Vantaa: Finnish Society of Forest Science; Finnish Forest Research Institute; University of Helsinki, p. 89-91 3 p. (International Conference on Functional-Structural Plant Models).

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Fast automatic precision tree models from terrestrial laser scanner data

Raunonen, P., Kaasalainen, M., Åkerblom, M., Kaasalainen, S., Kaartinen, H., Vastaranta, M., Holopainen, M., Disney, M. & Lewis, P., 2013, In : *Remote Sensing*. 5, 2, p. 491-520 30 p.

Research output: Contribution to journal › Article › Scientific › peer-review

Hyperbolic Laplace Operator and the Weinstein Equation in R^3

Eriksson, S-L. & Orelma, H., 2013, In : *Advances in Applied Clifford Algebras*. p. 1-16 16 p.

Research output: Contribution to journal › Article › Scientific › peer-review

Improving engineering students' mathematics skills and analysing their behaviour using ICT - tools.

Pohjolainen, S., Nykänen, O., Venho, J. & Kangas, J., 2013, *Proceedings of annual SEFI Conference, 16-20 September 2013, Leuven, Belgium*. Brussels, Belgium: European Society for Engineering Education SEFI, p. 1-8 8 p. 163. (Annual Conference of the European Society for Engineering Education).

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Information visualization of Twitter data for co-organizing conferences

Jussila, J., Huhtamäki, J., Kärkkäinen, H. & Still, K., 2013, *17th International Academic MindTrek Conference, October 1-4, 2013, Tampere, Finland*. New York, NY: ACM, p. 139-145 7 p. (MindTrek Conference).

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Introduction to Statistical Data Analysis for Engineers and Scientists

Piche, R., 2013, Las Vegas, NV, USA: CREATSPACE. 136 p.

Research output: Book/Report › Book › Professional

Iterative alternating sequential (IAS) method for radio tomography of asteroids in 3D

Pursiainen, S. & Kaasalainen, M., 2013, In : Planetary and Space Science. 82-83, p. 84-98 15 p.

Research output: Contribution to journal › Article › Scientific › peer-review

Least-Squares Transformations between Point-Sets

Rutanan, K., Gomez-Herrero, G., Eriksson, S-L. & Egiazarian, K., 2013, *Image Analysis, 18th Scandinavian Conference, SCIA 2013, Espoo, Finland, June 17-20, 2013, Proceedings*. Kämäräinen, J-K. & Koskela, M. (eds.). Berlin: Springer, p. 501-511 11 p. (Lecture Notes in Computer Science; vol. 7944).

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Manifolds in electromagnetism and superconductor modelling: Using their properties to model critical current of twisted conductors in self-field with 2-D model

Stenvall, A., Tarhasaari, T., Grilli, F., Raunonen, P., Vojenciak, M. & Pellikka, M., 2013, In : Cryogenics. 53, p. 135-141 7 p.

Research output: Contribution to journal › Article › Scientific › peer-review

Matematiikan kirjallinen kielentäminen yliopiston matematiikan opetuksessa

Translated title of the contribution: : Matematiikan kirjallinen kielentäminen yliopiston matematiikan opetuksessa

Joutsenlahti, J., Sarikka, H., Kangas, J. & Harjulehto, P., 2013, *Matematiikan ja luonnontieteiden opetuksen tutkimusseuran konferenssijulkaisu 2012. Tutkimuksia / Jyväskylän yliopisto, opettajankoulutuslaitos*. Hähkiöniemi, M., Leppäaho, H., Nieminen, P. & Viiri, J. (eds.). Jyväskylä: University of Jyväskylä, p. 59-70 12 p. (The annual conference of Finnish Mathematics and Science Education Research Association, November 8-9, 2012, Jyväskylä, Finland; vol. 90).

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Mean Value Properties for the Weinstein Equation Using the Hyperbolic Metric

Eriksson, S-L. & Orelma, H., 2013, In : Complex Analysis and Operator Theory. 7, 5, p. 1609-1621

Research output: Contribution to journal › Article › Scientific › peer-review

Networks of innovation relationships: multiscopic views on Finland

Still, K., Huhtamäki, J., Russell, M. G., Basole, R. C., Salonen, J. & Rubens, N., 2013, *XXIV ISPIM Conference, Innovating in Global Markets: Challenges for Sustainable Growth, 16-19 June 2013, Helsinki, Finland*. Huizingh, K. R. E., Conn, S., Torkkeli, M., Schneider, S. & Bitran, I. (eds.). Manchester, UK: International Society for Professional Innovation Management ISPIM, p. 1-15 15 p. (International Society for Professional Innovation Management Conference).

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Normal Distributions Transform Occupancy Maps: Application to Large-Scale Online 3D Mapping

Saarinen, J., Andreasson, H., Stoyanov, T., Ala-Luhtala, J. & Lilienthal, A. J., 2013, *2013 IEEE International conference on Robotics and Automation, ICRA, May 6-10, 2013, Karlsruhe, Germany*. Piscataway, NJ: IEEE, p. 2233-2238 6 p. (IEEE International Conference on Robotics and Automation).

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

On Hodge-de Rham systems in hyperbolic Clifford analysis

Eriksson, S-L. & Orelma, H., 2013, *11th International Conference of Numerical Analysis and Applied Mathematics, ICNAAM 2013, 21-27 September 2013, Rhodes, Greece*. American Institute of Physics AIP, p. 492-495 4 p. (AIP Conference Proceedings; vol. 1558).

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

On hypermonogenic functions

Translated title of the contribution: : On hypermonogenic functions

Eriksson, S-L. & Orelma, H., 2013, In : Complex Variables and Elliptic Equations. 58, 7, p. 975-990 16 p.

Research output: Contribution to journal › Article › Scientific › peer-review

On the Structure of Robust Controllers for Infinite-Dimensional Systems

Hämäläinen, T. & Pohjolainen, S., 2013, *12th European Control Conference, ECC 2013, Zürich, Switzerland, 17.-19.7.2013*. Zürich, Sveitsi: European Control Association EUCA, p. 59-62 4 p. (European Control Conference).

Research output: Chapter in Book/Report/Conference proceeding > Conference contribution > Scientific > peer-review

Output Regulation Theory for Distributed Parameter Systems with Unbounded Control and Observation

Paunonen, L. & Pohjolainen, S., 2013, *52nd IEEE Conference on Decision and Control, IEEE CDC 2013, December 10-13, 2013, Florence, Italy*. Piscataway, NJ: IEEE, p. 1083-1088 6 p. (IEEE Conference on Decision and Control).

Research output: Chapter in Book/Report/Conference proceeding > Conference contribution > Scientific > peer-review

Particle filter and smoother for indoor localization

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Research output: Chapter in Book/Report/Conference proceeding > Conference contribution > Scientific > peer-review

Process for Measuring and Visualizing an Open Innovation Platform: Case Demola

Huhtamäki, J., Luotonen, V., Kairamo, V., Still, K. & Russell, M. G., 2013, *17th International Academic MindTrek Conference, October 1-4, 2013, Tampere, Finland*. ACM, p. 166-171 6 p. (MindTrek Conference).

Research output: Chapter in Book/Report/Conference proceeding > Conference contribution > Scientific > peer-review

Rapid Characterisation of Forest Structure from TLS and 3D Modelling

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Research output: Chapter in Book/Report/Conference proceeding > Conference contribution > Scientific > peer-review

Reduced order internal models in robust output regulation

Paunonen, L. & Pohjolainen, S., 2013, In : *IEEE Transactions on Automatic Control*. 58, 9, p. 2307-2318 12 p.

Research output: Contribution to journal > Article > Scientific > peer-review

Regional compensation for statistical maximum likelihood reconstruction error of PET image pixels

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Research output: Contribution to journal > Article > Scientific > peer-review

Relational Capital and Social Capital: One or two Fields of Research?

Still, K., Huhtamäki, J. & Russell, M. G., 2013, *Proceedings of the 10th International Conference on Intellectual Capital, Knowledge Management and Organisational Learning, ICICKM 2013, Washington, DC, USA, October 24-25, 2013*.

