

### **Necessary and sufficient conditions for the existence of solution of generalized fuzzy relation equations $A \Leftrightarrow X = B$**

Turunen, E., 1 Oct 2020, In : Information Sciences. 536, p. 351-357 7 p.

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

### **On the zeros of the partial Hosoya polynomial of graphs**

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

Haukkanen, P., Mattila, M. & Mäntysalo, J., 1 Apr 2020, In : Journal of Combinatorial Theory. Series A. 171, 105161.

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

### **Computer-Generated Holograms for 3D Imaging: A Survey**

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

### **Densely-sampled light field reconstruction**

Vagharshakyan, S., Bregovic, R. & Gotchev, A., 2020, *Real VR – Immersive Digital Reality*. Springer, p. 67-95 29 p. (Lecture Notes in Computer Science; vol. 11900).

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

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### **Game-theoretic semantics for $ATL^+$ with applications to model checking**

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

### **Learning and Teaching Experiences with a Persuasive Social Robot in Primary School – Findings and Implications from a 4-Month Field Study**

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### **PRBS-based loop gain identification and output impedance shaping in DC microgrid power converters**

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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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### **Vehicle Attribute Recognition by Appearance: Computer Vision Methods for Vehicle Type, Make and Model Classification**

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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

### **Maximizing Achievable Data Rate in Unlicensed mmWave Networks with Mobile Clients**

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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

### **Ray-Based Modeling of Unlicensed-Band mmWave Propagation Inside a City Bus**

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### **Rewritability in monadic disjunctive Datalog, Mmsnp, and expressive description logics**

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### **Simultaneously Learning Architectures and Features of Deep Neural Networks**

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

### **Teaching educational game design: Expanding the game design mindset with instructional aspects**

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

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### **Toward Efficient Execution of RVC-CAL Dataflow Programs on Multicore Platforms**

Hautala, I., Boutellier, J., Nyländén, T. & Silvén, O., Nov 2018, In : *Journal of Signal Processing Systems*. 90, 11, p. 1507-1517 11 p.

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### **Graph measures with high discrimination power revisited: A random polynomial approach**

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

### **3D folded loop UAV antenna design**

Pyattaev, A., Solomitckii, D. & Ometov, A., 2018, *Wired/Wireless Internet Communications - 16th IFIP WG 6.2 International Conference, WWIC 2018, Proceedings*. Springer Verlag, p. 269-281 13 p. (Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics); vol. 10866 LNCS).

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

### **A Concise Review of 5G New Radio Capabilities for Directional Access at mmWave Frequencies**

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

### **ADVIO: An authentic dataset for visual-inertial odometry**

Cortés, S., Solin, A., Rahtu, E. & Kannala, J., 2018, *Computer Vision – ECCV 2018 - 15th European Conference, 2018, Proceedings*. Springer Verlag, p. 425-440 16 p. (Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics); vol. 11214 LNCS).

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

### **A Lower Bound on the Average Identification Time in a Passive RFID System**

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

### **An algebraic approach to reducing the number of variables of incompletely defined discrete functions**

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

### **Analytical Models for Schedule-Based License Assisted Access (LAA) LTE Systems**

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

### **Characterizing mmWave Radio Propagation at 60 GHz in a Conference Room Scenario**

Ponomarenko-Timofeev, A., Semkin, V., Masek, P. & Galinina, O., 2018, *Internet of Things, Smart Spaces, and Next Generation Networks and Systems - 18th International Conference, NEW2AN 2018, and 11th Conference, ruSMART 2018, Proceedings*. Springer Verlag, p. 381-393 13 p. (Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics); vol. 11118 LNCS).  
Research output: Chapter in Book/Report/Conference proceeding > Conference contribution > 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

### **Convolutional neural network based inter-frame enhancement for 360-degree video streaming**

Li, Y., Yu, L., Lin, C., Zhao, Y. & Gabbouj, M., 2018, *Advances in Multimedia Information Processing – PCM 2018 - 19th Pacific-Rim Conference on Multimedia, 2018*. Springer, p. 57-66 10 p. (Lecture Notes in Computer Science; vol. 11165).  
Research output: Chapter in Book/Report/Conference proceeding > Conference contribution > Scientific > peer-review

