

**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**

Ghorbani, M., Dehmer, M., Cao, S., Feng, L., Tao, J. & Emmert-Streib, F., 1 Jul 2020, In : Information Sciences. 524, p. 199-215 17 p.

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

**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**

Sahin, E., Stoykova, E., Mäkinen, J. & Gotchev, A., 2020, In : ACM Computing Surveys. 53, 2, 35 p., 32.

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

**Design and characterization of light field and holographic near-eye displays**

Sahin, E., Mäkinen, J., Akpınar, U., Miyanishi, Y. & Gotchev, A., 2020, *Real VR – Immersive Digital Reality*. Springer, p. 244-271 28 p. (Lecture Notes in Computer Science; vol. 11900).

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

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

Goranko, V., Kuusisto, A. & Rönnholm, R., 2020, In : Information and Computation. 23 p., 104554.

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**

Ahtinen, A. & Kaipainen, K., 2020, *Persuasive Technology. Designing for Future Change - 15th International Conference on Persuasive Technology, PERSUASIVE 2020, Proceedings*. Gram-Hansen, S. B., Jonassen, T. S. & Midden, C. (eds.). Springer, p. 73-84 12 p. (Lecture Notes in Computer Science; vol. 12064).

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

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

Khodamoradi, A., Liu, G., Mattavelli, P., Messo, T. & Abedini, H., 2020, In : Mathematics and Computers in Simulation. 13 p.

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

**Remarks on the Design of First Digital Computers in Japan - Contributions of Yasuo Komamiya**

Stanković, R. S., Sasao, T., Astola, J. T. & Yamada, A., 2020, *Computer Aided Systems Theory – EUROCAST 2019 - 17th International Conference, Revised Selected Papers*. Moreno-Díaz, R., Quesada-Arencibia, A. & Pichler, F. (eds.). Springer, p. 123-130 8 p. (Lecture Notes in Computer Science; vol. 12013).

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

**Tile priorities in adaptive 360-degree video streaming**

Curcio, I. D. D., Monakhov, D., Hourunranta, A. & Aksu, E. B., 2020, *Smart Multimedia - 2nd International Conference, ICSM 2019, Revised Selected Papers*. McDaniel, T., Berretti, S., Curcio, I. D. D. & Basu, A. (eds.). Springer, p. 212-223 12 p. (Lecture Notes in Computer Science; vol. 12015 LNCS).

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

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

Ni, X. & Huttunen, H., 2020, In : Journal of Signal Processing Systems.

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

### **Programming languages for data-intensive HPC applications: A systematic mapping study**

Amaral, V., Norberto, B., Goulão, M., Aldinucci, M., Benkner, S., Bracciali, A., Carreira, P., Celms, E., Correia, L., Grelck, C., Karatza, H., Kessler, C., Kilpatrick, P., Martiniano, H., Mavridis, I., Pillana, S., Respício, A., Simão, J., Veiga, L. & Visa, A., 8 Nov 2019, In : Parallel Computing. 91, 17 p., 102584.

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

### **Satisfiability of modal inclusion logic: Lax and strict semantics**

Hella, L., Kuusisto, A., Meier, A. & Vollmer, H., 1 Oct 2019, In : ACM TRANSACTIONS ON COMPUTATIONAL LOGIC. 21, 1, 7.

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

### **Model checking and validity in propositional and modal inclusion logics**

Hella, L., Kuusisto, A., Meier, A. & Virtema, J., 1 Sep 2019, In : JOURNAL OF LOGIC AND COMPUTATION. 29, 5, p. 605-630 26 p.

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

### **Hermitian normalized Laplacian matrix for directed networks**

Yu, G., Dehmer, M., Emmert-Streib, F. & Jodlbauer, H., 1 Aug 2019, In : Information Sciences. 495, p. 175-184 10 p.

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

### **High-performance SIMD implementation of the lattice-Boltzmann method on the Xeon Phi processor**

Robertsén, F., Mattila, K. & Westerholm, J., 10 Jul 2019, In : Concurrency Computation. 31, 13, 16 p., e5072.

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

### **Analysis of an efficient parallel implementation of active-set Newton algorithm**

San Juan Sebastián, P., Virtanen, T., Garcia-Molla, V. M. & Vidal, A. M., Mar 2019, In : Journal of Supercomputing. 75, 3, p. 1298-1309 12 p.

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

### **Towards detecting structural branching and cyclicity in graphs: A polynomial-based approach**

Dehmer, M., Chen, Z., Emmert-Streib, F., Mowshowitz, A., Shi, Y., Tripathi, S. & Zhang, Y., 1 Jan 2019, In : Information Sciences. 471, p. 19-28 10 p.

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

### **ALMARVI System Solution for Image and Video Processing in Healthcare, Surveillance and Mobile Applications**

Al-Ars, Z., van der Vlugt, S., Jääskeläinen, P. & van der Linden, F., Jan 2019, In : Journal of Signal Processing Systems. 91, 1, p. 1-7

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

### **A fun-accuracy trade-off in game-based learning**

Greipl, S., Ninaus, M., Bauer, D., Kiili, K. & Moeller, K., 2019, *Games and Learning Alliance - 7th International Conference, GALA 2018, Proceedings*. Söbke, H., Gentile, M. & Allegra, M. (eds.). Springer Verlag, p. 167-177 11 p. (Lecture Notes in Computer Science; vol. 11385).

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

### **Alternating-time temporal logic ATL with finitely bounded semantics**

Goranko, V., Kuusisto, A. & Rönholm, R., 2019, In : Theoretical Computer Science.

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

### **An Accurate Approximation of Resource Request Distributions in Millimeter Wave 3GPP New Radio Systems**

Kovalchukov, R., Moltchanov, D., Gaidamaka, Y. & Bobrikova, E., 2019, *Internet of Things, Smart Spaces, and Next Generation Networks and Systems - 19th International Conference, NEW2AN 2019, and 12th Conference, ruSMART 2019, Proceedings*. Galinina, O., Andreev, S., Koucheryavy, Y. & Balandin, S. (eds.). Springer Verlag, p. 572-585 14 p.

(Lecture Notes in Computer Science; vol. 11660).

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

#### **Autonomous UAV Landing on a Moving Vessel: Localization Challenges and Implementation Framework**

Castillo, C., Pyattaev, A., Villa, J., Masek, P., Moltchanov, D. & Ometov, A., 2019, *Internet of Things, Smart Spaces, and Next Generation Networks and Systems - 19th International Conference, NEW2AN 2019, and 12th Conference, ruSMART 2019, Proceedings*. Galinina, O., Andreev, S., Koucheryavy, Y. & Balandin, S. (eds.). Springer Verlag, p. 342-354 13 p. (Lecture Notes in Computer Science; vol. 11660).

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

#### **Characterizing the Degree of LTE Involvement in Supporting Session Continuity in Street Deployment of NR Systems**

Begishev, V., Samuylov, A., Moltchanov, D. & Samouylov, K., 2019, *Distributed Computer and Communication Networks - 22nd International Conference, DCCN 2019, Revised Selected Papers*. Vishnevskiy, V. M., Kozyrev, D. V., Samouylov, K. E. & Kozyrev, D. V. (eds.). Springer, p. 71-83 13 p. (Lecture Notes in Computer Science; vol. 11965).