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Research output: Chapter in Book/Report/Conference proceeding > Conference contribution > Scientific > peer-review

Robustness of polynomial stability with respect to unbounded perturbations

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Research output: Contribution to journal > Article > Scientific > peer-review

Robustness properties of controllers with reduced order internal models

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Research output: Chapter in Book/Report/Conference proceeding > Conference contribution > Scientific > peer-review

Robust output regulation and the preservation of polynomial closed-loop stability

Paunonen, L. & Pohjolainen, S., 2013, In : *International Journal of Robust and Nonlinear Control*. p. 1-28 28 p.

Research output: Contribution to journal > Article > Scientific > peer-review

SO-I: a surrogate model algorithm for expensive nonlinear integer programming problems including global optimization applications

Müller, J., Shoemaker, C. & Piche, R., 2013, In : Journal of Global Optimization. p. 1-25 25 p.

Research output: Contribution to journal › Article › Scientific › peer-review

Solvability of the output regulation problem with a feedforward controller

Laakkonen, P. & Pohjolainen, S., 2013, *12th European Control Conference, ECC 2013, Zürich, Switzerland, 17.-19.7.2013*. Zürich, Sveitsi: European Control Association EUCA, p. 560-565 6 p. (European Control Conference).

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

SO-MI: A surrogate model algorithm for computationally expensive nonlinear mixed-integer black-box global optimization problems

Müller, J., Shoemaker, C. & Piche, R., 2013, In : Computers and Operations Research. 40, 5, p. 1383-1400

Research output: Contribution to journal › Article › Scientific › peer-review

Statistical Path Loss Parameter Estimation and Positioning using RSS Measurements

Nurminen, H., Talvitie, J., Ali-Löytty, S., Muller, P., Lohan, E-S., Piche, R. & Renfors, M., 2013, In : Journal of Global Positioning Systems. 12, 1, p. 13-27 15 p.

Research output: Contribution to journal › Article › Scientific › peer-review

Stock Price Dynamics and Option Valuations under Volatility Feedback Effect

Kanniainen, J. & Piche, R., 2013, In : Physica A: Statistical Mechanics and Its Applications. 392, 4, p. 722-740

Research output: Contribution to journal › Article › Scientific › peer-review

Structure-Dynamics Relationships in Bursting Neuronal Networks Revealed Using a Prediction Framework

Mäki-Marttunen, T., Acimovic, J., Linne, M-L. & Ruohonen, K., 2013, In : PLoS ONE. 8, 7, p. 1-16 16 p., e69373.

Research output: Contribution to journal › Article › Scientific › peer-review

The Asymptotic Behaviour of the Proportion of Hard Instances of the Halting Problem

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Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

The Kraft Sum as a Monotone Function of the Refinement-Ordered Set of Uniquely Decipherable Codes

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Research output: Contribution to journal › Article › Scientific › peer-review

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Merline, W. J., Drummond, J. D., Carry, B., Conrad, A., Tamblyn, P. M., Dumas, C., Kaasalainen, M., Erikson, A., Mottola, S., Durech, J., Rousseau, G., Behrend, R., Casalnuovo, G. B., Chinaglia, B., Christou, J. C., Chapman, C. R. & Neyman, C., 2013, In : Icarus. 225, 1, p. 794-805 12 p.

Research output: Contribution to journal › Article › Scientific › peer-review

Tiedonloughintaa tieliikenneonnettomuussatasta

Translated title of the contribution: : Tiedonloughintaa tieliikenneonnettomuussatasta

Turunen, E., 2013, In : Liikenne. 31, 2, p. 7-8 2 p.

Research output: Contribution to journal › Article › Scientific › peer-review

Twitterihmiä ja uutispäivittelyä - toimittajana sosiaalisessa mediassa

Translated title of the contribution: : Twitterihmiä ja uutispäivittelyä - toimittajana sosiaalisessa mediassa

Vainikka, E., Noppari, E., Heinonen, A. & Huhtamäki, J., 2013, Tampereen yliopisto. Viestinnän, median ja teatterin yksikkö. Journalismin, viestinnän ja median tutkimuskeskus, COMET. 113 p.

Research output: Book/Report › Commissioned report › Professional

Unimodality and log-concavity of f-vectors for cyclic and ordinary polytopes

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Research output: [Contribution to journal](#) › [Article](#) › [Scientific](#) › [peer-review](#)

Verkostoanalyysi sosiaalisen median tutkimuksessa

Translated title of the contribution: : Verkostoanalyysi sosiaalisen median tutkimuksessa

Huhtamäki, J. & Parviainen, O., 2013, *Otteita verkosta - verkon ja sosiaalisen median tutkimusmenetelmät*. Laaksonen, S.-M., Matikainen, J. & Tikka, M. (eds.). 1 ed. Tampere: Vastapaino, p. 245-273 29 p.

Research output: [Chapter in Book/Report/Conference proceeding](#) › [Chapter](#) › [Scientific](#) › [peer-review](#)

Virtuaalinen konelaboratorio ja semanttinen mallinnus konejärjestelmän suunnittelun tukena, Loppuraportti, Semogen II -hanke

Translated title of the contribution: : Virtuaalinen konelaboratorio ja semanttinen mallinnus konejärjestelmän suunnittelun tukena, Loppuraportti, Semogen II -hanke

Nykänen, O., Koskinen, K. T., Ranta, P., Salonen, J., Aaltonen, J., Nurmi, J., Helminen, M., Alarotu, V., Salomaa, T. & Pohjolainen, S., 2013, Tampere: Tampereen teknillinen yliopisto, Smart Simulators -tutkimusryhmä. 50 p.

Research output: [Book/Report](#) › [Commissioned report](#) › [Professional](#)

What's out there? Asteroid models for target selection and mission planning

Kaasalainen, M. & Durech, J., 2013, *Asteroids: prospective energy and material resources*. Badescu, V. (ed.). Heidelberg: Springer, p. 131-150 20 p.

Research output: [Chapter in Book/Report/Conference proceeding](#) › [Chapter](#) › [Scientific](#) › [peer-review](#)

A review on old and new results on robust regulation of DPS with infinite-dimensional exosystems

Hämäläinen, T., 4 Jan 2012.

Research output: [Other conference contribution](#) › [Paper, poster or abstract](#) › [Scientific](#)

A characterization of level-continuous fuzzy numbers

Kaleva, O., 2012, In : *Fuzzy Sets and Systems*. 209, p. 84-88

Research output: [Contribution to journal](#) › [Article](#) › [Scientific](#) › [peer-review](#)

A Molecular Camera Gyroscope

Translated title of the contribution: : A Molecular Camera Gyroscope

Huttunen, V. & Piche, R., 2012, In : *Girokopiya I Navigatsiya*. 77, p. 69-81

Research output: [Contribution to journal](#) › [Article](#) › [Scientific](#) › [peer-review](#)

A Monocular Camera Gyroscope

Huttunen, V. & Piche, R., 2012, In : *Gyroscopy and Navigation*. 3, 2, p. 124-131

Research output: [Contribution to journal](#) › [Article](#) › [Scientific](#) › [peer-review](#)

An Adaptive Derivative Free Method for Bayesian Posterior Approximation

Raitoharju, M. & Ali-Löytty, S., 2012, In : *IEEE Signal Processing Letters*. 19, 2, p. 87-90 12436433.

Research output: [Contribution to journal](#) › [Article](#) › [Scientific](#) › [peer-review](#)

Analysis of the rotation period of asteroids (1865) Cerberus, (2100) Ra-Shalom, and (3103) Eger - search for the YORP effect

Durech, J., Vokrouhlicky, D., Baransky, A. R., Breiter, S., Burkhanov, O. A., Cooney, W., Fuller, V., Gafonyuk, N. M., Gross, J., Inasaridze, R. Y., Kaasalainen, M., Krugly, Y. N., Kvaratshelia, O. I., Litvinenko, E. A., Macomber, B., Marchis, F., Molotov, I. E., Oey, J., Polishook, D., Pollock, J., Pravec, P., Sarneczky, K., Shevchenko, V. G., Slyusarev, I., Stephens, R., Szabo, G., Terrell, D., Vachier, F., Vanderplate, Z., Viikinkoski, M. & Warner, B. D., 2012, In : *Astronomy and Astrophysics*. 547, p. 9 A10.