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Pautasso, C. (ed.), Sánchez-Figueroa, F. (ed.), Systä, K. (ed.) & Rodríguez, J. M. M. (ed.), 2018, Springer. 298 p. (Lecture Notes in Computer Science; vol. 11153)  
Research output: Book/Report > Anthology > 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: Chapter in Book/Report/Conference proceeding > Conference contribution > Scientific > peer-review

### **Kinetic Approach to Elasticity Analysis of D2D Links Quality Indicators Under Non-stationary Random Walk Mobility Model**

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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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Bhattacharyya, S. S. & Lilius, J., 2018, *Principles of Modeling*. Springer Verlag, p. 88-105 18 p. (Lecture Notes in Computer Science; vol. 10760).

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

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Schoeffmann, K. (ed.), Chalidabhongse, T. H. (ed.), Ngo, C. W. (ed.), Aramvith, S. (ed.), O'Connor, N. E. (ed.), Ho, Y. S. (ed.), Gabbouj, M. (ed.) & Elgammal, A. (ed.), 2018, Springer. 648 p. (Lecture Notes in Computer Science; vol. 10704)

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

### **MultiMedia Modeling: 24th International Conference, MMM 2018, Bangkok, Thailand, February 5-7, 2018, Proceedings, Part II**

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

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### **Optimization on ports activation towards energy efficient data center networks**

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



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## **Reduction of variables of index generation functions using linear and quadratic transformations**

Astola, H., Stanković, R. & Astola, J., 2018, In : Journal of Multiple-Valued Logic and Soft Computing. 31, 3, p. 255-270  
16 p.

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## **Representational quality challenges of big data: insights from comparative case studies**

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

## **Subjective quality of spatially asymmetric omnidirectional stereoscopic video for streaming adaptation**

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## **Quantitative Graph Theory: A new branch of graph theory and network science**

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## **Power Mitigation by Performance Equalization in a Heterogeneous Reconfigurable Multicore Architecture**

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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

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

#### **A Hybrid Task Graph Scheduler for High Performance Image Processing Workflows**

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#### **ASR in classroom today: Automatic visualization of conceptual network in science classrooms**

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

#### **Battery monitoring within industry 4.0 landscape: Solution as a service (SaaS) for industrial power unit systems**

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

#### **Characterizing time-dependent variance and coefficient of variation of SIR in D2D connectivity**

Ivchenko, A., Orlov, Y., Samouylov, A., Molchanov, D. & Gaidamaka, Y., 2017, *Internet of Things, Smart Spaces, and Next Generation Networks and Systems - 17th International Conference, NEW2AN 2017, 10th Conference, ruSMART 2017, 3rd Workshop NsCC 2017, Proceedings*. Springer Verlag, p. 526-535 10 p. (Lecture Notes in Computer Science; vol. 10531).

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

#### **Data Flow Algorithms for Processors with Vector Extensions: Handling Actors With Internal State**

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#### **Design Flow for GPU and Multicore Execution of Dynamic Dataflow Programs**

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

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Research output: Book/Report > Anthology > Scientific > peer-review

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

#### **Multi-task Deep Face Recognition**

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

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

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

#### **Parallel Digital Predistortion Design on Mobile GPU and Embedded Multicore CPU for Mobile Transmitters**

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

#### **Parental perspectives towards education technology in low-income urban households**

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

#### **Relative camera pose estimation using convolutional neural networks**

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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

#### **Search of the emotional design effect in programming revised**

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#### **Stubborn set intuition explained**

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#### **Stubborn sets with frozen actions**

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

#### **The time will tell on you: Exploring information leaks in SSH public key authentication**

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

#### **Time-dependent SIR analysis in shopping malls using fractal-based mobility models**

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#### **Tor de-anonymisation techniques**

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

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

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

#### **Coverage and network requirements of a "Big Data" flash crowd monitoring system using users' devices**

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

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#### **Evaluating a case of downlink uplink decoupling using queuing system with random requirements**

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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

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

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**Optimization of Flexible Filter Banks Based on Fast Convolution**

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**Fifty years of graph matching, network alignment and network comparison**

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**A prospect for computing in porous materials research: Very large fluid flow simulations**