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

#### **Communicating User Insights with Travel Mindsets and Experience Personas in Intra-city Bus Context**

Hildén, E. & Väänänen, K., 2019, *Human-Computer Interaction – INTERACT 2019 - 17th IFIP TC 13 International Conference, Proceedings*. Lamas, D., Loizides, F., Nacke, L., Petrie, H., Winckler, M. & Zaphiris, P. (eds.). Springer Verlag, p. 34-52 19 p. (Lecture Notes in Computer Science; vol. 11749).

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

#### **Digital Predistortion for 5G Small Cell: GPU Implementation and RF Measurements**

Pascual Campo, P., Lampu, V., Meirhaeghe, A., Boutellier, J., Anttila, L. & Valkama, M., 2019, In : *Journal of Signal Processing Systems*. 12 p.

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

#### **Emptiness problems for distributed automata**

Kuusisto, A. & Reiter, F., 2019, In : *Information and Computation*. 104503.

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

#### **Evaluating multi-connectivity in 5G NR systems with mixture of unicast and multicast traffic**

Kovalchukov, R., Moltchanov, D., Pyattaev, A. & Ometov, A., 2019, *Wired/Wireless Internet Communications - 17th IFIP WG 6.2 International Conference, WWIC 2019, Proceedings*. Di Felice, M., Natalizio, E., Bruno, R. & Kassler, A. (eds.). Springer Verlag, p. 118-128 11 p. (Lecture Notes in Computer Science; vol. 11618).

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

#### **Extending a digital fraction game piece by piece with physical manipulatives**

Kiili, K., Koskinen, A., Lindstedt, A. & Ninaus, M., 2019, *Games and Learning Alliance - 7th International Conference, GALA 2018, Proceedings*. Söbke, H., Gentile, M. & Allegra, M. (eds.). Springer Verlag, p. 157-166 10 p. (Lecture Notes in Computer Science; vol. 11385).

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

#### **Graph-boosted attentive network for semantic body parsing**

Wang, T. & Wang, H., 2019, *Artificial Neural Networks and Machine Learning – ICANN 2019: Image Processing - 28th International Conference on Artificial Neural Networks, 2019, Proceedings*. Tetko, I. V., Karpov, P., Theis, F. & Kurková, V. (eds.). Springer Verlag, p. 267-280 (Lecture Notes in Computer Science; vol. 11729).

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

#### **Institutional Perspectives on the Process of Enterprise Architecture Adoption**

Dang, D. & Pekkola, S., 2019, In : *Information Systems Frontiers*.

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

#### **Large-Scale Centralized Scheduling of Short-Range Wireless Links**

Pyattaev, A. & Gerasimenko, M., 2019, *Distributed Computer and Communication Networks - 22nd International Conference, DCCN 2019, Revised Selected Papers*. Vishnevskiy, V. M., Kozyrev, D. V., Samouylov, K. E. & Kozyrev, D. V. (eds.). Springer, p. 607-615 9 p. (Lecture Notes in Computer Science; vol. 11965).

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

### **Learning Image-to-Image Translation Using Paired and Unpaired Training Samples**

Tripathy, S., Kannala, J. & Rahtu, E., 2019, *Computer Vision - ACCV 2018 - 14th Asian Conference on Computer Vision, Revised Selected Papers*. Jawahar, C. V., Schindler, K., Mori, G. & Li, H. (eds.). Springer Verlag, p. 51-66 16 p. (Lecture Notes in Computer Science; vol. 11362).

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

### **Lifelong learning with a digital math game: Performance and basic experience differences across age**

Greipl, S., Moeller, K., Kiili, K. & Ninaus, M., 2019, *Games and Learning Alliance- 8th International Conference, GALA 2019, Proceedings*. Liapis, A., Yannakakis, G. N., Gentile, M. & Ninaus, M. (eds.). Springer, p. 301-311 11 p. (Lecture Notes in Computer Science; vol. 11899).

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

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

Chukhno, N., Chukhno, O., Shorgin, S., Samouylov, K., Galinina, O. & Gaidamaka, Y., 2019, *Internet of Things, Smart Spaces, and Next Generation Networks and Systems - 19th International Conference, NEW2AN 2019, and 12th Conference, ruSMART 2019, Proceedings*. Galinina, O., Andreev, S., Koucheryavy, Y. & Balandin, S. (eds.). Springer Verlag, p. 282-294 13 p. (Lecture Notes in Computer Science; vol. 11660).

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

### **MicroSCOPE: Enabling access control in searchable encryption with the use of attribute-based encryption and SGX**

Michalás, A., Bakas, A., Dang, H. V. & Zalizko, A., 2019, *Secure IT Systems - 24th Nordic Conference, NordSec 2019, Proceedings*. Askarov, A., Hansen, R. R. & Rafnsson, W. (eds.). Springer, p. 254-270 17 p. (Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics); vol. 11875 LNCS).

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

### **MLAttack: Fooling Semantic Segmentation Networks by Multi-layer Attacks**

Gupta, P. & Rahtu, E., 2019, *Pattern Recognition - 41st DAGM German Conference, DAGM GCPR 2019, Proceedings*. Fink, G. A., Frintrop, S. & Jiang, X. (eds.). Springer, p. 401-413 13 p. (Lecture Notes in Computer Science; vol. 11824 LNCS).

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

### **Multi-level Architecture for P2P Services in Mobile Networks**

Pirmagomedov, R., Ahmed, A. A. & Glushakov, R., 2019, *Internet of Things, Smart Spaces, and Next Generation Networks and Systems - 19th International Conference, NEW2AN 2019, and 12th Conference, ruSMART 2019, Proceedings*. Galinina, O., Andreev, S., Koucheryavy, Y. & Balandin, S. (eds.). Springer Verlag, p. 415-423 9 p. (Lecture Notes in Computer Science; vol. 11660).

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

### **Near Lossless JPEG Compression Based on Masking Effect of Non-predictable Energy of Image Regions**

Ponomarenko, M. & Egiazarian, K., 2019, *Image Analysis - 21st Scandinavian Conference, SCIA 2019, Proceedings*. Felsberg, M., Forssén, P-E., Unger, J. & Sintorn, I-M. (eds.). Springer Verlag, p. 173-183 11 p. (Lecture Notes in Computer Science; vol. 11482).

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

### **Non-parametric contextual relationship learning for semantic video object segmentation**

Wang, T. & Wang, H., 2019, *Progress in Pattern Recognition, Image Analysis, Computer Vision, and Applications - 23rd Iberoamerican Congress, CIARP 2018, Proceedings*. Vera-Rodriguez, R., Fierrez, J. & Morales, A. (eds.). Springer Verlag, p. 325-333 9 p. (Lecture Notes in Computer Science; vol. 11401).

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

### **On the web platform cornucopia**

Mikkonen, T., Pautasso, C., Systä, K. & Taivalsaari, A., 2019, *Web Engineering - 19th International Conference, ICWE 2019, Proceedings*. Bakaev, M., Ko, I-Y. & Frasinca, F. (eds.). Springer Verlag, p. 347-355 9 p. (Lecture Notes in Computer Science; vol. 11496).