Research output: [Contribution to journal](#) › [Article](#) › [Scientific](#) › [peer-review](#)

Analytics of the impact of user involvement in the innovation process and its outcomes. Case study: Media-Enhanced Learning (MEL) Service

Still, K., Huhtamäki, J., Isomursu, M., Lahti, J. & Koskela-Huotari, K., 2012, In : *Procedia: Social and Behavioral Sciences*. 46, p. 1740-1746

Research output: Contribution to journal › Article › Scientific › peer-review

An empirical solar radiation pressure model for autonomous GNSS orbit prediction

Ala-Luhtala, J., Seppänen, M. & Piche, R., 2012, *2012 IEEE/ION Position Location and Navigation Symposium PLANS, 23-26 April 2012, Myrtle Beach, SC, USA*. Piscataway, NJ: Institute of Electrical and Electronics Engineers IEEE, p. 568-575 12863831. (IEEE/ION Position Location and Navigation Symposium).

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

A New Characterization for n-Fold Positive Implicative BL-logics

Turunen, E., Tchikapa, N. & Lele, C., 2012, *Advances on Computational Intelligence 14th International Conference on Information Processing and Management of Uncertainty in Knowledge-Based Systems, IPMU 2012, Catania, Italy, July 9-13, 2012. Proceedings, Part I. Communications in Computer and Information Science*. Greco, S., Bouchon-Meunier, B., Coletti, G., Fedrizzi, M., Matarazzo, B. & Yager, R. R. (eds.). Berlin Heidelberg: Springer, p. 552-560 (International Conference on Information Processing and Management of Uncertainty in Knowledge-Based Systems; vol. 297).

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

A New Method and Format for Describing CANopen System Topology

Helminen, M., Salonen, J., Saha, H., Nykänen, O., Koskinen, K. T., Ranta, P. & Pohjolainen, S., 2012, *Proceedings of the 13th International CAN Conference, iCC 2012 in Hambach Castle, March 5 to March 6, Germany*. CAN in Automation e.V., p. 1-8 8 p. (International CAN Conference).

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific

Asteroid (2867) Steins: Shape, topography and global physical properties from OSIRIS observations

Jorda, L., Lamy, P., Gaskell, R., Kaasalainen, M., Groussin, O., Besse, S. & Faury, G., 2012, In : *Icarus*. 221, 2, p. 1089-1100

Research output: Contribution to journal › Article › Scientific › peer-review

A Stochastic Mixture Surrogate Model Algorithm for Computationally Expensive Black-Box Global Optimization Problems

Müller, J., Shoemaker, C. & Piche, R., 2012, *Proceedings of Global Optimization Workshop 2012, 26-29 June 2012, Natal, Brazil*. Natal, Brazil: Universidade Federal do Rio Grande do Norte, p. 1-4 4 p. (Global Optimization Workshop).

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific

Asymptotic modeling of unconstrained control of a tethered power kite moving along a given closed-loop spherical trajectory

Silvennoinen, R. & Argatov, I., 2012, In : *Journal of Engineering Mathematics*. 72, 1, p. 187-203

Research output: Contribution to journal › Article › Scientific › peer-review

Autonomous Prediction of GPS and GLONASS Satellite Orbits

Seppänen, M., Ala-Luhtala, J., Piche, R., Martikainen, S. & Ali-Löytty, S., 2012, In : *Navigation*. 59, 2, p. 119-134

Research output: Contribution to journal › Article › Scientific › peer-review

Characterizing n-Fold Positive Implicative BL-logics

Turunen, E., Lele, C. & Tchikapa, N., 2012, *ManyVal'12 In Honour of Antonio Di Nola's 65th Birthday, Salerno, Italy, 4.7.2012*. p. 60-64 (ManyVal).

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific

Comprehensive Quantitative Tree Models from TLS Data

Åkerblom, M., Raunonen, P., Kaasalainen, M., Kaasalainen, S. & Kaartinen, H., 2012, *IEEE International Geoscience and Remote Sensing Symposium, IGARSS, 2012, 22.-27.7.2012, Munich, Germany*. Piscataway, NJ: Institute of Electrical and Electronics Engineers IEEE, p. 6507-6510 13133382. (IEEE International Geoscience and Remote Sensing Symposium).

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Dual Look at Robust Regulation: Frequency Domain and State Space Approaches

Laakkonen, P., Paunonen, L. & Pohjolainen, S., 2012, *Proceedings of MMAR 2012. 17th International Conference on Methods and Models in Automation & Robotics, MMAR 2012, 27-30 August 2012, Miedzyzdroje, Poland*. Piscataway, NJ: Institute of Electrical and Electronics Engineers IEEE, p. 136-141 13117991. (International Conference on Methods and Models in Automation & Robotics).

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Elementary Partial Differential Equations. Theory and Solved Problems.

Piche, R., 2012, Saarbrücken, Germany: Lambert Academic Publishing. 131 p.

Research output: Book/Report › Book › Scientific › peer-review

Estimation of Linear Systems with Abrupt Changes of the Noise Covariances Using Variational Bayes Algorithm

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(Tampereen teknillinen yliopisto. Matematiikan laitos. Tutkimusraportti; vol. 100)

Research output: Book/Report › Commissioned report › Professional

Facilitating active participation in web-based co-development

Friedrich, P., Huhtamäki, J., Koskela-Huotari, K., Karppinen, K. & Still, K., 2012, *Proceedings of Innovation through Social Media, ISM 2012 workshop proceedings, December 3, 2012, Oslo, Norway*. Trondheim, Norway: AKADEMIKA FORLAG, p. 16-23 (Innovation Through Social Media).

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Feedforward Output Regulation for Distributed Parameter Systems with Infinite-Dimensional Exosystems

Paunonen, L. & Pohjolainen, S., 2012, *Proceedings of the 51st IEEE Conference on Decision and Control, IEEE CDC 2012, December 10-13 2012, Maui, Hawaii, USA*. Piscataway, NJ: IEEE, p. 1566-1571 (IEEE Conference on Decision and Control).

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Gaussian mixture filter allowing negative weights and its application to positioning using signal strength measurements

Muller, P., Ali-Löytty, S., Dashti, M., Nurminen, H. & Piche, R., 2012, *Proceedings of WPNC 2012, 9th Workshop on Positioning, Navigation and Communication, March 15-16, 2012, Dresden, Germany*. Piscataway, NJ: Institute of Electrical and Electronics Engineers IEEE, p. 71-76 (Workshop on Positioning, Navigation and Communication).

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Harmonic Forms on Conformal Euclidean Manifolds: The Clifford Multivector Approach

Orelma, H., 2012, In : *Advances in Applied Clifford Algebras*. 22, 1, p. 143-158

Research output: Contribution to journal › Article › Scientific › peer-review

Hierarchical Bayesian inference for the EEG inverse problem using realistic FE head models: Depth localization and source separation for focal primary currents

Lucka, F., Pursiainen, S., Burger, M. & Wolters, C. H., 2012, In : *NeuroImage*. 61, 4, p. 1364-1382

Research output: Contribution to journal › Article › Scientific › peer-review

Hyperbolic laplace operator and the Weinstein equation in R3

Eriksson, S-L. & Orelma, H., 2012, *Proceedings in the 19th International Conference on the Applications of Computer Science and Mathematics in Architecture and Civil Engineering, IKM 2012, July 4-6 2012, Weimar, Germany*. Gürlebeck, K., Lahmer, T. & Werner, F. (eds.). Weimar, Germany: IKM, p. 15 (International conference on the applications of computer science and mathematics in architecture and civil engineering).

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Mathematics Remedial Instruction with Math-Bridge e-learning system

Kangas, J., Miilumäki, T. & Pohjolainen, S., 2012, *16th SEFI MWG Seminar - Mathematical Education of Engineers, Salamanca, Spain, 28.-30.6.2012*. Alpers, B., Robinson, C., Rodriguez, G., Martin, A. & de la Villa, A. (eds.). Salamanca, Spain: Universidad de Salamanca, (SEFI MWG Seminar).

