

CONTENTS OF *Informatica* Volume 41 (2017) pp. 1–523

Papers

- AJANOVIĆ, A. & , J. KONDA, G. FELE-ŽORŽ, A. GRADIŠEK, M. GAMS, A. PETERLIN, K. POČIVAVŠEK, M. MATIČIČ. 2017. Application for Sexually Transmitted Infection Risk Assessment. *Informatica* 41:253–254.
- ALEPIS, E. & , C. TROUSSAS. 2017. M-learning Programming Platform: Evaluation in Elementary Schools. *Informatica* 41:471–478.
- BATIN, M. & , A. TURCHIN, S. MARKOV, A. ZHILA, D. DENKENBERGER. 2017. Artificial Intelligence in Life Extension: from Deep Learning to Superintelligence. *Informatica* 41:401–418.
- BAUM, S.D. & , A.M. BARRETT, R. YAMPOLSKIY. 2017. Modeling and Interpreting Expert Disagreement About Artificial Superintelligence. *Informatica* 41:419–427.
- BOURAS, Z.-E. & , M. MAOUCHE. 2017. Software Architecture Evolution based Merging. *Informatica* 41:111–120.
- CHANG, L. & , A. PÉREZ-SUÁREZ, J. HERNÁNDEZ-PALANCAR, M. ARIAS-ESTRADA, L.E. SUCAR. 2017. Improving Visual Vocabularies: A More Discriminative, Representative and Compact Bag of Visual Words. *Informatica* 41:333–347.
- CONTI, D. & , L. BONACINA, A. FROIO, F. MARCOLIN, E. VEZZETTI, D. SPERANZA, S. BORRA. 2017. Landmarking-Based Unsupervised Clustering of Human Faces Manifesting Labio-Schisis Dysmorphisms. *Informatica* 41:507–516.
- DJELLAL, A. & , Z. BOUFAIDA. 2017. Individual Classification: an Ontological Fuzzy Based Approach. *Informatica* 41:209–219.
- EL HOUBY, E.M.F. & , N.I.R. YASSIN, S. OMRAN. 2017. A Hybrid Approach from Ant Colony Optimization and K-nearest Neighbor for Classifying Datasets Using Selected Features. *Informatica* 41:495–506.
- ETH, D. & . 2017. The Technological Landscape Affecting Artificial General Intelligence and the Importance of Nanoscale Neural Probes. *Informatica* 41:463–470.
- FAOUZI, D. & , N. BIBI-TRIKI, B. MOHAMED, A. ABÉNE. 2017. Optimization, Modeling and Simulation of Microclimate and Energy Management of the Greenhouse by Modeling the Associated Heating and Cooling Systems and Implemented by a Fuzzy Logic Controller using Artificial Intelligence. *Informatica* 41:317–331.
- FISTER JR., I. & . 2017. Computational Intelligence Algorithms for the Development of an Artificial Sport Trainer. *Informatica* 41:517–518.
- FOMICHOV, V.A. & . 2017. SK-languages as a Powerful and Flexible Semantic Formalism for the Systems of Cross-Lingual Intelligent Information Access. *Informatica* 41:221–232.
- GHOSH, A. & , S. QIN, J. LEE, G.-N. WANG. 2017. An Output Instruction Based PLC Source Code Transformation Approach For Program Logic Simplification. *Informatica* 41:349–362.
- HASSANAT, A.B.A. & , V.B.S. PRASATH, K.I. MSEIDEIN, M. AL-AWADI, A.M. HAMMOURI. 2017. A Hybrid Wavelet-Shearlet Approach to Robust Digital Image Watermarking. *Informatica* 41:3–24.
- HORVAT, D. & . 2017. Classification of Vegetation in Aerial LiDAR Data. *Informatica* 41:379–380.
- HTIKE, K.K. & . 2017. Hidden-layer Ensemble Fusion of MLP Neural Networks for Pedestrian Detection. *Informatica* 41:87–97.
- HUANG, Y.F. & , Y.-H. CHO. 2017. Accelerating XML Query Processing on Views. *Informatica* 41:305–315.
- JILK, D.J. & . 2017. Conceptual-Linguistic Superintelligence. *Informatica* 41:429–439.
- KALYANI, G. & . 2017. Decision Tree Based Data Reconstruction for Privacy Preserving Classification Rule Mining. *Informatica* 41:289–304.
- KHARI, M. & , P. KUMAR. 2017. An Effective Meta-Heuristic Cuckoo Search Algorithm for Test Suite Optimization. *Informatica* 41:363–377.
- LE-TIEN, T. & , T. HUYNH-KHA, L. PHAM-CONG-HOAN, A. TRAN-HONG. 2017. Combined Zernike Moment and Multiscale Analysis for Tamper Detection in Digital Images. *Informatica* 41:59–70.
- LIANG, M. & , Z. ZHOU, Q. SONG. 2017. Improved Lane Departure Warning Method Based on Hough Transformation and Kalman Filter. *Informatica* 41:283–288.
- MAZOUZ, M. & , F. MOKHATI, M. BADRI. 2017. Formal Development of Multi-Agent Systems with FPASSI: Towards Formalizing PASSI Methodology using Rewriting Logic. *Informatica* 41:233–252.
- MEGHANATHAN, N. & . 2017. Bipartivity Index based Link Selection Strategy to Determine Stable and Energy-Efficient Data Gathering Trees for Mobile Sensor Networks. *Informatica* 41:259–274.
- MITRA, S. & , A. DAS. 2017. Distributed Fault Tolerant Architecture for Wireless Sensor Network. *Informatica* 41:47–58.