Mattila, K., Puurtinen, T., Hyv aluoma, J., Surmas, R., Mylly, M., Turpeinen, T., Roberts n, F., Westerholm, J. & Timonen, J., 1 Jan 2016, In : *Journal of Computational Science*. 12, p. 62-76 15 p.  
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**Are software developers just users of development tools? Assessing developer experience of a graphical user interface designer**

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**Coordinating decision-making in data management activities: A systematic review of data governance principles**

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**Customer involvement in continuous deployment: A systematic literature review**

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

### **Fair testing and stubborn sets**

Valmari, A. & Vogler, W., 2016, *Model Checking Software: 23rd International Symposium, SPIN 2016, Co-located with ETAPS 2016, Eindhoven, The Netherlands, April 7-8, 2016, Proceedings*. Springer Verlag, p. 225-243 19 p. (Lecture Notes in Computer Science; vol. 9641).

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

### **Global scale integral volumes**

Bhattacharya, S., Fan, L., Babahajiani, P. & Gabbouj, M., 2016, *Computer Vision - ECCV 2016 Workshops, Proceedings*. Springer International Publishing, Vol. 9913. p. 192-204 13 p. (Lecture Notes in Computer Science; vol. 9913).

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

### **HTML5-based mobile agents for Web-of-Things**

Voutilainen, J. P., Mattila, A. L., Systä, K. & Mikkonen, T., 2016, In : *Informatica*. 40, 1, p. 43-51 9 p.

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

### **IEEE 802.11ac MIMO Transceiver Baseband Processing on a VLIW Processor**

Aghababaeetafreshi, M., Lehtonen, L. K., Levanen, T., Valkama, M. & Takala, J., 2016, In : *Journal of Signal Processing Systems*.

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

### **Implementing a broadcast storm attack on a mission-critical wireless sensor network**

Krivtsova, I., Lebedev, I., Sukhoparov, M., Bazhayev, N., Zikratov, I., Ometov, A., Andreev, S., Masek, P., Fujdiak, R. & Hosek, J., 2016, *Wired/Wireless Internet Communications: 14th IFIP WG 6.2 International Conference, WWIC 2016, Thessaloniki, Greece, May 25-27, 2016, Proceedings*. Springer Verlag, Vol. 9674. p. 297-308 12 p. (Lecture Notes in Computer Science; vol. 9674).

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

### **Instrumentation-Driven Validation of Dataflow Applications**

Chukhman, I., Jiao, Y., Salem, H. B. & Bhattacharyya, S. S., 2016, In : *Journal of Signal Processing Systems*. 84, 3, p. 383-397

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

### **IS acquisition characteristics in the public sector**

Mäki-Lohiluoma, P., Hellsten, P. & Pekkola, S., 2016, *Electronic Government - 15th IFIP WG 8.5 International Conference, EGOV 2016, Proceedings*. Springer Verlag, p. 164-175 12 p. (Lecture Notes in Computer Science; vol. 9820).

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

### **Mobile soundscape mixer – ready for action**

Salo, K., Bauters, M. & Mikkonen, T., 2016, *Mobile Web and Intelligent Information Systems - 13th International Conference, MobiWIS 2016, Proceedings*. Springer Verlag, p. 18-30 13 p. (Lecture Notes in Computer Science; vol. 9847).

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

### **On the arity gap of finite functions: Results and applications**

Couceiro, M. & Lehtonen, E., 2016, In : *Journal of Multiple-Valued Logic and Soft Computing*. 27, 2-3, p. 193-207 15 p.

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

### **Operating system compositor and hardware usage to enhance graphical performance in web runtimes**

Peuhkurinen, A., Fedorov, A. & Systä, K., 2016, *Web Engineering: 16th International Conference, ICWE 2016, Lugano, Switzerland, June 6-9, 2016, Proceedings*. Springer Verlag, p. 381-388 8 p. (Lecture Notes in Computer Science; vol. 9671).

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

### **Private cloud deployment model in open-source mobile robots ecosystem**

Oksa, P. & Loula, P., 2016, *Towards Autonomous Robotic Systems: 17th Annual Conference, TAROS 2016, Sheffield, UK, June 26-July 1, 2016, Proceedings*. Springer Verlag, p. 239-248 10 p. (Lecture Notes in Computer Science; vol. 9716).