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Method of tracking a state of a mobile electronic device

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Research output: Patent › Scientific

Mobile Tracking in Mixed Line-of-Sight/Non-Line-of-Sight Conditions: Algorithm and Theoretical Lower Bound

Chen, L., Ali-Löyty, S., Piche, R. & Wu, L., 2012, In : WIRELESS PERSONAL COMMUNICATIONS. 65, 4, p. 753-771
Research output: Contribution to journal › Article › Scientific › peer-review

Networks of Growth: Case Young Innovative Companies in Finland

Huhtamäki, J., Still, K., Isomursu, M., Russell, M. G. & Rubens, N., 2012, *Proceedings of the 7th European Conference on Innovation and Entrepreneurship, September 20-21, 2012, Santarem, Portugal*. Vivas, C. & Lucas, F. (eds.). Reading, UK: Academic Publishing International Limited, (European Conference on Innovation and Entrepreneurship).
Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

n-Fold implicative basic logic is Gödel logic

Turunen, E., Tchikapa, N. & Lele, C., 2012, In : Soft Computing. 16, 1, p. 177-181
Research output: Contribution to journal › Article › Scientific › peer-review

Nonlinear iteration semigroups of fuzzy Cauchy problems

Kaleva, O., 2012, In : Fuzzy Sets and Systems. 209, p. 104-110 7 p.
Research output: Contribution to journal › Article › Scientific › peer-review

On the Parametric Instability Caused by Step Size Variation in Runge-Kutta-Nyström Methods

Piche, R., 2012, Unknown Publisher. 11 p. (arXiv; vol. arXiv:1209.5173)
Research output: Book/Report › Commissioned report › Professional

Optimal computation of brightness integrals parametrized on the unit sphere

Kaasalainen, M., Lu, X. & Vänttinen, A-V., 2012, In : Astronomy and Astrophysics. 539, p. 7 A96.
Research output: Contribution to journal › Article › Scientific › peer-review

Outlier-robust estimation of GPS satellite clock offsets

Martikainen, S., Piche, R. & Ali-Löyty, S., 2012, *2012 International Conference on Localization and GNSS ICL-GNSS, June 25-27, 2012, Starnberg, Germany*. Piscataway, NJ: Institute of Electrical and Electronics Engineers IEEE, p. 5 pp. 12906184. (2012 International Conference on Localization and GNSS).
Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Output Regulation for General Infinite-Dimensional Exosystems

Paunonen, L. & Pohjolainen, S., 2012, *Proceedings of the 7th IFAC Symposium on Robust Control Design, Rocond 2012, 20-22 June 2012, Aalborg, Denmark*. Laxenburg, Austria: International Federation of Automatic Control IFAC, p. 162-167 (IFAC Symposium on Robust Control Design).
Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Paradigm shift in innovation indicators - from analog to digital

Still, K., Huhtamäki, J., Russell, M. G. & Rubens, N., 2012, *Proceedings of the 5th ISPIM Innovation Forum, 9-12 December, 2012, Seoul, Korea*. Manchester, UK: International Society for Professional Innovation Management ISPIM, (ISPIM Innovation Symposium).
Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Periodic Output Regulation for Distributed Parameter Systems

Translated title of the contribution: : Periodic Output Regulation for Distributed Parameter Systems
Paunonen, L. & Pohjolainen, S., 2012, In : Mathematics of Control Signals and Systems. 24, 4, p. 403-441
Research output: Contribution to journal › Article › Scientific › peer-review

Prime filters on residuated lattices

Kondo, M. & Turunen, E., 2012, *2012 IEEE 42nd International Symposium on Multiple-Valued Logic ISMVL, 14-16 May, 2012, Victoria, British Columbia, Canada*. Piscataway, NJ: Institute of Electrical and Electronics Engineers IEEE, p. 89-91 (IEEE International Symposium on Multiple-Valued Logic).
Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Raviart-Thomas-type sources adapted to applied EEG and MEG: Implementation and results

Pursiainen, S., 2012, In : *Inverse Problems*. 28, 6, 065013.

Research output: Contribution to journal › Article › Scientific › peer-review

Robust Kalman filter for positioning with wireless BS coverage areas

Dashti, M., Ali-Löytty, S., Wirola, L., Muller, P., Nurminen, H. & Piche, R., 2012, *Proceedings of WPNC 2012, 9th Workshop on Positioning, Navigation and Communication, March 15-16, 2012, Dresden, Germany*. Piscataway, NJ: Institute of Electrical and Electronics Engineers IEEE, p. 83-88 (Workshop on Positioning, Navigation and Communication).

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Robustness of strongly and polynomially stable semigroups

Paunonen, L., 2012, In : *Journal of Functional Analysis*. 263, 9, p. 2555-2583

Research output: Contribution to journal › Article › Scientific › peer-review

Robust regulation: From state-space to frequency domain

Laakkonen, P., 2012, *Digest of TISE Seminar 2012, Nokia, Finland, 14 June, 2012. TISE Publications*. Niemistö, A. (ed.). Tampere: Tampere Graduate School in Information Science and Engineering (TISE). Tampere University of Technology, University of Tampere, p. 135-140 (TISE Seminar; vol. 11).

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific

Robust Regulation of Distributed Parameter Systems with Infinite-Dimensional Exosystems

Hämäläinen, T. & Pohjolainen, S., 2012, *The 51st IEEE Conference on Decision and Control, IEEE CDC 2012, December 10-13 2012, Maui, Hawaii, USA*. Piscataway, NJ: Institute of Electrical and Electronics Engineers IEEE, p. 3514-3519 (IEEE Conference on Decision and Control).

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Shape modeling technique KOALA validated by ESA Rosetta at (21) Lutetia

Carry, B., Kaasalainen, M., Merline, W. J., Muller, T. G., Jorda, L., Drummond, J. D., Berthier, J., O'Rourke, L., Durech, J., Küppers, M., Conrad, A., Tamblin, P., Dumas, C. & Sierks, H., 2012, In : *Planetary and Space Science*. 66, 1, p. 200-212

Research output: Contribution to journal › Article › Scientific › peer-review

Shape reconstruction of irregular bodies with multiple complementary data sources

Kaasalainen, M. & Viikinkoski, M., 2012, In : *Astronomy and Astrophysics*. 543, p. 9 A97.

Research output: Contribution to journal › Article › Scientific › peer-review

Sosiaalisesta mediasta dataa innovaatiotoiminnan ymmärtämiseen ja mittaamiseen

Translated title of the contribution: : Sosiaalisesta mediasta dataa innovaatiotoiminnan ymmärtämiseen ja mittaamiseen
Still, K., Huhtamäki, J., Russell, M. G., Koskela-Huotari, K., Isomursu, M. & Pohjolainen, S., 2012, *Tekes Policy Brief*; vol. 2)

Research output: Book/Report › Commissioned report › Professional

Stress-strain behavior of polyamide 6 staple fibers of punch-needled press felts under simulated wet-pressing conditions

Hakala, T., Kaleva, O. & Harlin, A., 2012, In : *Journal of the Textile Institute*. 103, 12, p. 1280-1293

Research output: Contribution to journal › Article › Scientific › peer-review

Suomessa 2004-2008 sattuneiden tieliikenneonnettomuuksien analysointia GUHA-tiedonlouhintamenetelmällä

Translated title of the contribution: : Suomessa 2004-2008 sattuneiden tieliikenneonnettomuuksien analysointia GUHA-tiedonlouhintamenetelmällä

Järvenpää, M. & Turunen, E., 2012, Tampere: Tampereen teknillinen yliopisto. Matematiikan laitos. 32 p. (Tampereen teknillinen yliopisto. Matematiikan laitos. Tutkimusraportti; vol. 99)

Research output: Book/Report › Commissioned report › Professional

Surrogate Model Optimization Toolbox: Matlab central file exchange

Müller, J., 2012

Research output: Artistic and non-textual form › Software › Scientific

Testing a New Vegetation Structure Retrieval Algorithm from Terrestrial Lidar Scanner Data Using 3D Models

Translated title of the contribution: : Testing a New Vegetation Structure Retrieval Algorithm from Terrestrial Lidar Scanner Data Using 3D Models

Disney, M., Lewis, P. & Raunonen, P., 2012, *Silvilaser 2012, 12th International Conference on LiDAR Applications for Assessing Forest Ecosystems, 16-19 September 2012, Vancouver, Canada*. Vancouver, Canada: Silvilaser Vancouver 2012, p. 1-9 9 p. (Silvilaser).