- MOHD, W.R.W. & , L. ABDULLAH. 2017. Aggregation Methods in Group Decision Making: A Decade Survey. *Informatica* 41:71–86.
- NGUYEN, H.D. & , T.D. VU, D.H. NGUYEN, M.D. LE, T.H. HO, T.V. PHAM. 2017. Key-Value-Links: A New Data Model for Developing Efficient RDMA-Based In-Memory Stores. *Informatica* 41:183–192.
- NGUYEN, V.-T. & , T.D. NGO, M.-T. TRAN, D.-D. LE, D.A. DUONG. 2017. Persons-In-Places: a Deep Features Based Approach for Searching a Specific Person in a Specific Location. *Informatica* 41:149–158.
- PHAM, T.T.T. & , T.-L. LE, T.-K. DAO. 2017. Improvement of Person Tracking Accuracy in Camera Network by Fusing WiFi and Visual Information. *Informatica* 41:133–148.
- REDDI, S. & , S. BORRA. 2017. Identity-based Signcryption Groupkey Agreement Protocol using Bilinear Pairing. *Informatica* 41:31–37.
- SARMA, G.P. & , N.J. HAY. 2017. Mammalian Value Systems. *Informatica* 41:441–449.
- SARMA, G.P. & , N.J. HAY. 2017. Robust Computer Algebra, Theorem Proving, and Oracle AI. *Informatica* 41:451–461.
- SATAPATHY, S.K. & , A.K. JAGADEV, S. DEHURI. 2017. Weighted Majority Voting Based Ensemble of Classifiers Using Different Machine Learning Techniques for Classification of EEG Signal to Detect Epileptic Seizure. *Informatica* 41:99–110.
- SERNA M., E. & , A. SERNA A.. 2017. Power and Limitations of Formal Methods for Software Fabrication: Thirty Years Later. *Informatica* 41:275–282.
- SOTALA, K. & , L. GLOOR. 2017. Superintelligence as a Cause or Cure for Risks of Astronomical Suffering. *Informatica* 41:389–400.
- TA, X.H. & , B. GAUDOU, D. LONGIN, T.V. HO. 2017. Emotional Contagion Model for Group Evacuation Simulation. *Informatica* 41:169–182.
- THANG, C.P. & . 2017. Image Processing Procedures Based on Multi-Quadratic Dynamic Programming. *Informatica* 41:255–256.
- THANKI, R. & , V. DWIVEDI, K. BORISAGAR. 2017. A Watermarking Algorithm for Multiple Watermarks Protection Using RDWT-SVD and Compressive Sensing. *Informatica* 41:479–493.
- TIWARI, P. & , H. DAO, G.N. NGUYEN. 2017. Performance Evaluation of Lazy, Decision Tree Classifier and Multilayer Perceptron on Traffic Accident Analysis. *Informatica* 41:39–46.
- TOULOUSE, M. & , H. LE, C.V. PHUNG, D. HOCK. 2017. Defense Strategies against Byzantine Attacks in a Consensus-Based Network Intrusion Detection System. *Informatica* 41:193–207.
- TRAN, V.L. & . 2017. Another Look at Radial Visualization for Class-preserving Multivariate Data Visualization. *Informatica* 41:159–168.
- WANG, C.-X. & , J.-J. ZHANG, J.G. TROMP, S.-L. WU, F. ZHANG. 2017. An Improved Gene Expression Programming Based on Niche Technology of Outbreeding Fusion. *Informatica* 41:25–30.
- ZUPANČIČ, J. & , M. GAMS. 2017. Dynamic Protocol for the Demand Management of Heterogeneous Resources with Convex Cost Functions. *Informatica* 41:121–128.