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

### **Patterns for functional safety system development**

Rauhämäki, J., 2019, *Transactions on Pattern Languages of Programming IV*. Springer Verlag, p. 100-138 39 p. (Lecture Notes in Computer Science; vol. 10600).

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

### **Patterns for light-weight fault tolerance and decoupled design in distributed control systems**

Alho, P. & Rauhämäki, J., 2019, *Transactions on Pattern Languages of Programming IV*. Springer Verlag, p. 1-21 21 p. (Lecture Notes in Computer Science; vol. 10600).

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

### **Performance of mmwave-based mesh networks in indoor environments with dynamic blockage**

Pirmagomedov, R., Moltchanov, D., Ustinov, V., Saqib, M. N. & Andreev, S., 2019, *Wired/Wireless Internet Communications - 17th IFIP WG 6.2 International Conference, WWIC 2019, Proceedings*. Di Felice, M., Natalizio, E., Bruno, R. & Kassler, A. (eds.). Springer Verlag, p. 129-140 12 p. (Lecture Notes in Computer Science; vol. 11618).

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

### **Predicting Novel Views Using Generative Adversarial Query Network**

Nguyen-Ha, P., Huynh, L., Rahtu, E. & Heikkilä, J., 2019, *Image Analysis - 21st Scandinavian Conference, SCIA 2019, Proceedings*. Felsberg, M., Forssén, P-E., Unger, J. & Sintorn, I-M. (eds.). Springer Verlag, p. 16-27 12 p. (Lecture Notes in Computer Science; vol. 11482).

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**

Ponomarenko-Timofeev, A., Ometov, A. & Galinina, O., 2019, *Internet of Things, Smart Spaces, and Next Generation Networks and Systems - 19th International Conference, NEW2AN 2019, and 12th Conference, ruSMART 2019, Proceedings*. Galinina, O., Andreev, S., Koucheryavy, Y. & Balandin, S. (eds.). Springer Verlag, p. 269-281 13 p. (Lecture Notes in Computer Science; vol. 11660).

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

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

Feier, C., Kuusisto, A. & Lutz, C., 2019, In : *Logical Methods in Computer Science*. 15, 2, p. 15:1-15:46

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

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

Wang, T., Fan, L. & Wang, H., 2019, *Artificial Neural Networks and Machine Learning – ICANN 2019: Deep Learning - 28th International Conference on Artificial Neural Networks, Proceedings*. Tetko, I. V., Karpov, P., Theis, F. & Kurková, V. (eds.). Springer Verlag, p. 275-287 13 p. (Lecture Notes in Computer Science; vol. 11728).

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**

Kiili, K. & Tuomi, P., 2019, *Games and Learning Alliance- 8th International Conference, GALA 2019, Proceedings*. Liapis, A., Yannakakis, G. N., Gentile, M. & Ninaus, M. (eds.). Springer, p. 103-113 11 p. (Lecture Notes in Computer Science ; vol. 11899).

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

### **Triggerflow: Regression Testing by Advanced Execution Path Inspection**

Gridin, I., Pereida García, C., Tuveri, N. & Brumley, B. B., 2019, *Detection of Intrusions and Malware, and Vulnerability Assessment - 16th International Conference, DIMVA 2019, Proceedings*. Maurice, C., Giacinto, G., Perdisci, R., Almgren, M. & Perdisci, R. (eds.). Springer Verlag, p. 330-350 21 p. (Lecture Notes in Computer Science; vol. 11543).

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

### **Understanding the digital and non-digital participation by the gaming youth**

Pietilä, I., Varsaluoma, J. & Väänänen, K., 2019, *Human-Computer Interaction – INTERACT 2019 - 17th IFIP TC 13 International Conference, Proceedings*. Lamas, D., Loizides, F., Nacke, L., Petrie, H., Winckler, M. & Zaphiris, P. (eds.). Springer Verlag, p. 453-471 19 p. (Lecture Notes in Computer Science; vol. 11747).

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

### **Usability, security and trust in password managers: A quest for user-centric properties and features**

Chaudhary, S., Schafeitel-Tähtinen, T., Helenius, M. & Berki, E., 2019, In : *Computer Science Review*. 33, p. 69-90 22 p.  
Research output: Contribution to journal › Review Article › Scientific › peer-review

### **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.

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

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

Dehmer, M., Chen, Z., Emmert-Streib, F., Shi, Y. & Tripathi, S., 1 Oct 2018, In : *Information Sciences*. 467, p. 407-414 8 p.

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

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

Koivisto, M., Laakkonen, P. & Lauri, J., 1 Jan 2018, In : *Theoretical Computer Science*.

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

### **18th International Conference on Next Generation Teletraffic and Wired/Wireless Advanced Networks and Systems, NEW2AN 2018 and 11th Conference on Internet of Things and Smart Spaces, ruSMART 2018**

Galinina, O., Andreev, S., Balandin, S. & Koucheryavy, Y., 2018, Springer Verlag. 720 p. (Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics); vol. 11118 LNCS)

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**

Sanfilippo, G., Galinina, O., Andreev, S., Pizzi, S. & Araniti, G., 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. 340-354 15 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

### **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**

Stepanov, N., Matveev, N., Galinina, O. & Turlikov, A., 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. 524-534 11 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

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

Astola, J., Astola, P., Stanković, R. & Tabus, I., 2018, In : *Journal of Multiple-Valued Logic and Soft Computing*. 31, 3, p. 239-253 15 p.

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

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

Markova, E., Moltchanov, D., Sinitsyna, A., Ivanova, D., Filipova, V., Gudkova, I. & Samouylov, K., 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. 210-223 14 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

### **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

### **Current Trends in Web Engineering: ICWE 2018 International Workshops, MATWEP, EnWot, KD-WEB, WEOD, TourismKG, Cáceres, Spain, June 5, 2018, Revised Selected Papers**

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

### **Gibbs Dyadic Differentiation on Groups - Evolution of the Concept**

Stankovic, R. S., Astola, J. & Moraga, C., 2018, *Computer Aided Systems Theory – EUROCAST 2017 - 16th International Conference, Revised Selected Papers*. Springer Verlag, p. 229-237 9 p. (Lecture Notes in Computer Science; vol. 10672).  
Research output: Chapter in Book/Report/Conference proceeding > Conference contribution > Scientific > peer-review

### **Information Exchange Architecture for Collaborative Industrial Ecosystem**

Kannisto, P., Hästbacka, D. & Martinen, A., 2018, In : *Information Systems Frontiers*. p. 1-16  
Research output: Contribution to journal > Article > Scientific > peer-review

### **IoT Application Deployment Using Request-Response Pattern with MQTT**

Luoto, A. & Systä, K., 2018, *Current Trends in Web Engineering: ICWE 2017 International Workshops, Liquid Multi-Device Software and EnWoT, practi-O-web, NLPIT, SoWeMine, Rome, Italy, June 5-8, 2017, Revised Selected Papers*. Springer Verlag, Vol. 10544. p. 48-60 13 p. (Lecture Notes in Computer Science; vol. 10544).  
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**

Samuylov, A. K., Ivchenko, A. Y., Orlov, Y. N., Moltchanov, D. A., Bobrikova, E. V., Gaidamaka, Y. V. & Shorgin, V. S., 2018, *Internet of Things, Smart Spaces, and Next Generation Networks and Systems - 18th International Conference, NEW2AN 2018, and 11th Conference, ruSMART 2018, Proceedings*. Springer, p. 224-235 12 p. (Lecture Notes in Computer Science; vol. 11118).  
Research output: Chapter in Book/Report/Conference proceeding > Conference contribution > Scientific > peer-review

