

Publications of Vagan Terziyan

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[JUFO Publications](#) Statistics:

JUFO_LEVEL = x : 104 papers;

JUFO_LEVEL = 0: 32 papers;

JUFO_LEVEL = 1: 89 papers;

JUFO_LEVEL = 2: 11 papers;

JUFO_LEVEL = 3: 3 papers.

TOTAL: **239** publications

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Edited Books and Book Chapters

Terziyan, V., Golovianko, M., & Gryshko, S. (2018). [Industry 4.0 Intelligence under Attack: From Cognitive Hack to Data Poisoning](#). In: K. Dimitrov (Ed.), *Cyber Defence in Industry 4.0 Systems and Related Logistics and IT Infrastructure (NATO Science for Peace and Security Series D: Information and Communication Security*, Vol. 51, pp. 110-125). IOS Press. <https://doi.org/10.3233/978-1-61499-888-4-110>

([JUFO_ID = 5548; JUFO_LEVEL = 1](#)).

([Brief presentation of the Cognitive Hack and Data Poisoning in the context of Industry 4.0 is here](#)).

Cochez, M., Periaux, J., Terziyan, V., & Tuovinen T. (2018). [Agile Deep Learning UAVs Operating in Smart Spaces: Collective Intelligence vs. “Mission-Impossible”](#). In: P. Dies *et al.* (Eds.), *Computational Methods and Models for Transport - New Challenges for the Greening of Transport Systems (Computational Methods in Applied Sciences*, Vol. 45, pp. 31-53).Springer. https://doi.org/10.1007/978-3-319-54490-8_3

([JUFO_ID = 79940; JUFO_LEVEL = 1](#)).

Dobko, T., Golovianko, M., Kaikova, O., Terziyan, V., & Tiihonen, T. (Eds.). (2014). [Імператив якості: вчимося цінувати і оцінювати вищу освіту. \(Quality Matters: How to Value and Evaluate Higher Education\)](#), 572 pp. Lviv: Publisher Company Manuscript.

Gryshko, S., Dobko, T., Kaikova, O., Terziyan, V., & Tiihonen, T. (Eds.). (2014). [Від контролю до культури якості: перезавантаження процесів забезпечення якості в українській вищій школі. \(“We Share because we Care”: Reloading the Processes of Quality Assurance in the Ukrainian Higher Education\)](#), 168 pp. Lviv: Publisher Company Manuscript.

Ermolayev, V., Akerkar, R., Terziyan, V., & Cochez M. (2013). [Towards Evolving Knowledge Ecosystems for Big Data Understanding](#). In: R. Akerkar (Ed.), *Big Data Computing* (pp. 3-56). Boca Raton, FL: Taylor & Francis. <https://doi.org/10.1201/b16014-3>

([JUFO_ID = 6003; JUFO_LEVEL = 2](#)).
([Full text of the chapter from books.google.com](#)).

Santos, M. Y., & Terziyan, V. (Eds.). (2011). *BUSTECH-2011: Proceedings of the First International Conference on Business Intelligence and Technology* (65 pp.). IARIA XPS Press, ISBN: 978-1-61208-160-1

Kesaniemi, J., & Terziyan, V. (2011). [Agent-Environment Interaction in MAS - Introduction and Survey](#). In: F. Alkhateeb (Ed.), *Multi-Agent Systems - Modeling, Interactions, Simulations and Case Studies* (pp. 203-226). IntechOpen. <https://doi.org/10.5772/15145>

([JUFO_ID = 7044; JUFO_LEVEL = 0](#)).

Katasonov, A., & Terziyan, V. (2010). [Using Semantic Technology to Enable Behavioural Coordination of Heterogeneous Systems](#). In: G. Wu (Ed.), *Semantic Web* (pp. 135-156). IntechOpen. <https://doi.org/10.5772/7304>

([JUFO_ID = 7044; JUFO_LEVEL = 0](#)).

Nagy, M., Katasonov, A., Khriyenko, O., Nikitin, S., Szydowski, M., & Terziyan, V. (2009). [Challenges of Middleware for the Internet of Things](#). In: A. Rodic (Ed.), *Automation and Control - Theory and Practice* (pp. 247-270). IntechOpen. <https://doi.org/10.5772/7869>

([JUFO_ID = 7044; JUFO_LEVEL = 0](#)).

Terziyan, V. (2009). [Semantic Web Services for Smart Devices Based on Mobile Agents](#). In: D. Taniar (Ed.), *Mobile Computing: Concepts, Methodologies, Tools,*

and Applications (pp. 630-641). IGI Global. <https://doi.org/10.4018/978-1-60566-054-7.ch054>

([JUFO_ID = 5478; JUFO_LEVEL = 1](#)).

Terziyan, V., & Katasonov, A. (2009). [Global Understanding Environment: Applying Semantic and Agent Technologies to Industrial Automation](#). In: M. D. Lytras, & P. O. De Pablos (Eds.), *Emerging Topics and Technologies in Information Systems* (pp. 55-87). IGI Global. <https://doi.org/10.4018/978-1-60566-222-0.ch003>

([JUFO_ID = 5478; JUFO_LEVEL = 1](#)).