Editorials

- CAREY, R. & , M. MAAS, N. WATSON, R. YAMPOLSKIY. 2017. Guest Editors' Introduction to the Special Issue on "Superintelligence". *Informatica* 41:387–388.
- DEY, N. & , S.BORRA, S.C. SATAPATHY. 2017. Editors' Introduction to the Special Issue on "End-user Privacy, Security, and Copyright issues". *Informatica* 41:1–2.
- GAMS, M. & . 2017. Editor-In-Chief's Introduction to the Special Issue on "Superintelligence", AI and an Overview of IJCAI 2017. *Informatica* 41:387–388.
- RAEDT, L.D. & , Y. DEVILLE, M. BUI, D.-L. TRUONG. 2017. Editors' Introduction to the Special Issue on "Information and Communication Technology". *Informatica* 41:131–132.

JOŽEF STEFAN INSTITUTE

Jožef Stefan (1835-1893) was one of the most prominent physicists of the 19th century. Born to Slovene parents, he obtained his Ph.D. at Vienna University, where he was later Director of the Physics Institute, Vice-President of the Vienna Academy of Sciences and a member of several scientific institutions in Europe. Stefan explored many areas in hydrodynamics, optics, acoustics, electricity, magnetism and the kinetic theory of gases. Among other things, he originated the law that the total radiation from a black body is proportional to the 4th power of its absolute temperature, known as the Stefan–Boltzmann law.

The Jožef Stefan Institute (JSI) is the leading independent scientific research institution in Slovenia, covering a broad spectrum of fundamental and applied research in the fields of physics, chemistry and biochemistry, electronics and information science, nuclear science technology, energy research and environmental science.

The Jožef Stefan Institute (JSI) is a research organisation for pure and applied research in the natural sciences and technology. Both are closely interconnected in research departments composed of different task teams. Emphasis in basic research is given to the development and education of young scientists, while applied research and development serve for the transfer of advanced knowledge, contributing to the development of the national economy and society in general.

At present the Institute, with a total of about 900 staff, has 700 researchers, about 250 of whom are postgraduates, around 500 of whom have doctorates (Ph.D.), and around 200 of whom have permanent professorships or temporary teaching assignments at the Universities.

In view of its activities and status, the JSI plays the role of a national institute, complementing the role of the universities and bridging the gap between basic science and applications.

Research at the JSI includes the following major fields: physics; chemistry; electronics, informatics and computer sciences; biochemistry; ecology; reactor technology; applied mathematics. Most of the activities are more or less closely connected to information sciences, in particular computer sciences, artificial intelligence, language and speech technologies, computer-aided design, computer architectures, biocybernetics and robotics, computer automation and control, professional electronics, digital communications and networks, and applied mathematics.

The Institute is located in Ljubljana, the capital of the independent state of Slovenia (or S^Qnia). The capital today is considered a crossroad between East, West and Mediterranean Europe, offering excellent productive capabilities and solid business opportunities, with strong international connections. Ljubljana is connected to important centers such as Prague, Budapest, Vienna, Zagreb, Milan, Rome, Monaco, Nice, Bern and Munich, all within a radius of 600 km.