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

#### **Supporting management of hybrid OSS communities - A stakeholder analysis approach**

Mäenpää, H., Kojo, T., Munezero, M., Fagerholm, F., Kilamo, T., Nurminen, M. & Männistö, T., 2016, *Product-Focused Software Process Improvement - 17th International Conference, PROFES 2016, Proceedings*. Springer Verlag, p. 102-108 7 p. (Lecture Notes in Computer Science; vol. 10027).

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

#### **Synchronizing application state using virtual DOM trees**

Voutilainen, J-P., Mikkonen, T. & Systä, K., 2016, *Current Trends in Web Engineering: ICWE 2016 International Workshops DUI, TELERISE, SoWeMine, and Liquid Web, Revised Selected Papers*. Springer Verlag, p. 142-154 13 p. (Lecture Notes in Computer Science; vol. 9881).

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

#### **System design and analysis of UAV-assisted BLE wireless sensor systems**

Komarov, M. & Moltchanov, D., 2016, *Wired/Wireless Internet Communications: 14th IFIP WG 6.2 International Conference, WWIC 2016, Thessaloniki, Greece, May 25-27, 2016, Proceedings*. Springer Verlag, p. 284-296 13 p. (Lecture Notes in Computer Science; vol. 9674).

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

#### **Temperature dependence of leakiness of transcription repression mechanisms of Escherichia coli**

Goncalves, N., Oliveira, S. M. D., Kandavalli, V. K., Fonseca, J. M. & S. Ribeiro, A., 2016, *Computational Methods in Systems Biology - 14th International Conference, CMSB 2016*. Springer Verlag, p. 341-342 2 p. (Lecture Notes in Computer Science; vol. 9859).

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

#### **The developers dilemma: Perfect product development or fast business validation?**

Terho, H., Suonsyrjä, S. & Systä, K., 2016, *Product-Focused Software Process Improvement - 17th International Conference, PROFES 2016, Proceedings*. Springer Verlag, p. 571-579 9 p. (Lecture Notes in Computer Science; vol. 10027).

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

#### **Towards model construction based on test cases and GUI extraction**

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

#### **Software evolution and time series volatility: An empirical exploration**

Ruohonen, J., Hyrynsalmi, S. & Leppänen, V., 30 Aug 2015, *14th International Workshop on Principles of Software Evolution, IWSE 2015 - Proceedings*. Institute of Electrical and Electronics Engineers Inc., Vol. 30-Aug-2015. p. 56-65 10 p.

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

#### **Automatic verification of Dafny programs with traits**

Ahmadi, R., Leino, K. R. M. & Nummenmaa, J., 7 Jul 2015, *Proceedings for the 17th Workshop on Formal Techniques for Java-like Programs, FTfJP 2015: co-located with ECOOP 2015*. Association for Computing Machinery, Inc, a4

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

#### **Accuracy evaluation of a linear positioning system for light field capture**

Vagharshakyan, S., Durmush, A., Suominen, O., Bregovic, R. & Gotchev, A., 2015, *Intelligent Information and Database Systems: 7th Asian Conference, ACIIDS 2015, Bali, Indonesia, March 23-25, 2015, Proceedings, Part II*. Springer Verlag, p. 388-397 10 p. (Lecture Notes in Computer Science; vol. 9012).

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

#### **A conceptual model towards the scaffolding of learning experience**

Arnab, S., Ger, P. M., Lim, T., Lamerias, P., Hendrix, M., Kiili, K., Hauge, J. B., Ninaus, M., de Freitas, S., Mazzetti, A., Dahlbom, A., Degano, C., Stanescu, I. & Riveiro, M., 2015, *Third International Conference, GALA 2014, Bucharest, Romania, July 2-4, 2014*. Springer Verlag, Vol. 9221. p. 83-96 14 p. (Lecture Notes in Computer Science (including

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

#### **Analysis of HVS-metrics' properties using color image database TID2013**

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

#### **Application and Theory of Petri Nets and Concurrency: 36th International Conference, PETRI NETS 2015 Brussels, Belgium, June 21-26, 2015 Proceedings**

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

#### **Applying finite state process algebra to formally specify a computational model of security requirements in the key2phone-mobile access solution**

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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

#### **Cache storage attacks**

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

#### **Complex transforms**

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

#### **Delayed key exchange for constrained smart devices**

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

#### **Detecting and tracking the tips of fluorescently labeled mitochondria in U2OS cells**

Lihavainen, E., Mäkelä, J., Spelbrink, J. N. & Ribeiro, A. S., 2015, *Image Analysis and Processing — ICIAP 2015: 18th International Conference, Genoa, Italy, September 7-11, 2015, Proceedings, Part II*. Springer Verlag, Vol. 9280. p. 363-372 10 p. (Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics); vol. 9280).