Ermolayev, V., Keberle, N., Kononenko, O., & Terziyan, V. (2007). [Proactively Composing Web Services as Tasks by Semantic Web Agents](#). In: L. J. Zang (Ed.), *Modern Technologies in Web Services Research* (pp. 217-246). IGI Global. <https://doi.org/10.4018/978-1-59904-280-0.ch011>

([JUFO_ID = 5478; JUFO_LEVEL = 1](#)).

Terziyan, V. (2007). [Challenges of the “Global Understanding Environment” based on Agent Mobility](#). In: V. Sugumaran (Ed.), *Application of Agents and Intelligent Information Technologies* (pp. 121-152). IGI Global. <https://doi.org/10.4018/978-1-59904-265-7.ch007>

([JUFO_ID = 5478; JUFO_LEVEL = 1](#)).

Kaykova, O., Khriyenko, O., Kovtun, D., Naumenko, A., Terziyan, V., & Zharko, A. (2007). [General Adaptation Framework: Enabling Interoperability for Industrial Web Resources](#). In: A. Sheth, & M. Lytras (Eds.), *Semantic Web-Based Information Systems: State-of-the-Art Applications* (pp. 61-97). IGI Global. <https://doi.org/10.4018/978-1-59904-426-2.ch003>

([JUFO_ID = 5478; JUFO_LEVEL = 1](#)).

Ermolayev, V., Terziyan, V., & Kaykova, H. (2006). [SW @ Ukraine](#). In: M. Lytras (Ed.), [Semantic Web Fact Book 2005](#) (pp. 13-17). AIS SIGSEMIS.

Bramer, M. A., & Terziyan, V. (Eds.). (2005). [Industrial Applications of Semantic Web: Proceedings of the 1st International IFIP/WG12.5 Working Conference on Industrial Applications of Semantic Web, August 25-27, 2005 Jyvaskyla, Finland](#) (322 pp.). ISBN 978-0-387-28568-9. Springer, Boston, MA. <https://doi.org/10.1007/0-387-29248-9>

([JUFO ID = 5952; JUFO LEVEL = 2](#)).

Terziyan, V., & Puuronen, S. (2000). [Reasoning with Multilevel Contexts in Semantic Metanetworks](#). In: P. Bonzon, M. Cavalcanti, & R. Nossun (Eds.), [Formal Aspects in Context](#) (Applied Logic Series, Vol. 20, pp. 107-126). Kluwer Academic Publishers. https://doi.org/10.1007/978-94-015-9397-7_7

([JUFO ID = 5598; JUFO LEVEL = 2](#)).

([Brief presentation of the Semantic Metanetwork concept is here](#)).

Articles in Scientific Journals

Terziyan, V., & Tiihonen, T. (2024). [Using Cloning-GAN Architecture to Unlock the Secrets of Smart Manufacturing: Replication of Cognitive Models](#). [Procedia Computer Science](#), 232, 890-902. Elsevier. <https://doi.org/10.1016/j.procs.2024.01.089>

([JUFO ID = 71301; JUFO LEVEL = 1](#)).

([Presentation slides are here](#)).

Terziyan, V., Terziian, A., & Vitko, O. (2024). [Creative and Adversarial Cellular Automata for Simulating Resilience in Industry 5.0](#). [Procedia Computer Science](#), 232, 1491-1502. Elsevier. <https://doi.org/10.1016/j.procs.2024.01.147>

([JUFO ID = 71301; JUFO LEVEL = 1](#)).

(Presentation slides are here).

Kaikova, O., & Terziyan, V. (2024). [Deep Neural Networks, Cellular Automata and Petri Nets: Useful Hybrids for Smart Manufacturing](#). *Procedia Computer Science*, 232, 2334-2346. Elsevier. <https://doi.org/10.1016/j.procs.2024.02.052>

(JUFO_ID = 71301; JUFO_LEVEL = 1).
(Presentation slides are here).

Terziyan, V., Bilokon, B., & Gavriushenko, M. (2024). [Deep Homeomorphic Data Encryption for Privacy Preserving Machine Learning](#). *Procedia Computer Science*, 232, 2201-2212. Elsevier. <https://doi.org/10.1016/j.procs.2024.02.039>

(JUFO_ID = 71301; JUFO_LEVEL = 1).
(Presentation slides are here).

Terziyan, V., & Vitko, O. (2024). [Taxonomy-Informed Neural Networks for Smart Manufacturing](#). *Procedia Computer Science*, 232, 1388-1399. Elsevier. <https://doi.org/10.1016/j.procs.2024.01.137>

(JUFO_ID = 71301; JUFO_LEVEL = 1).
(Presentation slides are here).

Terziyan, V., Kaikova, O., Golovianko, M., & Vitko, O. (2024). [Can ChatGPT Challenge the Scientific Impact of Published Research, Particularly in the Context of Industry 4.0 and Smart Manufacturing?](#). *Procedia Computer Science*, 232, 2540-2550. Elsevier. <https://doi.org/10.1016/j.procs.2024.02.072>

(JUFO_ID = 71301; JUFO_LEVEL = 1).
(Presentation slides are here).