From the Jožef Stefan Institute, the Technology park “Ljubljana” has been proposed as part of the national strategy for technological development to foster synergies between research and in-

dustry, to promote joint ventures between university bodies, research institutes and innovative industry, to act as an incubator for high-tech initiatives and to accelerate the development cycle of innovative products.

Part of the Institute was reorganized into several high-tech units supported by and connected within the Technology park at the Jožef Stefan Institute, established as the beginning of a regional Technology park “Ljubljana”. The project was developed at a particularly historical moment, characterized by the process of state reorganisation, privatisation and private initiative. The national Technology Park is a shareholding company hosting an independent venture-capital institution.

The promoters and operational entities of the project are the Republic of Slovenia, Ministry of Higher Education, Science and Technology and the Jožef Stefan Institute. The framework of the operation also includes the University of Ljubljana, the National Institute of Chemistry, the Institute for Electronics and Vacuum Technology and the Institute for Materials and Construction Research among others. In addition, the project is supported by the Ministry of the Economy, the National Chamber of Economy and the City of Ljubljana.

Jožef Stefan Institute
Jamova 39, 1000 Ljubljana, Slovenia
Tel.: +386 1 4773 900, Fax.: +386 1 251 93 85
WWW: <http://www.ijs.si>
E-mail: matjaz.gams@ijs.si
Public relations: Polona Strnad

INFORMATICA
AN INTERNATIONAL JOURNAL OF COMPUTING AND INFORMATICS
INVITATION, COOPERATION

Submissions and Refereeing

Please register as an author and submit a manuscript at: <http://www.informatica.si>. At least two referees outside the author's country will examine it, and they are invited to make as many remarks as possible from typing errors to global philosophical disagreements. The chosen editor will send the author the obtained reviews. If the paper is accepted, the editor will also send an email to the managing editor. The executive board will inform the author that the paper has been accepted, and the author will send the paper to the managing editor. The paper will be published within one year of receipt of email with the text in Informatica MS Word format or Informatica L^AT_EX format and figures in .eps format. Style and examples of papers can be obtained from <http://www.informatica.si>. Opinions, news, calls for conferences, calls for papers, etc. should be sent directly to the managing editor.

SUBSCRIPTION

Please, complete the order form and send it to Dr. Drago Torkar, Informatica, Institut Jožef Stefan, Jamova 39, 1000 Ljubljana, Slovenia. E-mail: drago.torkar@ijs.si

Since 1977, Informatica has been a major Slovenian scientific journal of computing and informatics, including telecommunications, automation and other related areas. In its 16th year (more than twentythree years ago) it became truly international, although it still remains connected to Central Europe. The basic aim of Informatica is to impose intellectual values (science, engineering) in a distributed organisation.

Informatica is a journal primarily covering intelligent systems in the European computer science, informatics and cognitive community; scientific and educational as well as technical, commercial and industrial. Its basic aim is to enhance communications between different European structures on the basis of equal rights and international refereeing. It publishes scientific papers accepted by at least two referees outside the author's country. In addition, it contains information about conferences, opinions, critical examinations of existing publications and news. Finally, major practical achievements and innovations in the computer and information industry are presented through commercial publications as well as through independent evaluations.

Editing and refereeing are distributed. Each editor can conduct the refereeing process by appointing two new referees or referees from the Board of Referees or Editorial Board. Referees should not be from the author's country. If new referees are appointed, their names will appear in the Refereeing Board.

Informatica web edition is free of charge and accessible at <http://www.informatica.si>.

Informatica print edition is free of charge for major scientific, educational and governmental institutions. Others should subscribe.