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

#### **Diversification of system calls in linux binaries**

Rauti, S., Laurén, S., Hosseinzadeh, S., Mäkelä, J. M., Hyrynsalmi, S. & Leppänen, V., 2015, *Trusted Systems - 6th International Conference, INTRUST 2014, Revised Selected Papers*. Springer Verlag, p. 15-35 21 p. (Lecture Notes in Computer Science; vol. 9473).

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



### **Existence and synthesis of complex hopfield type associative memories**

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

### **Gender classification by LUT based boosting of overlapping block patterns**

Mehta, R., Günther, M. & Marcel, S., 2015, *Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)*. Springer Verlag, p. 530-542 13 p. (Lecture Notes in Computer Science; vol. 9127).

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

### **Interaction and humans in internet of things**

Turunen, M., Sonntag, D., Engelbrecht, K-P., Olsson, T., Schnelle-Walka, D. & Lucero, A., 2015, *Lecture Notes in Computer Science*. Springer Verlag, p. 633-636 4 p. (Lecture Notes in Computer Science; vol. 9299).

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

### **Life in the fast lane: Effect of language and calibration accuracy on the speed of text entry by gaze**

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

### **Mining itemset-based distinguishing sequential patterns with gap constraint**

Yang, H., Duan, L., Dong, G., Nummenmaa, J., Tang, C. & Li, X., 2015, *Database Systems for Advanced Applications - 20th International Conference, DASFAA 2015, Proceedings Hanoi, Vietnam, April 20-23, 2015 Proceedings, Part I*. Springer Verlag, Vol. 9049. p. 39-54 16 p. (Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics); vol. 9049).

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

### **Non-local sigma filter**

Ponomarenko, N., Lukin, V., Astola, J. & Egiazarian, K., 2015, *Image Analysis and Processing — ICIAP 2015: 18th International Conference, Genoa, Italy, September 7-11, 2015, Proceedings, Part II*. Springer Verlag, Vol. 9280. p. 483-493 11 p. (Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics); vol. 9280).

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

### **Remarks on characterization of bent functions in terms of gibbs dyadic derivatives**

Stanković, R. S., Astola, J. T., Moraga, C., Stanković, M. & Gajić, D., 2015, *Computer Aided Systems Theory – EUROCAST 2015: 15th International Conference, Las Palmas de Gran Canaria, Spain, February 8-13, 2015, Revised Selected Papers*. Springer, p. 632-639 8 p. (Lecture Notes in Computer Science; vol. 9520).

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

### **Speaker verification using adaptive dictionaries in non-negative spectrogram deconvolution**

Drgas, S. & Virtanen, T., 2015, *Latent Variable Analysis and Signal Separation: 12th International Conference, LVA/ICA 2015, Liberec, Czech Republic, August 25-28, 2015, Proceedings*. Springer Verlag, Vol. 9237. p. 462-469 8 p. (Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics); vol. 9237).

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

### **The Extended 1-D (One-Dimensional) Discrete Phase Retrieval Problem**

Rusu, C. & Astola, J., 2015, *Computer Aided Systems Theory – EUROCAST 2015: 15th International Conference, Las Palmas de Gran Canaria, Spain, February 8-13, 2015, Revised Selected Papers*. Springer, p. 640-647 8 p. (Lecture Notes in Computer Science; vol. 9520).

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

### **Three positives make one negative: Public sector is procurement**

Alanne, A., Hellsten, P., Pekkola, S. & Saarenpää, I., 2015, *Electronic Government: 14th IFIP WG 8.5 International Conference, EGOV 2015, Thessaloniki, Greece, August 30 -- September 2, 2015, Proceedings*. Springer Verlag, Vol. 9248. p. 321-333 13 p. (Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics); vol. 9248).