### **Liquid Transfer of User Identity**

Thangavel, S. & Systä, K., 2018, *Current Trends in Web Engineering - ICWE 2017 International Workshops, Liquid Multi-Device Software and EnWoT, practi-O-web, NLPIT, SoWeMine, Revised Selected Papers*. Springer Verlag, p. 92-107 16 p. (Lecture Notes in Computer Science; vol. 10544).  
Research output: Chapter in Book/Report/Conference proceeding > Conference contribution > Scientific > peer-review

### **Memory Tampering Attack on Binary GCD Based Inversion Algorithms**

Aldaya, A. C., Brumley, B. B., Sarmiento, A. J. C. & Sánchez-Solano, S., 2018, In : *International Journal of Parallel Programming*. p. 1-20

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

### **Model-Based Dynamic Scheduling for Multicore Signal Processing**

Wu, J., Blattner, T., Keyrouz, W. & Bhattacharyya, S. S., 2018, In : *Journal of Signal Processing Systems*. p. 1-14 14 p.

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

### **Model-Based Representations for Dataflow Schedules**

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

### **Modeling and Engineering Promoters with Pre-defined RNA Production Dynamics in Escherichia Coli**

Oliveira, S. M. D., Bahrudeen, M. N. M., Startceva, S., Kandavalli, V. & Ribeiro, A. S., 2018, *Computational Methods in Systems Biology - 16th International Conference, CMSB 2018, Proceedings*. Springer Verlag, p. 3-20 18 p. (Lecture Notes in Bioinformatics; vol. 11095 LNBI).

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

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

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**

Aramvith, S., Ho, Y. S., O'Connor, N. E., Chalidabhongse, T., Schoeffmann, K., Ngo, C. W., Gabbouj, M. & Elgammal, A., 2018, Springer. 460 p. (Lecture Notes in Computer Science; vol. 10705)

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

### **On the degeneracy of the Randić entropy and related graph measures**

Dehmer, M., Chen, Z., Mowshowitz, A., Jodlbauer, H., Emmert-Streib, F., Shi, Y., Tripathi, S. & Xia, C., 2018, In : *Information Sciences*.

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

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

Chkirkbene, Z., Hamila, R., Fofou, S., Kiranyaz, S. & Gabbouj, M., 2018, *Ubiquitous Networking - 4th International Symposium, UNet 2018, Revised Selected Papers*. Springer Verlag, p. 155-166 12 p. (Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics); vol. 11277 LNCS).

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

### **Performance Limitations of Parsing Libraries: State-of-the-Art and Future Perspectives**

D'Agostino, A. M., Ometov, A., Pyattaev, A., Andreev, S. & Araniti, G., 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. 405-418 14 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

### **PESTEL Analysis of Hacktivism Campaign Motivations**

Nurmi, J. & Niemelä, M. S., 2018, *Secure IT Systems - 23rd Nordic Conference, NordSec 2018*. Springer Verlag, p. 323-335 13 p. (Lecture Notes in Computer Science; vol. 11252).

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



## **Preface**

Galinina, O., Balandin, S., Andreev, S. & Koucheryavy, Y., 2018, In : Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics). 11118 LNCS, p. v-vi  
Research output: Contribution to journal › Editorial › Scientific

## **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.

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

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

Wahyudi, A., Pekkola, S. & Janssen, M., 2018, *Challenges and Opportunities in the Digital Era - 17th IFIP WG 6.11 Conference on e-Business, e-Services, and e-Society, I3E 2018, Proceedings*. Springer Verlag, p. 520-538 19 p. (Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics); vol. 11195 LNCS).

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

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

Curcio, I. D. D., Naik, D., Toukoma, H. & Zare, A., 2018, *Smart Multimedia - 1st International Conference, ICSM 2018, Revised Selected Papers*. Springer, p. 417-428 12 p. (Lecture Notes in Computer Science; vol. 11010).

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

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

Dehmer, M., Emmert-Streib, F. & Shi, Y., 1 Dec 2017, In : Information Sciences. 418-419, p. 575-580 6 p.

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

## **Highly unique network descriptors based on the roots of the permanent polynomial**

Dehmer, M., Emmert-Streib, F., Hu, B., Shi, Y., Stefu, M. & Tripathi, S., 1 Oct 2017, In : Information Sciences. 408, p. 176-181 6 p.

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

## **Guest Editorial: Implementation Issues in System-on-Chip**

Ellervee, P. & Nurmi, J., 1 Jun 2017, In : Journal of Signal Processing Systems. 87, 3, p. 269-270 2 p.

Research output: Contribution to journal › Editorial › Scientific

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

Hussain, W., Hoffmann, H., Ahonen, T. & Nurmi, J., Jun 2017, In : Journal of Signal Processing Systems. 87, 3, p. 287-297 11 p.

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

## **Row-interleaved sampling for depth-enhanced 3d video coding for polarized displays**

Homayouni, M., Aflaki, P., Hannuksela, M. M. & Gabbouj, M., 1 Mar 2017, In : ACM TRANSACTIONS ON APPLIED PERCEPTION. 14, 3, 15.

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

## **Abstractions for transition systems with applications to stubborn sets**

Hansen, H., 1 Jan 2017, *Concurrency, Security, and Puzzles: Essays Dedicated to Andrew William Roscoe on the Occasion of His 60th Birthday*. Gibson-Robinson, T., Hopcroft, P. & Lazić, R. (eds.). Springer International Publishing, p. 104-123 20 p. (Lecture Notes in Computer Science; vol. 10160).

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

## **More stubborn set methods for process algebras**

Valmari, A., 1 Jan 2017, *Concurrency, Security, and Puzzles: Essays Dedicated to Andrew William Roscoe on the Occasion of His 60th Birthday*. Gibson-Robinson, T., Hopcroft, P. & Lazić, R. (eds.). Springer International Publishing, p. 246-271 26 p. (Lecture Notes in Computer Science; vol. 10160).

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

#### **A co-design study of digital service ideas in the bus context**

Hildén, E., Ojala, J. & Väänänen, K., 2017, *Human-Computer Interaction - INTERACT 2017 - 16th IFIP TC 13 International Conference, Proceedings*. Springer Verlag, p. 295-312 18 p. (Lecture Notes in Computer Science; vol. 10513).

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

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

Blattner, T., Keyrouz, W., Bhattacharyya, S. S., Halem, M. & Brady, M., 2017, In : *Journal of Signal Processing Systems*. 89, 3, p. 457-467 11 p.

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

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

Caballero, D., Araya, R., Kronholm, H., Viiri, J., Mansikkaniemi, A., Lehesvuori, S., Virtanen, T. & Kurimo, M., 2017, *Data Driven Approaches in Digital Education - 12th European Conference on Technology Enhanced Learning, EC-TEL 2017, Proceedings*. Springer Verlag, p. 541-544 4 p. (Lecture Notes in Computer Science; vol. 10474).

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**

Devos, M. & Masek, P., 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. 40-52 13 p. (Lecture Notes in Computer Science; vol. 10531).