Terziyan, V., Malyk, D., Golovianko, M., & Branytskyi, V. (2023). [Encryption and Generation of Images for Privacy-Preserving Machine Learning in Smart Manufacturing](#). *Procedia Computer Science*, 217, 91-101. Elsevier. <https://doi.org/10.1016/j.procs.2022.12.205>.

(JUFO_ID = 71301; JUFO_LEVEL = 1).
(Presentation slides are here).

Terziyan, V., & Vitko, O., (2023). [Causality-Aware Convolutional Neural Networks for Advanced Image Classification and Generation. *Procedia Computer Science*, 217, 495-506. Elsevier. <https://doi.org/10.1016/j.procs.2022.12.245>](#).

([JUFO ID = 71301; JUFO LEVEL = 1](#)).
([Presentation slides are here](#)).

Terziyan, V., Kaikova, O., Malyk, D., & Branytskyi, V. (2023). [The Truth is Out There: Focusing on Smaller to Guess Bigger in Image Classification. *Procedia Computer Science*, 217, 1323-1334. Elsevier. <https://doi.org/10.1016/j.procs.2022.12.330>](#).

([JUFO ID = 71301; JUFO LEVEL = 1](#)).
([Presentation slides are here](#)).

Golovianko, M., Terziyan, V., Branytskyi, V., & Malyk, D., (2023). [Industry 4.0 vs. Industry 5.0: Co-existence, Transition, or a Hybrid. *Procedia Computer Science*, 217, 102-113. Elsevier. <https://doi.org/10.1016/j.procs.2022.12.206>](#).

([JUFO ID = 71301; JUFO LEVEL = 1](#)).
([Presentation slides are here](#)).

Terziyan, V., Malyk, D., Golovianko, M., & Branytskyi, V. (2022). [Hyper-Flexible Convolutional Neural Networks Based on Generalized Lehmer and Power Means. *Neural Networks*, 155, 177-203. Elsevier. <https://doi.org/10.1016/j.neunet.2022.08.017>](#).

([JUFO ID = 63865; JUFO Level = 2](#)).

Golovianko, M., Gryshko, S., Terziyan, V., & Tuunanen, T. (2022). [Responsible Cognitive Digital Clones as Decision Makers: A Design Science Research Study. *European Journal of Information Systems*, 32\(5\), 879–901. <https://doi.org/10.1080/0960085X.2022.2073278>](#).

([JUFO ID = 55737; JUFO Level = 3](#)).

Kaikova, O., Terziyan, V., Tiihonen, T., Golovianko, M., Gryshko, S., & Titova, L. (2022). Hybrid Threats against Industry 4.0: Adversarial Training of Resilience. *E3S Web of Conferences*, 353, 03004. <https://doi.org/10.1051/e3sconf/202235303004> (JUFO ID = 86108; JUFO Level = 1).
([Presentation slides are here](#)).

Kumpulainen, S., & Terziyan, V. (2022). [Artificial General Intelligence vs. Industry 4.0: Do They Need Each Other?](#) *Procedia Computer Science*, 200, 140-150. Elsevier. <https://doi.org/10.1016/j.procs.2022.01.213> (JUFO ID = 71301; JUFO LEVEL = 1).
([Presentation slides are here](#)).

Terziyan, V., & Vitko, O. (2022). [Explainable AI for Industry 4.0: Semantic Representation of Deep Learning Models.](#) *Procedia Computer Science*, 200, 216-226. Elsevier. <https://doi.org/10.1016/j.procs.2022.01.220> (JUFO ID = 71301; JUFO LEVEL = 1).
([Presentation slides are here](#)).

Branytskyi, V., Golovianko, M., Malyk, D., & Terziyan, V. (2022). [Generative Adversarial Networks with Bio-Inspired Primary Visual Cortex for Industry 4.0.](#) *Procedia Computer Science*, 200, 418-427. Elsevier. <https://doi.org/10.1016/j.procs.2022.01.240> (JUFO ID = 71301; JUFO LEVEL = 1).
([Presentation slides are here](#)).

Branytskyi, V., Golovianko, M., Gryshko, S., Malyk, D., Terziyan, V., & Tuunanen, T. (2022). [Digital Clones and Digital Immunity: Adversarial Training Handles Both.](#) *International Journal of Simulation and Process Modelling*, 18(2), 124-139. Inderscience Publishers. <https://doi.org/10.1504/IJSPM.2022.10048910> .
<https://dx.doi.org/10.1504/IJSPM.2022.126106> (JUFO ID = 58809; JUFO Level = 1).

Terziyan, V., & Kaikova, O. (2021). [Neural Networks with Disabilities: An Introduction to Complementary Artificial Intelligence](#). *Neural Computation*, 34(1), 255-290. MIT Press Direct. https://doi.org/10.1162/neco_a_01449
([JUFO_ID = 63861; JUFO_LEVEL = 3](#)).