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

### **Towards liquid web applications**

Mikkonen, T., Systä, K. & Pautasso, C., 2015, *Engineering the Web in the Big Data Era: 15th International Conference, ICWE 2015, Rotterdam, The Netherlands, June 23-26, 2015, Proceedings*. Springer Verlag, p. 134-143 10 p. (Lecture Notes in Computer Science; vol. 9114).

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

### **Vision-based trajectories planning for four wheels independently steered mobile robots with maximum allowable velocities**

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

### **A computational approach to construct a multivariate complete graph invariant**

Dehmer, M., Emmert-Streib, F. & Grabner, M., 1 Mar 2014, In : *Information Sciences*. 260, p. 200-208 9 p.

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

### **Audio-haptic car navigation interface with rhythmic tactons**

Pakkanen, T., Raisamo, R. & Surakka, V., 2014, *Haptics: Neuroscience, Devices, Modeling, and Applications - 9th International Conference, EuroHaptics 2014, Proceedings*. Springer Verlag, Vol. 8618. p. 208-215 8 p. (Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics); vol. 8618).

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

### **Delayed haptic feedback to gaze gestures**

Kangas, J., Rantala, J., Akkil, D., Isokoski, P., Majaranta, P. & Raisamo, R., 2014, *Haptics: Neuroscience, Devices, Modeling, and Applications - 9th International Conference, EuroHaptics 2014, Proceedings*. Springer Verlag, Vol. 8618. p. 25-31 7 p. (Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics); vol. 8618).

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

### **Does visualization speed up the safety analysis process?**

Altarawneh, R., Steiner, M., Taibi, D., Humayoun, S. R. & Liggesmeyer, P., 2014, *Computer Safety, Reliability, and Security - SAFECOMP 2014 Workshops: ASCoMS, DECSoS, DEVVARTS, ISSE, ReSA4CI, SASSUR, Proceedings*. Springer Verlag, Vol. 8696 LNCS. p. 431-443 13 p. (Lecture Notes in Computer Science; vol. 8696).

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

### **Do persuasive technologies persuade? - A review of empirical studies**

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

### **Evaluation of user experience goal fulfillment: Case remote operator station**

Karvonen, H., Koskinen, H., Tokkonen, H. & Hakulinen, J., 2014, *Virtual, Augmented and Mixed Reality: Applications of Virtual and Augmented Reality - 6th International Conference, VAMR 2014, Held as Part of HCI International 2014, Proceedings*. PART 2 ed. Springer Verlag, Vol. 8526 LNCS. p. 366-377 12 p. (Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics); vol. 8526 LNCS, no. PART 2).

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

### **Interoperability-related architectural problems and solutions in information systems: A scoping study**

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

### **Low-Power Reconfigurable Miniature Sensor Nodes for Condition Monitoring**

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

### **Mining frequent closed sequential patterns with non-user-defined gap constraints**

Wang, W., Duan, L., Nummenmaa, J., Deng, S., Li, Z., Yang, H. & Tang, C., 2014, In : *Lecture Notes in Computer Science*. 8933, p. 55-70 16 p.

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

### **Multi-view regularized extreme learning machine for human action recognition**

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

### **Special Issue on Embedded Computer Systems: Architectures, Modeling and Simulation**

McAllister, J., Guevorkian, D., Jeschke, H. & Sima, M., 2014, In : *International Journal of Parallel Programming*. 43, 1

Research output: Contribution to journal > Special issue > Scientific > peer-review

### **Towards generic embedded multiprocessing for RVC-CAL dataflow programs**

Boutellier, J. & Silvén, O., Nov 2013, In : *Journal of Signal Processing Systems*. 73, 2, p. 137-142 6 p.

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

### **Intuitiveness of vibrotactile speed regulation cues**

Lylykangas, J., Surakka, V., Rantala, J. & Raisamo, R., Oct 2013, In : *ACM TRANSACTIONS ON APPLIED PERCEPTION*. 10, 4, 24.