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**

Barford, L., Bhattacharyya, S. S. & Liu, Y., 2017, In : *Journal of Signal Processing Systems*. 87, 1, p. 21-31

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

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

Boutellier, J. & Nyländén, T., 2017, In : *Journal of Signal Processing Systems*. 89, 3, p. 469-478 10 p.

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

#### **ICT based interventions for anganwadi healthcare workers in Mumbai**

Thankachan, B., Sharma, S., Turunen, M., Linna, J., Väättäjä, H., Kortekaas, R. & Gross, T., 2017, *Human-Computer Interaction - INTERACT 2017 - 16th IFIP TC 13 International Conference, Proceedings*. Springer Verlag, p. 485-487 3 p. (Lecture Notes in Computer Science; vol. 10516).

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

#### **Implementation of a Multirate Resampler for Multi-carrier Systems on GPUs**

Kim, S. C. & Bhattacharyya, S. S., 2017, In : *Journal of Signal Processing Systems*. 89, 3, p. 445-455 11 p.

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

#### **Internet of Things, Smart Spaces, and Next Generation Networks and Systems: 17th International Conference, NEW2AN 2017, 10th Conference, ruSMART 2017, Third Workshop NsCC 2017, St. Petersburg, Russia, August 28-30, 2017, Proceedings**

Galinina, O. (ed.), Andreev, S. (ed.), Balandin, S. (ed.) & Koucheryavy, Y. (ed.), 2017, Springer Verlag. (Lecture Notes in Computer Science; vol. 10531)

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

#### **Local adaptive wiener filtering for class averaging in single particle reconstruction**

Abdollahzadeh, A., Acar, E., Peltonen, S. & Ruotsalainen, U., 2017, *Image Analysis - 20th Scandinavian Conference, SCIA 2017, Proceedings*. Springer Verlag, p. 233-244 12 p. (Lecture Notes in Computer Science; vol. 10270).

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

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

Yuan, J., Ma, W., Zhu, P. & Egiazarian, K., 2017, *Biometric Recognition - 12th Chinese Conference, CCBP 2017, Proceedings*. Springer Verlag, p. 183-190 8 p. (Lecture Notes in Computer Science; vol. 10568).

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

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

Koivisto, M., Laakkonen, P. & Lauri, J., 2017, *Computing and Combinatorics - 23rd International Conference, COCOON 2017, Proceedings*. Springer Verlag, p. 333-345 13 p. (Lecture Notes in Computer Science; vol. 10392).

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**

Li, K., Ghazi, A., Tarver, C., Boutellier, J., Abdelaziz, M., Anttila, L., Juntti, M., Valkama, M. & Cavallaro, J. R., 2017, In : *Journal of Signal Processing Systems*. 89, 3, p. 417-430 14 p.

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

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

Sharma, S., Linna, J., Thankachan, B., Turunen, M., Väättäjä, H., Kallioniemi, P., Read, J. C. & Sim, G., 2017, *Human-Computer Interaction - INTERACT 2017 - 16th IFIP TC 13 International Conference, Proceedings*. Springer Verlag, p. 501-503 3 p. (Lecture Notes in Computer Science; vol. 10516).

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

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

Melekhov, I., Ylioinas, J., Kannala, J. & Rahtu, E., 2017, *Advanced Concepts for Intelligent Vision Systems - 18th International Conference, ACIVS 2017, Proceedings*. Springer Verlag, p. 675-687 13 p. (Lecture Notes in Computer Science; vol. 10617).

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

#### **Robust Deep Face Recognition with Label Noise**

Yuan, J., Ma, W., Zhu, P. & Egiazarian, K., 2017, *Neural Information Processing - 24th International Conference, ICONIP 2017, Proceedings*. Springer Verlag, p. 593-602 10 p. (Lecture Notes in Computer Science; vol. 10635).

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

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

Nurminen, M., Leppänen, L., Väättäjä, H. & Ihantola, P., 2017, *Data Driven Approaches in Digital Education - 12th European Conference on Technology Enhanced Learning, EC-TEL 2017, Proceedings*. Springer Verlag, p. 434-440 7 p. (Lecture Notes in Computer Science; vol. 10474).

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

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

Valmari, A. & Hansen, H., 2017, *Transactions on Petri Nets and Other Models of Concurrency XII*. Springer Verlag, p. 140-165 26 p. (Lecture Notes in Computer Science; vol. 10470).

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

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

Valmari, A., 2017, *Reachability Problems - 11th International Workshop, RP 2017, Proceedings*. Springer Verlag, p. 160-175 16 p. (Lecture Notes in Computer Science; vol. 10506).

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**

Kannisto, J. & Harju, J., 2017, *Network and System Security: 11th International Conference, NSS 2017, Helsinki, Finland, August 21-23, 2017, Proceedings*. Springer, p. 301-314 14 p. (Lecture Notes in Computer Science; vol. 10394).

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**

Orlov, Y., Kirina-Lilinskaya, E., Samuylov, A., Ometov, A., Moltchanov, D., Gaimamaka, Y., Andreev, S. & Samouylov, K., 2017, *Wired/Wireless Internet Communications - 15th IFIP WG 6.2 International Conference, WWIC 2017, Proceedings*. Springer, p. 16-25 10 p. (Lecture Notes in Computer Science; vol. 10372).

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

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

Nurmi, J. & Niemelä, M. S., 2017, *Network and System Security: 11th International Conference, NSS 2017, Helsinki, Finland, August 21–23, 2017, Proceedings*. Springer, p. 657-671 15 p. (Lecture Notes in Computer Science; vol. 10394).

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

#### **Wired/Wireless Internet Communications: 15th IFIP WG 6.2 International Conference, WWIC 2017, St. Petersburg, Russia, June 21–23, 2017, Proceedings**

Koucheryavy, Y. (ed.), Mamatas, L. (ed.), Matta, I. (ed.), Ometov, A. (ed.) & Papadimitriou, P. (ed.), 2017, Springer. (Lecture Notes in Computer Science; vol. 10372)

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

#### **A survey on internal interfaces used by exploits and implications on interface diversification**

Rauti, S., Lauren, S., Uitto, J., Hosseinzadeh, S., Ruohonen, J., Hyrynsalmi, S. & Leppänen, V., 2 Nov 2016, *Secure IT Systems - 21st Nordic Conference, NordSec 2016, Proceedings*. Springer Verlag, Vol. 10014 LNCS. p. 152-168 17 p. (Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics); vol. 10014 LNCS).

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**

Nguyen, A., Komarov, M. & Moltchanov, D., 20 Sep 2016, *Internet of Things, Smart Spaces, and Next Generation Networks and Systems - 16th International Conference, NEW2AN 2016 and 9th Conference, ruSMART 2016, Proceedings*. Springer International Publishing AG, p. 372-382 11 p. (Lecture Notes in Computer Science; vol. 9870).

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

#### **Dynamic trust management framework for robotic multi-agent systems**

Zikratov, I., Maslennikov, O., Lebedev, I., Ometov, A. & Andreev, S., 20 Sep 2016, *Internet of Things, Smart Spaces, and Next Generation Networks and Systems - 16th International Conference, NEW2AN 2016 and 9th Conference, ruSMART 2016, Proceedings*. Springer International Publishing AG, Vol. 9870. p. 339-348 10 p. (Lecture Notes in Computer Science; vol. 9870).