Terziyan, V., & Nikulin, A. (2021). [Semantics of Voids within Data: Ignorance-Aware Machine Learning](#). *ISPRS International Journal of Geo-Information*, 10(4), 246. <https://doi.org/10.3390/ijgi10040246>
([JUFO_ID = 76096; JUFO_LEVEL = 1](#)).

Girka, A., Terziyan, V., Gavriushenko, M., & Gontarenko, A. (2021). [Anonymization as Homeomorphic Data Space Transformation for Privacy-Preserving Deep Learning](#). *Procedia Computer Science*, 180, 867-876. Elsevier. <https://doi.org/10.1016/j.procs.2021.01.337>
([JUFO_ID = 71301; JUFO_LEVEL = 1](#)).
([Presentation slides are here](#)).

Terziyan, V., Gryshko, S., & Golovianko, M. (2021). [Taxonomy of Generative Adversarial Networks for Digital Immunity of Industry 4.0 Systems](#). *Procedia Computer Science*, 180, 676-685. Elsevier. <https://doi.org/10.1016/j.procs.2021.01.290>
([JUFO_ID = 71301; JUFO_LEVEL = 1](#)).
([Presentation slides are here](#)).

Golovianko, M., Gryshko, S., Terziyan, V., & Tuunanen, T. (2021). [Towards Digital Cognitive Clones for the Decision-Makers: Adversarial Training Experiments](#). *Procedia Computer Science*, 180, 180-189. Elsevier. <https://doi.org/10.1016/j.procs.2021.01.155>
([JUFO_ID = 71301; JUFO_LEVEL = 1](#)).
([Presentation slides are here](#)).

Terziyan, V., Gavriushenko, M., Girka, A., Gontarenko, A., & Kaikova, O. (2021). [Cloning and Training Collective Intelligence with Generative Adversarial Networks](#). *IET Collaborative Intelligent Manufacturing*, 3(1), 64-74. John Wiley and Sons Ltd. <https://doi.org/10.1049/cim2.12008>

([JUFO ID = 89082; JUFO LEVEL = 1](#)).

Gavriushenko, M., Kaikova, O., & Terziyan, V. (2020). Bridging Human and Machine Learning for the Needs of Collective Intelligence Development. *Procedia Manufacturing*, 42, 302-306. Elsevier. <https://doi.org/10.1016/j.promfg.2020.02.092>

([JUFO ID = 82223; JUFO LEVEL = 1](#)).

([Presentation slides are here](#)).

([Best paper award](#)).

Terziyan, V., Gryshko, S., & Golovianko, M. (2018). [Patented Intelligence: Cloning Human Decision Models for Industry 4.0](#). *Journal of Manufacturing Systems*, 48 (Part C), 204-217. Elsevier. <https://doi.org/10.1016/j.jmsy.2018.04.019>

([JUFO ID = 60916; JUFO LEVEL = 1](#)).

Terziyan, V. (2017). [Social Distance Metric: From Coordinates to Neighborhoods](#), *International Journal of Geographical Information Science*, 31(12), 2401-2426. Taylor & Francis. <https://doi.org/10.1080/13658816.2017.1367796>

([JUFO ID = 58467; JUFO LEVEL = 2](#)).

Cochez, M., Terziyan, V., & Ermolayev, V. (2017). [Large Scale Knowledge Matching with Balanced Efficiency-Effectiveness Using LSH Forest](#). In: N. T. Nguyen, R. Kowalczyk, A. M. Pinto, & J. Cardoso (Eds.), *Transactions on Computational Collective Intelligence XXVI (Lecture Notes in Computer Science, Vol. 10190, pp. 46-66)*. Springer, Cham. https://doi.org/10.1007/978-3-319-59268-8_3

([JUFO ID = 82348; JUFO LEVEL = 1](#)).

Terziyan, V., & Kaikova, O. (2016). [Ontology for Temporal Reasoning based on Extended Allen's Interval Algebra](#), *International Journal of Metadata, Semantics and Ontologies*, 11(2), 93-109. Inderscience Publishers. <https://doi.org/10.1504/IJMSO.2016.080348>

([JUFO ID = 58633; JUFO LEVEL = 1](#)).

Terziyan, V., & Kaikova, O. (2015). [The "Magic Square": A Roadmap towards Emotional Business Intelligence](#). *Journal of Decision Systems*, 24(3), 255-272. Taylor & Francis. <https://doi.org/10.1080/12460125.2015.969592>

([JUFO ID = 60106; JUFO LEVEL = 1](#)).

Terziyan, V., Golovianko, M., & Shevchenko, O. (2015). [Semantic Portal as a Tool for Structural Reform of the Ukrainian Educational System](#). *Information Technology for Development*, 21(3), 381-402. Taylor & Francis. <https://doi.org/10.1080/02681102.2014.899955>

([JUFO ID = 57864; JUFO LEVEL = 1](#)).