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

The Infinite-Dimensional Sylvester Differential Equation and Periodic Output Regulation

Paunonen, L., 2012, *Spectral Theory, Mathematical System Theory, Evolution Equations, Differential and Difference Equations. 21st International Workshop on Operator Theory and Applications, Berlin, July 2010. Operator Theory: Advances and Applications..* Arendt, W., Ball, J. A., Behrndt, J., Förster, K-H., Mehrmann, V. & Trunk, C. (eds.). Basel, Switzerland: Springer Basel, p. 515-531 (International Workshop on Operator Theory and Applications; vol. 221).

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Transforming Innovation Ecosystems Through Network Orchestration: Case EIT ICT Labs

Still, K., Huhtamäki, J., Russell, M. G. & Rubens, N., 2012, *Proceedings of the XXIII ISPIM Conference. Action for Innovation: Innovating from Experience, Barcelona, Spain, 17-20 June 2012*. Huizingh, K. R. E., Conn, S., Torkkeli, M. & Bitran, I. (eds.). Manchester, UK: International Society for Professional Innovation Management ISPIM, (International Society for Professional Innovation Conference).

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Understanding Mobile Ecosystem Dynamics: a Data-Driven Approach

Basole, R. C., Russell, M. G., Huhtamäki, J. & Rubens, N., 2012, *Mobile Business in Everyday life: users' routines versus provider's turbulence. Proceedings of the 11th International Conference on Mobile Business, ICMB 2012, June 21-22, 2012, Delft, Netherlands*. Delft, The Netherlands: Delft University of Technology, p. 17-28 (International Conference on Mobile Business).

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

User Guide for Modularized Surrogate Model Toolbox

Müller, J., 2012, Tampere: Tampere University of Technology. 28 p. (TUT DPub)

Research output: Book/Report › Commissioned report › Professional

Using unlocated fingerprints in generation of WLAN maps for indoor positioning

Raitoharju, M., Fadjuhoff, T., Ali-Löytty, S. & Piche, R., 2012, *2012 IEEE/ION Position Location and Navigation Symposium PLANS, 23-26 April 2012, Myrtle Beach, SC, USA*. Piscataway, NJ: Institute of Electrical and Electronics Engineers IEEE, p. 576-583 12863832. (IEEE/ION Position Location and Navigation Symposium).

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Output Regulation Theory for Linear Systems with Infinite-Dimensional and Periodic Exosystems

Paunonen, L., 4 Nov 2011, Tampere: Tampere University of Technology. (Tampere University of Technology. Publication; vol. 992)

Research output: Book/Report › Doctoral thesis › Monograph

Absolute radiometric calibration of ALS intensity data: Effects on accuracy and target classification

Kaasalainen, S., Pyysalo, U., Krooks, A., Vain, A., Kukko, A., Hyypä, J. & Kaasalainen, M., 2011, In : *Sensors*. 11, 11, p. 10586-10602

Research output: Contribution to journal › Article › Scientific › peer-review

A differential form approach to Dirac operators on surfaces

Orelma, H. & Sommen, F., 2011, *Hypercomplex Analysis and Applications. Trends in Mathematics*. Sabadini, I. & Sommen, F. (eds.). Basel: Birkhäuser, p. 213-232

Research output: Chapter in Book/Report/Conference proceeding › Chapter › Scientific › peer-review

Advances in Augmented Reality Technologies

Translated title of the contribution: : Advances in Augmented Reality Technologies

Pylvänäinen, T., 2011, Tampere: Tampere University of Technology. 183 p. (Tampere University of Technology. Publication; vol. 975)
Research output: Book/Report › Doctoral thesis › Collection of Articles

A Framework for Bayesian Receiver Autonomous Integrity Monitoring in Urban Navigation

Pesonen, H., 2011, In : *Navigation*. 58, 3, p. 229-240
Research output: Contribution to journal › Article › Scientific › peer-review

A hyperbolic interpretation of Cauchy-type kernels in hyperbolic function theory in hypercomplex analysis

Eriksson, S-L. & Orelma, H., 2011, *Hypercomplex Analysis and Applications. Trends in Mathematics*. Sabadini, I. & Sommen, F. (eds.). Basel: Birkhäuser, p. 43-59
Research output: Chapter in Book/Report/Conference proceeding › Chapter › Scientific › peer-review

Alumni Network Analysis

Rubens, N., Russell, M. G., Perez, R., Huhtamäki, J., Still, K., Kaplan, D. & Okamoto, T., 2011, *2011 IEEE 2nd Global Engineering Education Conference EDUCON, 4-6 April 2011, Amman, Jordan*. Piscataway, NJ: IEEE, p. 606-611 (IEEE Global Engineering Education Conference EDUCON).
Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

A Mean-Value Theorem for Some Eigenfunctions of the Laplace -Beltrami Operator on the Upper-Half Space

Eriksson, S-L. & Orelma, H., 2011, In : *Annales Academiae Scientiarum Fennicae-Mathematica*. 36, p. 101-110 10 p.
Research output: Contribution to journal › Article › Scientific › peer-review

A method of tracking a state of a mobile electronic device

Translated title of the contribution: : A method of tracking a state of a mobile electronic device
Sirola, N. & Ali-Löytty, S., 2011, Patent No. Pat. KR 101106276, Priority date 18 Jan 2012, Priority No. 10-2008-7024373
Research output: Patent › Scientific

A Monocular Camera Gyroscope

Huttunen, V. & Piche, R., 2011, Tampere: Tampereen teknillinen yliopisto. 16 p. (Tampereen teknillinen yliopisto. Matematiikan laitos. Tutkimusraportti; vol. 98)
Research output: Book/Report › Commissioned report › Professional

Analysis of Incidence Angle and Distance Effects on Terrestrial Laser Scanner Intensity: Search for Correction Methods

Kaasalainen, S., Jaakkola, A., Kaasalainen, M., Krooks, A. & Kukko, A., 2011, In : *Remote Sensing*. 3, 10, p. 2207-2221
Research output: Contribution to journal › Article › Scientific › peer-review

A Network-Centric Snapshot of Value Co-Creation in Finnish Innovation Financing

Huhtamäki, J., Russell, M. G., Still, K. & Rubens, N., 2011, *EBRF 2010, Research Forum to Understand Business in Knowledge Society, September 15-17, 2010, Nokia, Finland*. Seppä, M., Helander, N. & Ilvonen, I. (eds.). Nokia: GVL Finland, p. 1-15 15 p. (Research Forum to Understand Business in Knowledge Society EBRF).
Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

A Network-Centric Snapshot of Value Co-Creation in Finnish Innovation Financing

Huhtamäki, J., Russell, M. G., Still, K. & Rubens, N., 2011, *The Open Source Business Resource*. McPhee, C., Seppä, M. & Tanev, S. (eds.). Talent First Network, p. 13-21
Research output: Chapter in Book/Report/Conference proceeding › Chapter › Scientific › peer-review

An implementation of a semantic, web-based virtual machine laboratory prototyping environment

Salonen, J., Nykänen, O., Ranta, P., Nurmi, J., Helminen, M., Rokala, M., Palonen, T., Alarotu, V., Koskinen, K. & Pohjolainen, S., 2011, In : *Lecture Notes in Computer Science*. 7032, p. 221-236
Research output: Contribution to journal › Article › Scientific › peer-review

Apparent wind load effects on the tether of a kite power generator

Argatov, I., Rautakorpi, P. & Silvennoinen, R., 2011, In : *Journal of Wind Engineering and Industrial Aerodynamics*. 99, 10, p. 1079-1088

Research output: Contribution to journal › Article › Scientific › peer-review

Approximation of Volume and Branch Size Distribution of Trees from Laser Scanner Data

Raumonen, P., Kaasalainen, S., Kaasalainen, M. & Kaartinen, H., 2011, *International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences, ISPRS Workshop Laser Scanning, 2011, 29.-31.8.2011, Calgary, Canada*. Calgary: ISPRS, p. 1-6 6 p. (ISPRS Workshop Laser Scanning; vol. 38-5/W12).

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

A Self-Tuning Robust Regulator for Infinite-Dimensional Systems

Hämäläinen, T. & Pohjolainen, S., 2011, In : *IEEE Transactions on Automatic Control*. 56, 9, p. 2116-2127

Research output: Contribution to journal › Article › Scientific › peer-review

Autonomous satellite orbit prediction

Seppänen, M., 2011, *Digest of TISE Seminar 2011. TISE publications*. Niemistö, A. (ed.). Tampere: Tampere Graduate School in Information Science and Engineering (TISE). Tampere University of Technology, p. 5-10 (TISE Seminar; vol. 10).