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

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

Sopin, E., Samouylov, K., Vikhrova, O., Kovalchukov, R., Moltchanov, D. & Samuylov, A., 20 Sep 2016, *Internet of Things, Smart Spaces, and Next Generation Networks and Systems - 16th International Conference, NEW2AN 2016 and 9th Conference, ruSMART 2016, Proceedings*. Springer International Publishing, p. 440-450 11 p. (Lecture Notes in Computer Science; vol. 9870).

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

#### **Intra-CPU traffic estimation and implications on networks-on-chip research**

Moltchanov, D., Kluchev, A., Kustarev, P., Borunova, K. & Platonov, A., 20 Sep 2016, *Internet of Things, Smart Spaces, and Next Generation Networks and Systems - 16th International Conference, NEW2AN 2016 and 9th Conference, ruSMART 2016, Proceedings*. Springer International Publishing AG, p. 453-464 12 p. (Lecture Notes in Computer Science; vol. 9870).

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

#### **Optimizing network-assisted WLAN systems with aggressive channel utilization**

Ometov, A., Andreev, S., Levina, A. & Bezzateev, S., 20 Sep 2016, *Internet of Things, Smart Spaces, and Next Generation Networks and Systems - 16th International Conference, NEW2AN 2016 and 9th Conference, ruSMART 2016, Proceedings*. Springer International Publishing AG, p. 217-229 13 p. (Lecture Notes in Computer Science; vol. 9870).

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**

Devillers, R., Valmari, A. & Penczek, W., 13 Sep 2016, In : *Fundamenta Informaticae*. 146, 1, p. v-vi  
Research output: Contribution to journal › Editorial › Scientific

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

Yli-Kaakinen, J. & Renfors, M., Aug 2016, In : *Journal of Signal Processing Systems*. 85, 1, p. 101-111  
Research output: Contribution to journal › Article › Scientific › peer-review

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

Emmert-Streib, F., Dehmer, M. & Shi, Y., 10 Jun 2016, In : *Information Sciences*. 346-347, p. 180-197 18 p.  
Research output: Contribution to journal › Article › Scientific › peer-review

**Constructing Minimal Coverability Sets**

Piipponen, A. & Valmari, A., 4 Mar 2016, In : *Fundamenta Informaticae*. 143, 3-4, p. 393-414 22 p.  
Research output: Contribution to journal › Article › Scientific › peer-review

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

**Are software developers just users of development tools? Assessing developer experience of a graphical user interface designer**

Kuusinen, K., 2016, *Human-Centered and Error-Resilient Systems Development - IFIP WG 13.2/13.5 Joint Working Conference 6th International Conference on Human-Centered Software Engineering, HCSE 2016 and 8th International Conference on Human Error, Safety, and System Development, HESSD 2016, Proceedings*. Springer Verlag, p. 215-233 19 p. (Lecture Notes in Computer Science; vol. 9856).  
Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**Backend infrastructure supporting audio augmented reality and storytelling**

Salo, K., Giova, D. & Mikkonen, T., 2016, *Human Interface and the Management of Information: Applications and Services: 18th International Conference, HCI International 2016 Toronto, Canada, July 17-22, 2016. Proceedings, Part II*. Springer Verlag, p. 325-335 11 p. (Lecture Notes in Computer Science; vol. 9735).  
Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

**Construction of enterprise architecture in discourses within the public sector**

Lemmetti, J., 2016, *Electronic Government - 15th IFIP WG 8.5 International Conference, EGOV 2016, Proceedings*. Springer Verlag, p. 287-298 12 p. (Lecture Notes in Computer Science; vol. 9820).  
Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

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

Brous, P., Janssen, M. & Vilminko-Heikkinen, R., 2016, *Electronic Government - 15th IFIP WG 8.5 International Conference, EGOV 2016, Proceedings*. Springer Verlag, p. 115-125 11 p. (Lecture Notes in Computer Science; vol. 9820).  
Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

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

Yaman, S. G., Sauvola, T., Riungu-Kalliosaari, L., Hokkanen, L., Kuvaja, P., Oivo, M. & M nnist , T., 2016, *Requirements Engineering: Foundation for Software Quality: 22nd International Working Conference, REFSQ 2016, Gothenburg, Sweden, March 14-17, 2016, Proceedings*. Springer Verlag, p. 249-265 17 p. (Lecture Notes in Computer Science; vol. 9619).  
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**

Jääskeläinen, A., 2016, *Testing Software and Systems - 28th IFIP WG 6.1 International Conference, ICTSS 2016, Proceedings*. Springer Verlag, p. 225-230 6 p. (Lecture Notes in Computer Science; vol. 9976).

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

subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics); vol. 9221).

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

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

Ponomarenko, N., Lukin, V., Astola, J. & Egiazarian, K., 2015, *Advanced Concepts for Intelligent Vision Systems: 16th International Conference, ACIVS 2015, Catania, Italy, October 26-29, 2015. Proceedings*. Springer Verlag, p. 613-624 12 p. (Lecture Notes in Computer Science; vol. 9386).

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**

Devillers, R. (ed.) & Valmari, A. (ed.), 2015, Springer Verlag. (Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics); vol. 9115)

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**

Chaudhary, S., Li, L., Berki, E., Helenius, M., Kela, J. & Turunen, M., 2015, *Lecture Notes in Computer Science*. Springer Verlag, p. 128-145 18 p. (Lecture Notes in Computer Science; vol. 9128).

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

#### **Bayesian statistical analysis for performance evaluation in real-time control systems**

Boström, P., Heikkilä, M., Huova, M., Waldèn, M. & Linjama, M., 2015, *Quantitative Evaluation of Systems: 12th International Conference, QEST 2015, Madrid, Spain, September 1-3, 2015, Proceedings*. Springer Verlag, Vol. 9259. p. 312-328 17 p. (Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics); vol. 9259).

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

#### **Cache storage attacks**

Brumley, B. B., 2015, *Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)*. Springer Verlag, p. 22-34 13 p. (Lecture Notes in Computer Science; vol. 9048).

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

#### **Complex transforms**

Murthy, G. R. & Saramäki, T., 2015, *Mining Intelligence and Knowledge Exploration: Third International Conference, MIKE 2015, Hyderabad, India, December 9-11, 2015, Proceedings*. Springer Verlag, p. 382-391 10 p. (Lecture Notes in Computer Science; vol. 9468).

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

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

Kannisto, J., Heikkinen, S., Slavov, K. & Harju, J., 2015, *Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)*. Springer Verlag, p. 12-26 15 p. (Lecture Notes in Computer Science; vol. 8629).

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**

Rama Murthy, G. & Gabbouj, M., 2015, *Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)*. Springer Verlag, p. 356-369 14 p. (Lecture Notes in Computer Science; vol. 9095).

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**

Räihä, K. J., 2015, *Human-Computer Interaction – INTERACT 2015 - 15th IFIP TC 13 International Conference, Proceedings*. Springer Verlag, Vol. 9296. p. 402-417 16 p. (Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics); vol. 9296).

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**

Ziaei, Z., Oftadeh, R. & Mattila, J., 2015, *Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)*. Springer Verlag, Vol. 9287. p. 303-309 7 p. (Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics); vol. 9287).