Terziyan, V., Shevchenko, O., & Golovianko, M. (2014). [An Introduction to Knowledge Computing](#). *Eastern-European Journal of Enterprise Technologies*, 67(1/2), 2014, 27-40. <https://doi.org/10.15587/1729-4061.2014.21830>

([JUFO ID = 70334; JUFO LEVEL = 0](#)).

([Link to the full text of the paper](#)).

Khriyenko, O., Terziyan, V., Kaikova, O. (2013). [End User-Facilitated Interoperability in Internet of Things: Visually-Enriched User-Assisted Ontology Alignment](#). *International Journal on Advances in Internet Technology*, 6(1&2), 90-100. IARIA XPS Press.

([JUFO ID = 75269; JUFO LEVEL = 0](#)).

Terziyan, V., & Kaykova, O. (2012). [From Linked Data and Business Intelligence to Executable Reality](#). *International Journal on Advances in Intelligent Systems*, 5(1&2), 194-208. IARIA XPS Press.

([JUFO_ID = 70821; JUFO_LEVEL = 0](#)).
([Brief presentation of the concept is here](#)).
([Link to the full text of the paper](#)).

Terziyan, V., Katasonov, A., Cardoso, J., Hauswirth, M., & Majumdar, A. (2011). [PRIME: Proactive Inter-Middleware for Global Enterprise Resource Integration](#). *Eastern-European Journal of Enterprise Technologies*, 51(3/12), 2011, 3-16.

([JUFO_ID = 70334; JUFO_LEVEL = 0](#)).
([Link to the full text of the paper](#)).

Terziyan, V., Kaykova, O., & Zhovtobryukh, D. (2010). [UbiRoad: Semantic Middleware for Cooperative Traffic Systems and Services](#). *International Journal on Advances in Intelligent Systems*, 3(3&4), 286-302. IARIA XPS Press. ([Brief presentation of the concept is here](#)).

([JUFO_ID = 70821; JUFO_LEVEL = 0](#)).
([Brief presentation of the concept is here](#)).
([Link to the full text of the paper](#)).

Terziyan, V. (2008). [SmartResource – Proactive Self-Maintained Resources in Semantic Web: Lessons learned](#). *International Journal of Smart Home*, 2(2), 33-57. Global Vision Press. <http://dx.doi.org/10.14257/ijsh.2008.2.2.03>

([JUFO_ID = 58812; JUFO_LEVEL = 0](#)).
([Brief presentation of the concept is here](#)).

Naumenko, A., Srirama, S., Terziyan, V., & Jarke, M. (2006). Semantic Authorization of Mobile Web Services. *Journal of Theoretical and Applied Electronic Commerce Research*, 1(1), 1-15.

[https://kodu.ut.ee/~srirama/publications/Semantic Authorizations of Mobile Web Services.pdf](https://kodu.ut.ee/~srirama/publications/Semantic_Authorizations_of_Mobile_Web_Services.pdf)

([JUFO_ID = 62007; JUFO_LEVEL = 1](#)).

Khriyenko, O., Terziyan, V. (2006). [A Framework for Context-Sensitive Metadata Description](#). *International Journal of Metadata, Semantics and Ontologies*, 1(2), 154-164. Inderscience Publishers. <https://doi.org/10.1504/IJMSO.2006.011011>

([JUFO_ID = 58633; JUFO_LEVEL = 1](#)).

Veijalainen, J., Terziyan, V., Tirri, H. (2006). [Transaction Management for M-Commerce at a Mobile Terminal](#). *Electronic Commerce Research and Applications*, 5(3), 229-245. Elsevier. <https://doi.org/10.1016/j.elelap.2005.10.010>

([JUFO_ID = 55136; JUFO_LEVEL = 1](#)).

([Link to the full text of the paper](#)).

Naumenko, A., Nikitin, S., & Terziyan, V. (2006). [Service Matching in Agent Systems](#). *International Journal of Applied Intelligence*, 25(2), 223-237. Kluwer Academic Publishers. <https://doi.org/10.1007/s10489-006-9655-4>

([JUFO_ID = 51492; JUFO_LEVEL = 1](#)).

Naumenko, A., Nikitin, S., Terziyan, V., & Zharko, A. (2005). [Strategic Industrial Alliances in Paper Industry: XML- vs. Ontology-Based Integration Platforms](#). *The Learning Organization*, 12(5), 492-514. Emerald. <https://doi.org/10.1108/09696470510611438>

([JUFO_ID = 62552; JUFO_LEVEL = 1](#)).

([Link to the full text of the paper](#)).

Kaykova, O., Khriyenko, O., Kovtun, D., Naumenko, A., Terziyan, V., & Zharko, A. (2005). [General Adaption Framework: Enabling Interoperability for Industrial Web Resources](#). *International Journal on Semantic Web and Information Systems*, 1(3), 31-63. IGI Global. <https://doi.org/10.4018/jswis.2005070102>

([JUFO_ID = 58926; JUFO_LEVEL = 1](#)).