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific

Autonomous satellite orbit prediction

Seppänen, M., Perälä, T. & Piche, R., 2011, *Proceedings of The Institute of Navigation 2011 International Technical Meeting, January 24-26, 2011, San Diego, CA, USA*. San Diego, CA: The Institute of Navigation, p. 554-564 (Institute of Navigation International Technical Meeting).

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific

Axiomatic Extensions of Höhle's Monoidal Logic

Turunen, E., 2011, *Proceedings of the 7th conference of the European Society for Fuzzy Logic and Technology EUSFLAT-LFA 2011, Aix-Les-Bains, France, 18 - 22 July 2011*. Amsterdam: Atlantis Press, p. 163-168 (Conference of the European Society for Fuzzy Logic and Technology EUSFLAT-LFA).

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Bayesian Positioning Using Gaussian Mixture Models with Time-varying Component Weights

Pesonen, H. & Piche, R., 2011, *JSM 2011 Joint Statistical Meetings 2011, Miami Beach, Florida, USA, July 30-August 4, 2011*. Miami Beach, FL: American Statistical Association, p. 4516-4524 (Joint Statistical Meetings JSM).

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific

Business Angels and Investment Organizations as Networked Co-creators of the Finnish Innovation Ecosystem

Huhtamäki, J., Russell, M. G., Still, K., Rubens, N. & Yu, J. C., 2011, *Proceedings of the Triple Helix IX International Conference: Silicon Valley: Global Model or Unique Anomaly? 11-14 July, 2011, Stanford, California, USA*. Stanford, CA: Stanford University, H-STAR Institute Center for Innovation and Communication, p. 1-15 15 p. (Triple Helix International Conference).

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Combining asteroid models derived by lightcurve inversion with asteroidal occultation silhouettes

Durech, J., Kaasalainen, M., Herald, D., Dunham, D., Timerson, B., Hanus, J., Frappa, E., Talbot, J., Hayamizu, T., Warener, B. D., Pilcher, F. & Galad, A., 2011, In : *Icarus*. 214, 2, p. 652-670

Research output: Contribution to journal › Article › Scientific › peer-review

Commutative bounded integral residuated orthomodular lattices are Boolean algebras

Tlادlec, J. & Turunen, E., 2011, In : *Soft Computing*. 15, 4, p. 635-636

Research output: Contribution to journal › Article › Scientific › peer-review

Computational study of noise in a large signal transduction network

Intosalmi, J., Manninen, T., Ruohonen, K. & Linne, M-L., 2011, In : *BMC Bioinformatics*. 12, p. 1-8 8 p., 252.

Research output: Contribution to journal › Article › Scientific › peer-review

Dimensional Reduction of Electromagnetic Boundary Value Problems

Raumonen, P., Suuriniemi, S. & Kettunen, L., 2011, In : *Boundary Value Problems*. 2011, p. 1-25 25 p., 9.
Research output: Contribution to journal > Article > Scientific > peer-review

Directed structure at infinity for infinite-dimensional systems

Laakkonen, P. & Pohjolainen, S., 2011, In : *International Journal of Control*. 84, 4, p. 702-715
Research output: Contribution to journal > Article > Scientific > peer-review

Discrete maximum principles for FE solutions of nonstationary diffusion-reaction problems with mixed boundary conditions

Farago, I., Horvath, R. & Korotov, S., 2011, In : *Numerical Methods for Partial Differential Equations*. 27, 3, p. 702-720
Research output: Contribution to journal > Article > Scientific > peer-review

Explaining innovation with indicators of mobility and networks: Insights into central innovation nodes in Europe

Still, K., Russell, M. G., Huhtamäki, J., Turpeinen, M. & Rubens, N., 2011, *Proceedings of the Triple Helix IX International Conference: Silicon Valley: Global Model or Unique Anomaly? 11-14 July, 2011, Stanford, California, USA*. Stanford, CA: Stanford University, H-STAR Institute Center for Innovation and Communication, p. 1-17 17 p. (Triple Helix International Conference).

Research output: Chapter in Book/Report/Conference proceeding > Conference contribution > Scientific > peer-review

Forecasting the diffusion of innovation: A stochastic bass model with log-normal and mean-reverting error process

Kanniainen, J., Mäkinen, S., Piche, R. & Chakrabarti, A., 2011, In : *IEEE Transactions on Engineering Management*. 99, p. 1-22 22 p.

Research output: Contribution to journal > Article > Scientific > peer-review

Gender and Innovation: Networks of Executive Women in Technology-Based Companies

Still, K., Russell, M. G., Huhtamäki, J., Yu, J. C. & Rubens, N., 2011, *Proceedings of the Triple Helix IX International Conference: Silicon Valley: Global Model or Unique Anomaly? 11-14 July, 2011, Stanford, California, USA*. Stanford, CA: Stanford University, H-STAR Institute Center for Innovation and Communication, p. 1-20 20 p. (Triple Helix International Conference).

Research output: Chapter in Book/Report/Conference proceeding > Conference contribution > Scientific > peer-review

Images of asteroid 21 Lutetia: A remnant planetesimal from the early solar system

Sierks, H., Lamy, P., Barbieri, C., Koschny, D., Rickman, H., Rodrigo, R., A'Hearn, M. F., Angrilli, F., Barucci, M. A., Bertaux, J.-L., Bertini, I., Besse, S., Carry, B., Cremonese, G., Da Deppo, V., Davidsson, B., Debei, S., De Cecco, M., De Leon, J., Ferri, F., Fornasier, S., Fulle, M., Hviid, S. F., Gaskell, R. W., Groussin, O., Gutierrez, P., Ip, W., Jorda, L., Kaasalainen, M., Keller, H. U., Knollenberg, J., Kramm, R., Kühr, E., Küppers, M., Lara, L., Lazzarin, M., Leyrat, C., Lopez Moreno, J. J., Magrin, S., Marchi, S., Marzari, F., Massironi, M., Michalik, H., Moissl, R., Naletto, G., Preusker, F., Sabau, L., Sabolo, W., Scholten, F., Snodgrass, C., Thomas, N., Tubiana, C., Vernazza, P., Vincent, J.-B., Wenzel, K.-P., Andert, T., Pätzold, M. & Weiss, B. P., 2011, In : *Science*. 334, 6055, p. 487-490

Research output: Contribution to journal > Article > Scientific > peer-review

Information Diversity in Structure and Dynamics of Simulated Neuronal Networks

Mäki-Marttunen, T., Acimovic, J., Nykter, M., Kesseli, J., Ruohonen, K., Yli-Harja, O. & Linne, M.-L., 2011, In : *Frontiers in Computational Neuroscience*. 5, p. 1-17 17 p., 26.

Research output: Contribution to journal > Article > Scientific > peer-review

Invertibility and Dedekind finiteness in structural matrix rings

Foldes, S., Sziget, J. & van Wyk, L., 2011, In : *Linear and Multilinear Algebra*. 59, 2, p. 221-227

Research output: Contribution to journal > Article > Scientific > peer-review

Korkeakoulumatematiikka teekkarin kompastuskivenä?

Translated title of the contribution: : Korkeakoulumatematiikka teekkarin kompastuskivenä?

Silius, K., Pohjolainen, S., Miilumäki, T., Kangas, J. & Joutsenlahti, J., 2011, *Korkeajännityksiä - kohti osallisuutta luovaa korkeakoulutusta*. Mäkinen, M., Korhonen, V., Annala, J., Kalli, P., Svärd, P. & Värr, V.-M. (eds.). Tampere: Tampere University Press, p. 242-265

Research output: Chapter in Book/Report/Conference proceeding > Chapter > Scientific > peer-review

Learner Control and Responsibility: Expanding the Concept of Self-direction in Higher Education

Väljataga, T., 2011, Tampere: Tampere University of Technology. 167 p. (Tampere University of Technology. Publication; vol. 946)

Research output: Book/Report > Doctoral thesis > Collection of Articles

Linear Equation Solvers: Comparison of LU Decomposition and a Robust ODE Solver

Translated title of the contribution: : Linear Equation Solvers: Comparison of LU Decomposition and a Robust ODE Solver
Pohjolainen, S. & Nortunen, H., 2011, *Proceedings of CAO2011 ECCOMAS Thematic Conference on Computational Analysis and Optimization, Jyväskylä, Finland, 9.6.-11.6.2011. Reports of the Department of Mathematical Information Technology. Series A Collections*. Repin, S., Tiihonen, T. & Tuovinen, T. (eds.). Jyväskylä: University of Jyväskylä, p. 77-80 (CAO ECCOMAS Thematic Conference on Computational Analysis and Optimization; no. 1/2011).