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**

Hamari, J., Koivisto, J. & Pakkanen, T., 2014, *Persuasive Technology - 9th International Conference, PERSUASIVE 2014, Proceedings*. Springer Verlag, Vol. 8462 LNCS. p. 118-136 19 p. (Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics); vol. 8462 LNCS).

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**

Abukwaik, H., Taibi, D. & Rombach, D., 2014, *Software Architecture - 8th European Conference, ECSA 2014, Proceedings*. Springer Verlag, p. 308-323 16 p. (Lecture Notes in Computer Science; vol. 8627).

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

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

Nyländén, T., Boutellier, J., Nikunen, K., Hannuksela, J. & Silvén, O., 2014, In : *International Journal of Parallel Programming*. 43, 1, p. 3-23 21 p.

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**

Iosifidis, A., Tefas, A. & Pitas, I., 2014, *Artificial Intelligence: Methods and Applications: 8th Hellenic Conference on AI, SETN 2014, Ioannina, Greece, May 15-17, 2014. Proceedings*. Springer Verlag, Vol. 8445. p. 84-94 11 p. (Lecture Notes in Computer Science; vol. 8445 LNCS).

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**

Kee, H., Shen, C. C., Bhattacharyya, S. S., Wong, I., Rao, Y. & Kornerup, J., 2012, In : *Journal of Signal Processing Systems*. 66, 3, p. 285-301 17 p.

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

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

Nukarinen, T., Raisamo, R., Pystynen, J. & Mäkinen, E., 2012, In : *Lecture Notes in Computer Science*. 7283 LNCS, PART 2, p. 214-217 4 p.

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

### **Orientation inquiry: A new haptic interaction technique for non-visual pedestrian navigation**

Raisamo, R., Nukarinen, T., Pystynen, J., Mäkinen, E. & Kildal, J., 2012, In : *Lecture Notes in Computer Science*. 7283 LNCS, PART 2, p. 139-144 6 p.

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

### **Practical realisation and elimination of an ECC-related software bug attack**

Brumley, B., Barbosa, M., Page, D. & Vercauteren, F., 2012, *Topics in Cryptology, CT-RSA 2012 - The Cryptographers' Track at the RSA Conference 2012, Proceedings*. Vol. 7178 LNCS. p. 171-186 16 p. (Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics); vol. 7178 LNCS).

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

### **Secure and fast implementations of two involution ciphers**

Brumley, B. B., 2012, *Information Security Technology for Applications - 15th Nordic Conference on Secure IT Systems, NordSec 2010, Revised Selected Papers*. Vol. 7127 LNCS. p. 269-282 14 p. (Lecture Notes in Computer Science; vol. 7127 LNCS).

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

### **SymbolChat: Picture-based communication platform for users with intellectual disabilities**

Keskinen, T., Heimonen, T., Turunen, M., Rajaniemi, J. P. & Kauppinen, S., 2012, *Computers Helping People with Special Needs - 13th International Conference, ICCHP 2012, Proceedings*. PART 2 ed. Vol. 7383 LNCS. p. 279-286 8 p. (Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics); vol. 7383 LNCS, no. PART 2).

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

### **Utilizing haptic feedback in drill rigs**

Keskinen, T., Turunen, M., Raisamo, R., Evreinov, G. & Haverinen, E., 2012, In : *Lecture Notes in Computer Science*. 7283 LNCS, PART 2, p. 73-78 6 p.

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

### **Overview of the MPEG reconfigurable video coding framework**

Bhattacharyya, S. S., Eker, J., Janneck, J. W., Lucarz, C., Mattavelli, M. & Raulet, M., May 2011, In : *Journal of Signal Processing Systems*. 63, 2, p. 251-263 13 p.

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

### **Quasi-static scheduling of CAL actor networks for reconfigurable video coding**

Boutellier, J., Lucarz, C., Lafond, S., Gomez, V. M. & Mattavelli, M., May 2011, In : *Journal of Signal Processing Systems*. 63, 2, p. 191-202 12 p.

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

### **Exploiting statically schedulable regions in dataflow programs**

Gu, R., Janneck, J. W., Raulet, M. & Bhattacharyya, S. S., Apr 2011, In : *Journal of Signal Processing Systems*. 63, 1, p. 129-142 14 p.

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

### **Forward simulation and inverse dipole localization with the lowest order Raviart - Thomas elements for electroencephalography**

Pursiainen, S., Sorrentino, A., Campi, C. & Piana, M., Apr 2011, In : *Inverse Problems*. 27, 4, 045003.

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

### **Multimodal and mobile conversational Health and Fitness Companions**

Turunen, M., Hakulinen, J., Ståhl, O., Gambäck, B., Hansen, P., Rodríguez Gancedo, M. C., De La Cámara, R. S., Smith, C., Charlton, D. & Cavazza, M., Apr 2011, In : *Computer Speech and Language*. 25, 2, p. 192-209 18 p.

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

### **Some background on dialogue management and conversational speech for dialogue systems**

Wilks, Y., Catizone, R., Worgan, S. & Turunen, M., Apr 2011, In : *Computer Speech and Language*. 25, 2, p. 128-139 12 p.

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

### **All the news that's fit to read: Finding and recommending news online**

Leino, J., Rähkä, K. J. & Finnberg, S., 2011, *Human-Computer Interaction - INTERACT 2011 - 13th IFIP TC 13 International Conference, Proceedings*. PART 3 ed. Vol. 6948 LNCS. p. 169-186 18 p. (Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics); vol. 6948 LNCS, no. PART 3).

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

### **A method for text localization and recognition in real-world images**

Neumann, L. & Matas, J., 2011, *Computer Vision, ACCV 2010 - 10th Asian Conference on Computer Vision, Revised Selected Papers*. PART 3 ed. Vol. 6494 LNCS. p. 770-783 14 p. (Lecture Notes in Computer Science (including subseries

Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics); vol. 6494 LNCS, no. PART 3).  
Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

#### **A model-based schedule representation for heterogeneous mapping of dataflow graphs**

Wu, H. H., Shen, C. C., Sane, N., Plishker, W. & Bhattacharyya, S. S., 2011, *2011 IEEE International Symposium on Parallel and Distributed Processing, Workshops and Phd Forum, IPDPSW 2011*. p. 70-81 12 p. 6008822  
Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

#### **A morphological atlas of prostate's zonal anatomy for construction of realistic digital and physical phantoms**

Makni, N., Iancu, A., Puech, P., Mordon, S. & Betrouni, N., 2011, *Prostate Cancer Imaging: Image Analysis and Image-Guided Interventions - International Workshop, Held in Conjunction with MICCAI 2011, Proceedings*. Vol. 6963 LNCS. p. 22-34 13 p. (Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics); vol. 6963 LNCS).  
Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

#### **Bit-sliced binary normal basis multiplication**

Brumley, B. & Page, D., 2011, *Proceedings - 20th IEEE Symposium on Computer Arithmetic, ARITH-20*. p. 205-212 8 p. 5992128  
Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

#### **Evaluations of piezo actuated haptic stimulations**

Salminen, K., Surakka, V., Lylykangas, J., Rantala, J., Laitinen, P. & Raisamo, R., 2011, *Affective Computing and Intelligent Interaction - 4th International Conference, ACII 2011, Proceedings*. PART 1 ed. Vol. 6974 LNCS. p. 296-305 10 p. (Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics); vol. 6974 LNCS, no. PART 1).  
Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