Terziyan, V. (2005). [Semantic Web Services for Smart Devices Based on Mobile Agents](#). *International Journal of Intelligent Information Technologies*, 1(2), 43-55. IGI Global. <https://doi.org/10.4018/jiit.2005040104>

([JUFO_ID = 58548; JUFO_LEVEL = 1](#)).
([Link to the full text of the paper](#)).

Terziyan, V. (2005). [A Bayesian Metanetwork](#). *International Journal on Artificial Intelligence Tools*, 14(3), 371-384. World Scientific. <https://doi.org/10.1142/S0218213005002156>

([JUFO_ID = 58921; JUFO_LEVEL = 1](#)).
([Link to the full text of the paper](#)).

Kaykova, O., Khriyenko, O., Naumenko, A., Terziyan, V., & Zharko, A. (2005). [RSCDF: A Dynamic and Context-Sensitive Metadata Description Framework for Industrial Resources](#). *Eastern-European Journal of Enterprise Technologies*, 15(3), 55-78.

([JUFO_ID = 70334; JUFO_LEVEL = 0](#)).

Terziyan, V., & Khriyenko, O. (2004). [Mobile Agent-Based Web Service Components in Semantic Web](#). *Eastern-European Journal of Enterprise Technologies*, 8(2), 4-15.

([JUFO_ID = 70334; JUFO_LEVEL = 0](#)).

Levykin, V., Terziyan V., & Shevchenko, O. (2004). [Менеджмент знаний в системе организации и технологии подготовки специалистов на профилирующей кафедре](#). ([Organization and Technology for Educating Specialists at a Profiling Department based on Knowledge Management](#)). *Eastern-European Journal of Enterprise Technologies*, 8(2), 15-19.

([JUFO_ID = 70334; JUFO_LEVEL = 0](#)).

Kaikova, H., Khriyenko, O., Kononenko, O., Terziyan, V., & Zharko, A. (2004). [Proactive Self-Maintained Resources in Semantic Web. *Eastern-European Journal of Enterprise Technologies*, 7\(1\), 4-16.](#)

([JUFO ID = 70334; JUFO LEVEL = 0.](#))

Ermolayev, V., Keberle, N., Plaksin, S., Kononenko, O., & Terziyan, V. (2004). [Towards a Framework for Agent-Enabled Semantic Web Service Composition. *International Journal of Web Services Research*, 1\(3\), 63-87. IGI Global. <https://doi.org/10.4018/jwsr.2004070>](#)

([JUFO ID = 58911; JUFO LEVEL = 1.](#))

([Link to the full text of the paper.](#))

Terziyan, V., & Zharko, A. (2003). [Semantic Web and Peer-to-Peer: Integration and Interoperability in Industry. *International Journal of Computers, Systems and Signals*, 4\(2\), 33-46. IAAMSAD.](#)

Terziyan, V. (2003). [Intelligent “Mirror Web Browsing” vs. Pull/Push Technology. *Eastern-European Journal of Enterprise Technologies*, 1\(1\), 4-14.](#)

([JUFO ID = 70334; JUFO LEVEL = 0.](#))

([Brief presentation of the concept is here.](#))

Tang, J., Terziyan, V., & Veijalainen, J. (2003). [Distributed PIN Verification Scheme for Improving Security of Mobile Devices. *Mobile Networks and Applications*, 8\(2\), 159-175. Kluwer Academic Publishers. <https://doi.org/10.1023/A:1022289231864>](#)

([JUFO ID = 63465; JUFO LEVEL = 1.](#))

Terziyan, V. (2002). [Ontological Modelling of E-Services to Ensure Appropriate Mobile Transactions. *Intelligent Systems in Accounting, Finance and Management*, 11\(3\), 159-172. John Wiley & Sons. <https://doi.org/10.1002/isaf.221>](#)
(JUFO_ID = 70602; JUFO_LEVEL = 1).

Terziyan, V., & Vitko, O. (2002). [Вероятностные метасети для решения задач интеллектуального анализа данных. \(Probabilistic Metanetworks for Intelligent Data Analysis\). *Artificial Intelligence: Scientific and Theoretical Journal*, 3, 188-197. \[Donetsk Institute of Artificial Intelligence Problems\]\(#\).](#)

Terziyan, V., & Vitko, O. (2001). [Интеллектуальное управление информацией в мобильной электронной коммерции. \(Intelligent Information Management in Mobile Electronic Commerce\). *News of Artificial Intelligence: Journal of Russian Association of Artificial Intelligence*, 5-6, 26-33.](#)

Terziyan, V., Puuronen, S., & Kaikova, H. (1999). [Interval-Based Parameter Recognition with the Trends in Multiple Estimations, *Pattern Recognition and Image Analysis*, 9\(4\), 719-731. PLEIADES Publishing.](#)
(JUFO_ID = 71262; JUFO_LEVEL = 0).

Savolainen, V., & Terziyan, V. (1999). [Metapetrinets for Controlling Complex and Dynamic Processes. *International Journal of Information and Management Sciences*, 10\(1\), 13-32.](#)
(JUFO_ID = 85426; JUFO_LEVEL = 0).
([Brief presentation of the concept is here](#)).
([Link to the full text of the paper](#)).