Informatica WWW:

<http://www.informatica.si/>

Referees from 2008 on:

A. Abraham, S. Abraham, R. Accornero, A. Adhikari, R. Ahmad, G. Alvarez, N. Anciaux, R. Arora, I. Awan, J. Azimi, C. Badica, Z. Balogh, S. Banerjee, G. Barbier, A. Baruzzo, B. Batagelj, T. Beaubouef, N. Beaulieu, M. ter Beek, P. Bellavista, K. Bilal, S. Bishop, J. Bodlaj, M. Bohanec, D. Bolme, Z. Bonikowski, B. Bokovi, M. Botta, P. Brazdil, J. Brest, J. Brichau, A. Brodник, D. Brown, I. Bruha, M. Bruynooghe, W. Buntine, D.D. Burdescu, J. Buys, X. Cai, Y. Cai, J.C. Cano, T. Cao, J.-V. Capella-Hernandez, N. Carver, M. Cavazza, R. Ceylan, A. Chebotko, I. Chekalov, J. Chen, L.-M. Cheng, G. Chiola, Y.-C. Chiou, I. Chorbev, S.R. Choudhary, S.S.M. Chow, K.R. Chowdhury, V. Christlein, W. Chu, L. Chung, M. Ciglari, J.-N. Colin, V. Cortellessa, J. Cui, P. Cui, Z. Cui, D. Cutting, A. Cuzzocrea, V. Cvjetkovic, J. Cyprianski, L. ehovin, D. erepnalkoski, I. osi, G. Daniele, G. Danoy, M. Dash, S. Datt, A. Datta, M.-Y. Day, F. Debili, C.J. Debono, J. Dedi, P. Degano, A. Dekdouk, H. Demirel, B. Demoen, S. Dendamrongvit, T. Deng, A. Derezsinska, J. Dezert, G. Dias, I. Dimitrovski, S. Dobriek, Q. Dou, J. Doumen, E. Dovgan, B. Dragovich, D. Drajić, O. Drbohlav, M. Drole, J. Dujmovi, O. Ebers, J. Eder, S. Elaluf-Calderwood, E. Engstrm, U. riza Erturk, A. Farago, C. Fei, L. Feng, Y.X. Feng, B. Filipi, I. Fister, I. Fister Jr., D. Fier, A. Flores, V.A. Fomichov, S. Forli, A. Freitas, J. Fridrich, S. Friedman, C. Fu, X. Fu, T. Fujimoto, G. Fung, S. Gabrielli, D. Galindo, A. Gambarara, M. Gams, M. Ganzha, J. Garbajosa, R. Gennari, G. Georgeson, N. Gligori, S. Goel, G.H. Gonnet, D.S. Goodsell, S. Gordillo, J. Gore, M. Grar, M. Grgurovi, D. Grosse, Z.-H. Guan, D. Gubiani, M. Guid, C. Guo, B. Gupta, M. Gusev, M. Hahsler, Z. Haiping, A. Hameed, C. Hamzaebi, Q.-L. Han, H. Hanping, T. Hrder, J.N. Hatzopoulos, S. Hazelhurst, K. Hempstalk, J.M.G. Hidalgo, J. Hodgson, M. Holbl, M.P. Hong, G. Howells, M. Hu, J. Hyvrinen, D. Ienco, B. Ionescu, R. Irfan, N. Jaisankar, D. Jakobovi, K. Jassem, I. Jawhar, Y. Jia, T. Jin, I. Jureta, . Jurii, S. K, S. Kalajdziski, Y. Kalantidis, B. Kalua, D. Kanellopoulos, R. Kapoor, D. Karapetyan, A. Kassler, D.S. Katz, A. Kaveh, S.U. Khan, M. Khattak, V. Khomenko, E.S. Khorasani, I. Kitanovski, D. Kocev, J. Kocijan, J. Kollr, A. Kontostathis, P. Koroec, A. Koschmider, D. Koir, J. Kova, A. Krajnc, M. Krevs, J. Krogstie, P. Krsek, M. Kubat, M. Kukar, A. Kulis, A.P.S. Kumar, H. Kwanicka, W.K. Lai, C.-S. Laih, K.-Y. Lam, N. Landwehr, J. Lanir, A. Lavrov, M. Layouni, G. Leban, A. Lee, Y.