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

### **Integration of dataflow-based heterogeneous multiprocessor scheduling techniques in GNU radio**

Zaki, G. F., Plishker, W., Bhattacharyya, S. S., Clancy, C. & Kuykendall, J., Feb 2013, In : *Journal of Signal Processing Systems*. 70, 2, p. 177-191 15 p.

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

### **A field trial on mobile crowdsourcing of news content: Factors influencing participation**

Väätäjä, H., Sirkkunen, E. & Ahvenainen, M., 2013, *Human-Computer Interaction, INTERACT 2013, 14th IFIP TC 13 International Conference, Cape Town, South Africa, September 2-6, 2013, Proceedings, Part III. PART 3* ed. Berlin, Germany: Springer, Vol. 8119 LNCS. p. 54-73 20 p. (Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics); vol. 8119 LNCS, no. PART 3).

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

### **Automatic hierarchical discovery of quasi-static schedules of RVC-CAL dataflow programs**

Boutellier, J., Raulet, M. & Silvén, O., 2013, In : *Journal of Signal Processing Systems*. 71, 1, p. 35-40 6 p.

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

### **Cell-at-a-time approach to lazy evaluation of dimensional aggregations**

Thanisch, P., Nummenmaa, J., Niemi, T. & Niinimäki, M., 2013, *Data Warehousing and Knowledge Discovery - 15th International Conference, DaWaK 2013, Proceedings*. Vol. 8057 LNCS. p. 349-358 10 p. (Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics); vol. 8057 LNCS).

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

### **Creating immersive audio and lighting based physical exercise games for schoolchildren**

Hakulinen, J., Turunen, M., Heimonen, T., Keskinen, T., Sand, A., Paavilainen, J., Parviainen, J., Yrjänäinen, S., Mäyrä, F., Okkonen, J. & Raisamo, R., 2013, *Advances in Computer Entertainment - 10th International Conference, ACE 2013, Proceedings*. Vol. 8253 LNCS. p. 308-319 12 p. (Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics); vol. 8253 LNCS).

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

### **Designing gesture-based control for factory automation**

Heimonen, T., Hakulinen, J., Turunen, M., Jokinen, J. P. P., Keskinen, T. & Raisamo, R., 2013, *Human-Computer Interaction, INTERACT 2013 - 14th IFIP TC 13 International Conference, Proceedings*. PART 2 ed. Vol. 8118 LNCS. p. 202-209 8 p. (Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics); vol. 8118 LNCS, no. PART 2).

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

### **Expectation maximization for average reward decentralized POMDPs**

Pajarinen, J. & Peltonen, J., 2013, *Machine Learning and Knowledge Discovery in Databases - European Conference, ECML PKDD 2013, Proceedings*. PART 1 ed. Vol. 8188 LNAI. p. 129-144 16 p. (Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics); vol. 8188 LNAI, no. PART 1).

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

### **Parameterized scheduling of topological patterns in signal processing dataflow graphs**

Wang, L. H., Shen, C. C., Wu, S. & Bhattacharyya, S. S., 2013, In : *Journal of Signal Processing Systems*. 71, 3, p. 275-286 12 p.

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

### **Voluntary facial activations regulate physiological arousal and subjective experiences during virtual social stimulation**

Vanhala, T., Surakka, V., Courgeon, M. & Martin, J. C., Mar 2012, In : *ACM TRANSACTIONS ON APPLIED PERCEPTION*. 9, 1, 1.

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

### **Comparison of extensive vs. confirmation haptic interfaces with two levels of disruptive tasks**

Pakkanen, T., Raisamo, R. & Surakka, V., 2012, In : *Lecture Notes in Computer Science*. 7282 LNCS, PART 1, p. 383-394 12 p.

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

### **Mapping parameterized cyclo-static dataflow graphs onto configurable hardware**

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

### **NonVisNavi: Non-visual mobile navigation application for pedestrians**

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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

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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: 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: 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

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

### **Consecutive S-box lookups: A timing attack on SNOW 3G**

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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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### **Fast point decomposition for standard elliptic curves**

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#### **Koblitz curves and integer equivalents of Frobenius expansions**

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#### **Optimization procedure for predicting nonlinear time series based on a non-Gaussian noise model**

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#### **A novel stochastic learning rule for neural networks**

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

#### **Users' preferences for ubiquitous computing applications at home**

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