Research output: Chapter in Book/Report/Conference proceeding > Conference contribution > Scientific > peer-review

Maaliskuun puheenaihe: Mielenkiintoista matematiikkaa opetukseen LUMA-sanomat

Translated title of the contribution: : Maaliskuun puheenaihe: Mielenkiintoista matematiikkaa opetukseen LUMA-sanomat
Eriksson, S-L., 2011, In : LUMA-sanomat. Maaliskuu, p. 1-3 3 p.

Research output: Contribution to journal > Article > General public

Matematiikkaklinikka

Translated title of the contribution: : Matematiikkaklinikka

Kangas, J., 2011, *Oppaiden opas - vinkkejä opetukseen opintopolun eri vaiheissa. Aalto-yliopiston julkaisusarja Tiede + Teknologia*. Myller, E. (ed.). Helsinki: Aalto-yliopisto, p. 56-60

Research output: Chapter in Book/Report/Conference proceeding > Chapter > Professional

Math-Bridge - Eurooppalainen silta lukio- ja korkeakoulumatematiikan välille

Translated title of the contribution: : Math-Bridge - Eurooppalainen silta lukio- ja korkeakoulumatematiikan välille
Miilumäki, T., Pohjolainen, S., Silius, K., Nykänen, O. & Kangas, J., 2011, *ITK 2011, Interaktiivinen Tekniikka Koulutuksessa -konferenssi 2011 - Uutuuden viehätystä, ideoiden kierrätystä, Hämeenlinna, 6.-8.4.2011. Hämeen kesäyliopiston julkaisuja. Sarja B*. Leinamo, S. & Salo, H. (eds.). Hämeenlinna: Hämeen kesäyliopisto, p. 70-71 (ITK Interaktiivinen Tekniikka Koulutuksessa -konferenssi).

Research output: Chapter in Book/Report/Conference proceeding > Conference contribution > Scientific > peer-review

Mean value properties for K-hypermonogenic functions

Eriksson, S-L. & Orelma, H., 2011, *9th International Conference on Clifford Algebras and their Applications in Mathematical Physics 15 - 20 July 2011, Weimar, Germany*. Gurlebeck, K. (ed.). Weimar: ICCA9, p. 1-11 11 p. (International Conference on Clifford Algebras and their Applications in Mathematical Physics).

Research output: Chapter in Book/Report/Conference proceeding > Conference contribution > Scientific > peer-review

Miten opiskella matematiikkaa yliopistossa - opas opiskelijoille

Translated title of the contribution: : Miten opiskella matematiikkaa yliopistossa - opas opiskelijoille

Kailanto, M., 2011, *Oppaiden opas - vinkkejä opetukseen opintopolun eri vaiheissa. Aalto-yliopiston julkaisusarja Tiede + Teknologia*. Myller, E. (ed.). Helsinki: Aalto-yliopisto, p. 53-55

Research output: Chapter in Book/Report/Conference proceeding > Chapter > Professional

Mixture surrogate models based on Dempster-Shafer theory for global optimization problems

Muller, J. & Piche, R., 2011, In : *Journal of Global Optimization*. 51, 1, p. 79-104 26 p.

Research output: Contribution to journal > Article > Scientific > peer-review

Mobile Tracking in Mixed Line-of-sight/Non-line-of-sight Conditions: Algorithms and Theoretical Lower Bound. Chapter 21

Liang, C., Ali-Löytty, S., Piche, R. & Lenan, W., 2011, *Handbook of Position Location: Theory, Practice and Advances*. Zekavat, R. & Buehrer, R. M. (eds.). Hoboken, NJ: WILEY-IEEE PRESS, p. 685-708

Research output: Chapter in Book/Report/Conference proceeding > Chapter > Scientific

Modeling of Neuronal Growth In Vitro: Comparison of Simulation Tools NETMORPH and CX3D

Acimovic, J., Mäki-Marttunen, T., Havela, R., Teppola, H. & Linne, M-L., 2011, In : *Eurasip Journal on Bioinformatics and Systems Biology*. 2011, p. 1-13 13 p., 616382.

Research output: Contribution to journal > Article > Scientific > peer-review

Modifications of the 85/85 test and the temperature cycling test for tantalum capacitors

Virkki, J., Sydänheimo, L. & Raumonen, P., 2011, In : Soldering and Surface Mount Technology. 23, 3, p. 168-176
Research output: Contribution to journal › Article › Scientific › peer-review

Motivating the Mathematics Studies by Real-life Examples of Signal Processing and Communications Engineering

Huttunen, H., Valkama, M., Talvitie, J. & Laaksonen, M., 2011, *2011 IEEE Digital Signal Processing Workshop and IEEE Signal Processing Education Workshop (DSP/SPE), Sedona, USA, 4-7 January 2011*. Piscataway, NJ: IEEE, p. 1-6 6 p. (IEEE Digital Signal Processing Workshop and IEEE Signal Processing Education Workshop DSP/SPE).
Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Multimodal inverse problems: maximum compatibility estimate and shape reconstruction

Kaasalainen, M., 2011, In : Inverse Problems and Imaging. 5, 1, p. 37-57
Research output: Contribution to journal › Article › Scientific › peer-review

Non-classical Logics with Real Life Applications

Turunen, E., 2011, *Proceedings of International Conference of Rough Sets, Fuzzy Sets and Soft Computing ICRSFSSC-2009, November 5-7 2009, Tripura University*. New Delhi: Serial Publications, p. 171-178 (International Conference of Rough Sets, Fuzzy Sets and Soft Computing ICRSFSSC).
Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

On Fractional Ornstein-Uhlenbeck Process

Kaarakka, T. & Salminen, P., 2011, In : Communications on Stochastic Analysis. 5, 1, p. 121-133
Research output: Contribution to journal › Article › Scientific › peer-review

On the distribution of coefficients of powers of positive polynomials

Major, L., 2011, In : Australasian Journal of Combinatorics. 49, p. 239-243
Research output: Contribution to journal › Article › Scientific › peer-review

Perturbation of strongly and polynomially stable Riesz-spectral operators

Paunonen, L., 2011, In : Systems and Control Letters. 60, 4, p. 234-248
Research output: Contribution to journal › Article › Scientific › peer-review

Plotting root-locus of infinite-dimensional systems

Laakkonen, P., 2011, *Proceedings of CAO2011 ECCOMAS Thematic Conference on Computational Analysis and Optimization, Jyväskylä, Finland, 9.6.-11.6.2011. Reports of the Department of Mathematical Information Technology. Series A Collections*. Repin, S., Tiihonen, T. & Tuovinen, T. (eds.). Jyväskylä: University of Jyväskylä, p. 139-142 (CAO ECCOMAS Thematic Conference on Computational Analysis and Optimization; no. 1/2011).
Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Properties of duration drift

Kanniainen, J. & Ruohonen, K., 2011, In : International Journal of Economics and Business Research. 3, 2, p. 176-191
Research output: Contribution to journal › Article › Scientific › peer-review

Puuvirta-virtuaalinen ja simuloitu oppimisympäristö

Kortemaa, A., Moisio, M., Punkki, J., Palonen, T., Ranta, P., Leino, T., Alarotu, V., Koskinen, K. T. & Tohu, J., 2011
Research output: Artistic and non-textual form › Software › Scientific

Rank Based Fingerprinting Algorithm for Indoor Positioning

Machaj, J., Brida, P. & Piche, R., 2011, *2011 International Conference on Indoor Positioning and Indoor Navigation IPIN, 21-23 September 2011, Guimarães, Portugal*. Piscataway, NJ: IEEE, p. 1-6 6 p. (International Conference on Indoor Positioning and Indoor Navigation IPIN).
Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Robust estimation of a reception region from location fingerprints

Piche, R., 2011, *2011 International Conference on Localization and GNSS ICL-GNSS June 29-30, 2011 Tampere, Finland*. Piscataway, NJ: IEEE, p. 31-35 (International Conference on Localization and GNSS ICL-GNSS).