Terziyan, V., Tsymbal, A., & Puuronen, S. (1998). [The Decision Support System for Telemedicine Based on Multiple Expertise. *International Journal of Medical Informatics*, 49\(2\), 217-229. Elsevier. \[https://doi.org/10.1016/S1386-5056\\(98\\)00041-0\]\(https://doi.org/10.1016/S1386-5056\(98\)00041-0\)](#)

([JUFO ID = 58623; JUFO LEVEL = 3](#)).

Puuronen, S., Terziyan, V., & Omelayenko, B. (1998). [Приобретение знаний множества экспертов: экспериментальное исследование двух стратегий перерасчета рангов. \(Experimental Investigation of Two Rank Refinement Strategies for Voting with Multiple Experts\)](#). *Artificial Intelligence: Scientific and Theoretical Journal*, 2, 25-41. [Donetsk Institute of Artificial Intelligence Problems](#).

Huebenthal, F., Puuronen, S., & Terziyan, V. (1997). [Подход к интеллектуальной навигации, контроль и распределение в системе управления флотом. \(Approach to Intelligent Navigation, Control and Dispatching in Fleet Management System\)](#). *Интеллектуальные системы (Intelligent Systems)*, 2(1-4), 12 pp. Moscow State University.

Puuronen, S., & Terziyan, V. (1997). [Представление знаний с помощью семантических метасетей. \(Presenting Knowledge Using Semantic Metanetwork\)](#). *Интеллектуальные системы (Intelligent Systems)*, 2(1-4), 12 pp. Moscow State University.

Terziyan, V., Tkachuk, A., Tsymbal, A., & Puuronen, S. (1996). Intelligent Medical Diagnostics System Based on Integration of Statistical Methods. *Informatica Medica Slovenica*, 3(1-3), 109-114. SIMIA.

Bondarenko, M., Grebenyuk, V., & Terziyan, V. (1993). Reasoning Based on the Algebra of Semantic Relations. *Pattern Recognition and Image Analysis*, 3(4), 488-499. PLEIADES Publishing.

([JUFO ID = 71262; JUFO LEVEL = 0](#)).

Terziyan, V. (1993). Понятие интеллектуальности естественно-языковых систем. (The Concept of Intellectuality of Natural Language Systems). [*АСУ и приборы автоматике \(ASU i Pribory Avtomatiki\)*](#), 101, 47-54. Kharkiv: OSNOVA. ISSN 0135-1710

Bondarenko, M., Terziyan, V., & Popkov, I. (1992). Метод частичного устранения многозначности синтаксического представления предложения без привлечения семантики. (Syntactical Homonyms Removal Method without Use of Semantics). [*АСУ и приборы автоматике \(ASU i Pribory Avtomatiki\)*](#), 98, 26-31; 99, 36-42; 100, 8-19. Kharkiv: OSNOVA. ISSN 0135-1710

Terziyan, V., & Popkov, I. (1991). Формализация процесса устранения многозначности синтаксического разбора естественно-языкового высказывания. (A Formalism for Syntactical Homonyms Removal in Natural Language Expressions). [*Проблемы бионики \(Problemy Bioniki\)*](#), 47, 23-36. Kharkiv: State University Publishing. ISSN 0555-2656

Terziyan, V. (1991). Приобретение знаний в интеллектуальных естественно-языковых системах. (Knowledge Acquisition in Natural Language Systems). [*Upravlyayushchie Sistemy i Mashiny \(Control Systems and Computers\)*](#), 7, 143-149. Kiev: Naukova Dumka. ISSN 0130-5395

Gerasin, S., Kaikova, H., & Terziyan, V. (1990). Интервальный подход к обработке экспертных мнений: Метод последовательных отсечений. (An Interval-Based Approach to Multiple Experts' Opinions Processing: Successive Severance Method). [*Проблемы бионики \(Problemy Bioniki\)*](#), 44, 41-46. Kharkiv: State University Publishing. ISSN 0555-2656

Dzundzjuk, B., Terziyan, V., & Severina, L. (1989). Разработка медицинской экспертной системы на основе дискретной математики. (Development of Expert

Health-Protection Systems Based on Discrete Mathematics). [Проблемы бионики \(Problemy Bioniki\)](#), 42, 104-109. Kharkiv: State University Publishing. ISSN 0555-2656

Dzundzjuk, B., & Terziyan, V. (1988). Принципы построения интеллектуального обучаемого естественно-языкового интерфейса для решения задач борьбы с профессиональными заболеваниями. (Principles of Constructing an Intelligent Learning Natural Language Interface for Solving Problems of Combating Occupational Diseases). [Проблемы бионики \(Problemy Bioniki\)](#), 40, 81-88. Kharkiv: State University Publishing. ISSN 0555-2656

Kaikova, N., & Terziyan, V. (1987). Механизм исследования временных последовательностей в естественно-языковых текстах. (A Mechanism of Temporal Sequences Investigation in Texts). [Проблемы бионики \(Problemy Bioniki\)](#), 39, 25-34. Kharkiv: State University Publishing. ISSN 0555-2656