-C. Lee, U. Legat, A. Leonardis, G. Li, G.-Z. Li, J. Li, X. Li, X. Li, Y. Li, Y. Li, S. Lian, L. Liao, C. Lim, J.-C. Lin, H. Liu, J. Liu, P. Liu, X. Liu, X. Liu, F. Logist, S. Loskovska, H. Lu, Z. Lu, X. Luo, M. Lutrek, I.V. Lyustig, S.A. Madani, M. Mahoney, S.U.R. Malik, Y. Marinakis, D. Marini, J. Marques-Silva, A. Martin, D. Marwede, M. Matijaevi, T. Matsui, L. McMillan, A. McPherson, A. McPherson, Z. Meng, M.C. Mihaescu, V. Milea, N. Min-Allah, E. Minisci, V. Mii, A.-H. Mogos, P. Mohapatra, D.D. Monica, A. Montanari, A. Moroni, J. Mosegaard, M. Mokon, L. de M. Mourelle, H. Moustafa, M. Moina, M. Mrak, Y. Mu, J. Mula, D. Nagamalai, M. Di Natale, A. Navarra, P. Navrat, N. Nedjah, R. Nejabati, W. Ng, Z. Ni, E.S. Nielsen, O. Nouali, F. Novak, B. Novikov, P. Nurmi, D. Obrul, B. Oliboni, X. Pan, M. Panur, W. Pang, G. Papa, M. Paprzycki, M. Parali, B.-K. Park, P. Patel, T.B. Pedersen, Z. Peng, R.G. Pensa, J. Per, D. Petcu, B. Petelin, M. Petkovek, D. Pevec, M. Piulin, R. Piltaver, E. Pirogova, V. Podpean, M. Polo, V. Pomponiu, E. Popescu, D. Poshyvanyk, B. Potonik, R.J. Povinelli, S.R.M. Prasanna, K. Pripu, G. Puppis, H. Qian, Y. Qian, L. Qiao, C. Qin, J. Que, J.-J. Quisquater, C. Rafe, S. Rahimi, V. Rajkovi, D. Rakovi, J. Ramaekers, J. Ramon, R. Ravnik, Y. Reddy, W. Reimche, H. Rezankova, D. Rispoli, B. Ristevski, B. Robi, J.A. Rodriguez-Aguilar, P. Rohatgi, W. Rossak, I. Roanc, J. Rupnik, S.B. Sadkhan, K. Saeed, M. Saeki, K.S.M. Sahari, C. Sakharwade, E. Sakkopoulos, P. Sala, M.H. Samadzadeh, J.S. Sandhu, P. Scaglioso, V. Schau, W. Schempp, J. Seberry, A. Senanayake, M. Senobari, T.C. Seong, S. Shamala, c. shi, Z. Shi, L. Shiguo, N. Shilov, Z.-E.H. Slimane, F. Smith, H. Sneed, P. Sokolowski, T. Song, A. Soppera, A. Sorniotti, M. Stajdohar, L. Stanescu, D. Strnad, X. Sun, L. ajn, R. enkek, M.R. ikonja, J. ilc, I. krjanc, T. tajner, B. ter, V. truc, H. Takizawa, C. Talcott, N. Tomasev, D. Torkar, S. Torrente, M. Trampu, C. Tranoris, K. Trojancanec, M. Tschierschke, F. De Turck, J. Twycross, N. Tziritas, W. Vanhoof, P. Vateekul, L.A. Vese, A. Visconti, B. Vlaovi, V. Vojisavljevi, M. Vozalis, P. Vraar, V. Vrani, C.-H. Wang, H. Wang, H. Wang, H. Wang, S. Wang, X.-F. Wang, X. Wang, Y. Wang, A. Wasilewska, S. Wenzel, V. Wickramasinghe, J. Wong, S. Wrobel, K. Wrona, B. Wu, L. Xiang, Y. Xiang, D. Xiao, F. Xie, L. Xie, Z. Xing, H. Yang, X. Yang, N.Y. Yen, C. Yong-Sheng, J.J. You, G. Yu, X. Zabulis, A. Zainal, A. Zamuda, M. Zand, Z. Zhang, Z. Zhao, D. Zheng, J. Zheng, X. Zheng, Z.-H. Zhou, F. Zhuang, A. Zimmermann, M.J. Zuo, B. Zupan, M. Zuqiang, B. alik, J. ika,