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Robust output regulation and the internal model principle

Paunonen, L., 2011, *Digest of TISE Seminar 2011. TISE publications*. Niemistö, A. (ed.). Tampere: Tampere Graduate School in Information Science and Engineering (TISE). Tampere University of Technology, p. 71-75 (TISE Seminar; vol. 10).

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific

Social Media, Reputation And Branding Of Innovation Hubs: A Periscope Using Content Analysis Of Twitter

Yu, J. C., Russell, M. G., Still, K., Rubens, N., Huhtamäki, J. & Pöschko, J., 2011, *Proceedings of the Triple Helix IX International Conference: Silicon Valley: Global Model or Unique Anomaly? 11-14 July, 2011, Stanford, California, USA*. Stanford, CA: Stanford University, H-STAR Institute Center for Innovation and Communication, p. 1-20 20 p. (Triple Helix International Conference).

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Social media-supported indicators for user-driven service innovation

Still, K., Isomursu, M., Koskela-Huotari, K. & Huhtamäki, J., 2011, *Proceedings of VTT Symposium on Service Innovation, August 18, 2011, Espoo, Finland. VTT Symposium*. Espoo: VTT Technical Research Centre of Finland, p. 208-217 (VTT Symposium on Service Innovation; vol. 271).

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Some remarks on structural matrix rings and matrices with ideal entries

Foldes, S. & Meletiou, G., 2011, In : *Miskolc Mathematical Notes*. 12, 1, p. 25-29

Research output: Contribution to journal › Article › Scientific › peer-review

Studying the quality of noise in a large biochemical reaction network as a function of the system volume

Intosalmi, J., Manninen, T., Ruohonen, K. & Linne, M-L., 2011, *The International Conference on Applied Mathematics, Modeling and Computational Science, AMMCS 2011, 25 - 29 July, Waterloo, Ontario, Canada*. Waterloo, Ontario, Canada: AMMCS 2011, p. 409 (International Conference on Applied Mathematics, Modeling and Computational Science AMMCS).

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific

Teleconsultation: Changes in technology and costs over a 12-year period

Lamminen, J., Forsvik, H. J., Voipio, V. & Ruohonen, K., 2011, In : *Journal of Telemedicine and Telecare*. 17, 8, p. 412-416

Research output: Contribution to journal › Article › Scientific › peer-review

The root-locus analysis: An outline

Laakkonen, P., 2011, *TISE Seminar 2011, Tampere, 25.5.2011. Digest of TISE Seminar 2011*. Niemistö, A. (ed.). Tampere: Tampere Graduate School in Information Science and Engineering (TISE). Tampere University of Technology, p. 1-4 4 p. (TISE Seminar; vol. 10).

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific

Transforming Innovation Ecosystems through Shared Vision and Network Orchestration

Russell, M. G., Still, K., Huhtamäki, J., Yu, J. C. & Rubens, N., 2011, *Proceedings of the Triple Helix IX International Conference: Silicon Valley: Global Model or Unique Anomaly? 11-14 July, 2011, Stanford, California, USA*. Stanford, CA: Stanford University, H-STAR Institute Center for Innovation and Communication, p. 1-21 21 p. (Triple Helix International Conference).

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Utilization of the hydraulic engineering design information for semi-automatic simulation model generation

Markkula, M., Rokala, M., Palonen, T., Alarotu, V., Helminen, M., Koskinen, K. T., Salonen, J., Nykänen, O., Ranta, P. & Pohjolainen, S., 2011, *The Twelfth Scandinavian International Conference on Fluid Power, SICFP'11, May 18-20, 2011, Tampere, Finland*. Sairala, H. & Koskinen, K. T. (eds.). Tampere: Scandinavian International Conference on Fluid Power, p. 443-458 (Scandinavian International Conference on Fluid Power SICFP; vol. 12, no. 3).

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Virtual machine laboratory based on m1-technology

Helminen, M., Palonen, T., Rokala, M., Ranta, P., Mäkelä, T. & Koskinen, K. T., 2011, *The Twelfth Scandinavian International Conference on Fluid Power, SICFP'11, May 18-20, 2011, Tampere, Finland*. Tampere: Scandinavian International Conference on Fluid Power, p. 321-334 (Scandinavian International Conference on Fluid Power SICFP; vol. 12).

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

VRTUOSI: Courses Data Mining and Many-valued Similarities: Universidad Rey Juan Carlos

Turunen, E., 2011

Research output: Artistic and non-textual form › Digital or Visual Products › Scientific

What can be done to bridge the competency gap between upper-secondary school and university mathematics?

Silius, K., Pohjolainen, S., Kangas, J., Miilumäki, T. & Joutsenlahti, J., 2011, *2011 IEEE Global Engineering Education Conference EDUCON, 4-6 April 2011, Amman, Jordania*. Piscataway, NJ: IEEE, p. 428-436 (IEEE Global Engineering Education Conference EDUCON).

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

New perspectives in hyperbolic function theory

Orelma, H., 28 Apr 2010, Tampere: Tampere University of Technology. 37 p. (Tampere University of Technology. Publication; vol. 892)

Research output: Book/Report › Doctoral thesis › Collection of Articles

A hyperbolic interpretation of Cauchy type kernels in hyperbolic function theory

Eriksson, S-L. & Orelma, H., 2010, Tampere: Unknown Publisher. (Tampereen teknillinen yliopisto. Matematiikan laitos. Tutkimusraportti; vol. 96)

Research output: Book/Report › Commissioned report › Professional

Akustinen mallinnus

Translated title of the contribution: : Akustinen mallinnus

Pohjolainen, S. & Suutala, A., 2010, *Matemaattinen mallinnus*. Pohjolainen, S. (ed.). Helsinki: WSOYpro, p. 238-259

Research output: Chapter in Book/Report/Conference proceeding › Chapter › Scientific

A motion model for articulated vehicles and a distributed acceleration measurement system

Sirola, N. & Rouhe, J., 2010, *Proceedings of the 7th Workshop on Positioning, Navigation and Communication 2010 WPNC'10, 11-12 March 2010, Dresden, Germany*. p. 164-167

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Approximative solutions to the bicriterion Vehicle Routing Problem with Time Windows

Muller, J., 2010, In : *European Journal of Operational Research*. 202, 1, p. 223-231

Research output: Contribution to journal › Article › Scientific › peer-review

Bayesian assaying of GUHA nuggets

Piche, R. & Turunen, E., 2010, *Information Processing and Management of Uncertainty in Knowledge-Based Systems. Theory and Methods, 13th International Conference, IPMU 2010, Dortmund, Germany, June 28 - July 2, 2010*.

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Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Bayesian Methods

Penttinen, A. & Piche, R., 2010, Tampere: Tampere University of Technology. 82 p.

Research output: Book/Report › Book › Professional

Box Gaussian mixture filter

Ali-Löytty, S., 2010, In : *IEEE Transactions on Automatic Control*. 55, 9, p. 2165-2169

Research output: Contribution to journal › Article › Scientific › peer-review

Briefly about the root-locus of linear systems

Laakkonen, P., 2010, *Digest of TISE Seminar 2010, Ylöjärvi, Finland, 26.5.2010. TISE Publications*. Koivisto, P. (ed.). p. 101-106 6 p.

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific

Closed classes of functions, generalized constraints, and clusters

Lehtonen, E., 2010, In : *Algebra Universalis*. 63, 2-3, p. 203-234

Research output: Contribution to journal › Article › Scientific › peer-review

Closed-form algorithms in mobile positioning: Myths and misconceptions

Sirola, N., 2010, *Proceedings of the 7th Workshop on Positioning, Navigation and Communication 2010 WPNC'10, 11-12 March 2010, Dresden, Germany*. p. 38-44

Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Column-partitioned matrices over rings without invertible transversal submatrices

Foldes, S. & Lehtonen, E., 2010, In : *Ars Combinatoria*. 97, p. 33-39

Research output: Contribution to journal › Article › Scientific › peer-review