#### **Focused multi-task learning using Gaussian processes**

Leen, G., Peltonen, J. & Kaski, S., 2011, *Machine Learning and Knowledge Discovery in Databases - European Conference, ECML PKDD 2011, Proceedings*. PART 2 ed. Vol. 6912 LNAI. p. 310-325 16 p. (Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics); vol. 6912 LNAI, no. PART 2).  
Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

#### **Heterogeneous design in functional DIF**

Plishker, W., Sane, N., Kiemb, M. & Bhattacharyya, S. S., 2011, *Transactions on High-Performance Embedded Architectures and Compilers IV*. Vol. 6760 LNCS. p. 391-408 18 p. (Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics); vol. 6760 LNCS).  
Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

#### **Planar affine rectification from change of scale**

Chum, O. & Matas, J., 2011, *Computer Vision, ACCV 2010 - 10th Asian Conference on Computer Vision, Revised Selected Papers*. PART 4 ed. Vol. 6495 LNCS. p. 347-360 14 p. (Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics); vol. 6495 LNCS, no. PART 4).  
Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

#### **Processing and classification of multichannel remote sensing data**

Lukin, V., Ponomarenko, N., Kurekin, A. & Pogrebnyak, O., 2011, *Advances in Soft Computing - 10th Mexican International Conference on Artificial Intelligence, MICAI 2011, Proceedings*. PART 2 ed. Vol. 7095 LNAI. p. 487-498 12 p. (Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics); vol. 7095 LNAI, no. PART 2).  
Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

#### **Remote timing attacks are still practical**

Brumley, B. & Tuveri, N., 2011, *Computer Security, ESORICS 2011 - 16th European Symposium on Research in Computer Security, Proceedings*. Vol. 6879 LNCS. p. 355-371 17 p. (Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics); vol. 6879 LNCS).  
Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

### **The effects of emotionally worded synthesized speech on the ratings of emotions and voice quality**

Ilves, M., Surakka, V. & Vanhala, T., 2011, *Affective Computing and Intelligent Interaction - 4th International Conference, ACII 2011, Proceedings*. PART 1 ed. Vol. 6974 LNCS. p. 588-598 11 p. (Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics); vol. 6974 LNCS, no. PART 1).

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

### **The virtual workplace of a mobile employee - How does Vischer's model function in identifying physical, functional and psychosocial fit?**

Hyrkkänen, U. & Nenonen, S., 2011, *Human-Computer Interaction: Towards Mobile and Intelligent Interaction Environments - 14th International Conference, HCI International 2011, Proceedings*. PART 3 ed. Vol. 6763 LNCS. p. 69-75 7 p. (Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics); vol. 6763 LNCS, no. PART 3).

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

### **Topological patterns for scalable representation and analysis of dataflow graphs**

Sane, N., Kee, H., Seetharaman, G. & Bhattacharyya, S. S., 2011, In : *Journal of Signal Processing Systems*. 65, 2, p. 229-244 16 p.

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

### **Using gaze data in evaluating interactive visualizations**

Siirtola, H. & Räihä, K. J., 2011, *Human Aspects of Visualization - Second IFIP WG 13.7 Workshop on Human-Computer Interaction and Visualization, HCIV (INTERACT) 2009, Revised Selected Papers*. Vol. 6431 LNCS. p. 127-141 15 p. (Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics); vol. 6431 LNCS).

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

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

Brumley, B. B., Hakala, R. M., Nyberg, K. & Sovio, S., 1 Dec 2010, *Information and Communications Security - 12th International Conference, ICICS 2010, Proceedings*. p. 171-185 15 p. (Lecture Notes in Computer Science; vol. 6476).

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

### **New results on instruction cache attacks**

Acliçmez, O., Brumley, B. B. & Grabher, P., 5 Nov 2010, *Cryptographic Hardware and Embedded Systems, CHES 2010 - 12th International Workshop, Proceedings*. p. 110-124 15 p. (Lecture Notes in Computer Science; vol. 6225).

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

### **Conversion algorithms and implementations for koblitz curve cryptography**

Brumley, B. B. & Järvinen, K. U., 4 Jan 2010, In : *IEEE Transactions on Computers*. 59, 1, p. 81-92 12 p., 5255226.

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

### **Cache-timing template attacks**

Brumley, B. B. & Hakala, R. M., 28 Dec 2009, *Advances in Cryptology - ASIACRYPT 2009 - 15th International Conference on the Theory and Application of Cryptology and Information Security, Proceedings*. p. 667-684 18 p. (Lecture Notes in Computer Science; vol. 5912).

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

### **On modular decomposition of integers**

Brumley, B. B. & Nyberg, K., 9 Nov 2009, *Progress in Cryptology - AFRICACRYPT 2009 - Second International Conference on Cryptology in Africa, Proceedings*. p. 386-402 17 p. (Lecture Notes in Computer Science; vol. 5580).

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

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

Brumley, B. B. & Järvinen, K. U., 1 Jul 2008, *Public Key Infrastructure - 5th European PKI Workshop: Theory and Practice, EuroPKI 2008, Proceedings*. p. 134-149 16 p. (Lecture Notes in Computer Science; vol. 5057).

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

#### **Differential properties of elliptic curves and blind signatures**

Brumley, B. B. & Nyberg, K., 1 Dec 2007, *Information Security - 10th International Conference, ISC 2007, Proceedings*. p. 376-389 14 p. (Lecture Notes in Computer Science; vol. 4779).

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

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

Brumley, B. B. & Järvinen, K., 1 Dec 2007, *Selected Areas in Cryptography - 14th International Workshop, SAC 2007, Revised Selected Papers*. p. 126-137 12 p. (Lecture Notes in Computer Science; vol. 4876).

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

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

Emmert-Streib, F. & Dehmer, M., 2007, *Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)*. Vol. 4827 LNAI. p. 540-549 10 p. (Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics); vol. 4827 LNAI).

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

#### **Left-to-right signed-bit $\tau$ -adic representations of $n$ integers**

Brumley, B. B., 1 Jan 2006, *Information and Communications Security - 8th International Conference, ICICS 2006, Proceedings*. Springer Verlag, p. 469-478 10 p. (Lecture Notes in Computer Science; vol. 4307).

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

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

Emmert-Streib, F., 2006, *Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)*. Springer Verlag, Vol. 3971 LNCS. p. 414-423 10 p. (Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics); vol. 3971 LNCS).

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

#### **A neurobiologically motivated model for self-organized learning**

Emmert-Streib, F., 2005, *Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)*. Gelbukh, A., DeAlbornoz, A. & TerashimaMarin, H. (eds.). Springer-Verlag, Berlin, Vol. 3789 LNAI. p. 415-424 10 p. (Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics); vol. 3789 LNAI).

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

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

Rentto, K., Korhonen, I., Vääänen, A., Pekkarinen, L., Tuomisto, T., Cluitmans, L. & Lappalainen, R., 2003, *Lecture Notes in Computer Science: Ambient Intelligence. First European Symposium, EUSAI 2003*. Springer Netherlands, Vol. 2875. p. 384-393 10 p.

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