Informatica

An International Journal of Computing and Informatics

Web edition of Informatica may be accessed at: <http://www.informatica.si>.

Subscription Information Informatica (ISSN 0350-5596) is published four times a year in Spring, Summer, Autumn, and Winter (4 issues per year) by the Slovene Society Informatika, Litostrojska cesta 54, 1000 Ljubljana, Slovenia.

The subscription rate for 2017 (Volume 41) is

- 60 EUR for institutions,
- 30 EUR for individuals, and
- 15 EUR for students

Claims for missing issues will be honored free of charge within six months after the publication date of the issue.

Typesetting: Borut Žnidar.

Printing: ABO grafika d.o.o., Ob železnici 16, 1000 Ljubljana.

Orders may be placed by email (drago.torkar@ijs.si), telephone (+386 1 477 3900) or fax (+386 1 251 93 85). The payment should be made to our bank account no.: 02083-0013014662 at NLB d.d., 1520 Ljubljana, Trg republike 2, Slovenija, IBAN no.: SI56020830013014662, SWIFT Code: LJBASI2X.

Informatica is published by Slovene Society Informatika (president Niko Schlamberger) in cooperation with the following societies (and contact persons):

Slovene Society for Pattern Recognition (Simon Dobrišek)

Slovenian Artificial Intelligence Society (Mitja Luštrek)

Cognitive Science Society (Olga Markič)

Slovenian Society of Mathematicians, Physicists and Astronomers (Marej Brešar)

Automatic Control Society of Slovenia (Nenad Muškinja)

Slovenian Association of Technical and Natural Sciences / Engineering Academy of Slovenia (Stane Pejovnik)

ACM Slovenia (Matjaž Gams)

Informatica is financially supported by the Slovenian research agency from the Call for co-financing of scientific periodical publications.

Informatica is surveyed by: ACM Digital Library, Citeseer, COBISS, Compendex, Computer & Information Systems Abstracts, Computer Database, Computer Science Index, Current Mathematical Publications, DBLP Computer Science Bibliography, Directory of Open Access Journals, InfoTrac OneFile, Inspec, Linguistic and Language Behaviour Abstracts, Mathematical Reviews, MatSciNet, MatSci on SilverPlatter, Scopus, Zentralblatt Math

Informatica

An International Journal of Computing and Informatics

Editor-In-Chief's Introduction to the Special Issue on "Superintelligence", AI and an Overview of IJCAI 2017	M. Gams	383
Guest Editors' Introduction to the Special Issue on "Superintelligence"	R. Carey, M. Maas, N. Watson, R. Yampolskiy	387
Superintelligence as a Cause or Cure for Risks of Astronomical Suffering	K. Sotala, L. Gloor	389
Artificial Intelligence in Life Extension: from Deep Learning to Superintelligence	M. Batin, A. Turchin, S. Markov, A. Zhila, D. Denkenberger	401
Modeling and Interpreting Expert Disagreement About Artificial Superintelligence	S.D. Baum, A.M. Barrett, R. Yampolskiy	419
Conceptual-Linguistic Superintelligence	D.J. Jilk	429
Mammalian Value Systems	G.P. Sarma, N.J. Hay	441
Robust Computer Algebra, Theorem Proving, and Oracle AI	G.P. Sarma, N.J. Hay	451
The Technological Landscape Affecting Artificial General Intelligence and the Importance of Nanoscale Neural Probes	D. Eth	463
<hr/> <i>End of Special Issue / Start of normal papers</i>		
M-learning Programming Platform: Evaluation in Elementary Schools	E. Alepis, C. Troussas	471
A Watermarking Algorithm for Multiple Watermarks Protection Using RDWT-SVD and Compressive Sensing	R. Thanki, V. Dwivedi, K. Borisagar	479
A Hybrid Approach from Ant Colony Optimization and K-nearest Neighbor for Classifying Datasets Using Selected Features	E.M.F. El Houby, N.I.R. Yassin, S. Omran	495
Landmarking-Based Unsupervised Clustering of Human Faces Manifesting Labio-Schisis Dysmorphisms	D. Conti, L. Bonacina, A. Froio, F. Marcolin, E. Vezzetti, D. Speranza, S. Borra	507
Computational Intelligence Algorithms for the Development of an Artificial Sport Trainer	I. Fister Jr.	517