Terziyan, V. (1985). Принципы организации анализа естественно-языковых высказываний в системах общения пользователей с ЭВМ. (Principles of Natural Language Analysis Organization in Interface Systems). [Проблемы бионики \(Problemy Bioniki\)](#), 34, 66-74; 35, 17-24. Kharkiv: State University Publishing. ISSN 0555-2656

Komarkova, I., & Terziyan, V. (1984). Алгоритм разрешения местоимений в системах машинного анализа текстов. (Pronouns Resolution Algorithms in Text Processing Systems). [Проблемы бионики \(Problemy Bioniki\)](#), 33, 42-48. Kharkiv: State University Publishing. ISSN 0555-2656

Golovina, E., Kolmychek, K., & Terziyan, V. (1984). Принципы проверки семантической правильности естественно-языковых высказываний. (Principles of Semantic Verification of Natural Language Statements). [Проблемы бионики](#)

[\(Problemy Bioniki\)](#), 32, 64-72. Kharkiv: State University Publishing. ISSN 0555-2656

Lovitskii, V., & Terziyan, V. (1981). Кодирование слов в ТВ-структуре. (Words' Coding in TB-Structure). [Проблемы бионики \(Problemy Bioniki\)](#), 26, 60-68. Kharkiv: State University Publishing. ISSN 0555-2656

Papers in Conference Proceedings and Key Presentations

Terziyan, V. (2024). [Adversarial Analytics – Adversarial Maintenance – Adversarial AI: A New Bermuda Triangle?](#) In: F. Sobieczky (ed.), *Presentations of the Hagenberg Prescriptive Analytics Days 2024*. Hagenberg, Austria, April 4, 2024. https://ai.it.jyu.fi/Adversarial_Analytics.pptx

Terziyan, V. (2023). [Digital Cloning: Towards Responsible Use of AI](#). In: P. Hartikainen (Ed.), *Presentations of the KONE Cybersecurity Week*. Espoo, Finland, October 23-28, 2023. https://ai.it.jyu.fi/KONE_AI_and_Cybersecurity.pptx

Golovianko, M., Gryshko, S. & Terziyan, V. (2018). [From Deep Learning to Deep University: Cognitive Development of Intelligent Systems](#). In: J. Szymański & Y. Velegrakis (Eds.), *Semantic Keyword-Based Search on Structured Data Sources (Lecture Notes in Computer Science, Vol. 10546, pp. 80-85)*. Springer, Cham. https://doi.org/10.1007/978-3-319-74497-1_8

(JUFO ID = 82183; JUFO LEVEL = 1).
([Presentation slides are here](#)).

Terziyan, V. (2018). [Wearable Artificial Intelligence: Cognitive vs. Physical Capability Enhancement](#). In: *Presentations of the COST CA16116 MC/WG Meeting*

[\(WearableRobots: Wearable Robots for Augmentation, Assistance or Substitution of Human Motor Functions\)](#). Darmstadt, Germany, March 5-6, 2018.

Terziyan, V., Golovianko, M., & Cochez, M. (2017). [TB-Structure: Collective Intelligence for Exploratory Keyword Search](#). In: A. Cali, D. Gorgan & M. Ugarte (Eds.). [Semantic Keyword-Based Search on Structured Data Sources](#) (*Lecture Notes in Computer Science*, Vol. 10151, pp. 171-178). Springer, Cham. https://doi.org/10.1007/978-3-319-53640-8_15

([JUFO_ID = 82183; JUFO_LEVEL = 1](#)).
([Presentation slides are here](#)).

Cochez, M., Terziyan, V., & Ermolayev, V. (2015). [Balanced Large Scale Knowledge Matching Using LSH Forest](#). In: J. Cardoso, F. Guerra, G.-J. Houben, A. M. Pinto & Y. Velegrakis (Eds.). [Semantic Keyword-based Search on Structured Data Sources](#) (*Lecture Notes in Computer Science*, Vol. 9398, pp. 36-50). https://doi.org/10.1007/978-3-319-27932-9_4

([JUFO_ID = 82183; JUFO_LEVEL = 1](#)).
([Presentation slides are here](#)).

Helfenstein, S., Kaikova, O., Khriyenko, O., & Terziyan, V. (2014). [Emotional Business Intelligence](#). In: L. Gomes, J. Wtorek, A. Costa, H. Sawada, M. Manic & P. Strumillo (Eds.), [Proceedings of the 7th International Conference on Human System Interaction \(HSI-2014\)](#) (pp. 14-21). IEEE. <https://doi.org/10.1109/HSI.2014.6860441>

([JUFO_ID = 5475; JUFO_LEVEL = 1](#)).
([See relevant presentation material here](#)).

Khriyenko, O., Terziyan, V., & Kaikova, O. (2012). [User-Assisted Semantic Interoperability in Internet of Things. Visually-Facilitated Ontology Alignment through Visually-Enriched Ontology and Thing Descriptions](#). In: [Proceedings of the Sixth International Conference on Mobile Ubiquitous Computing, Systems, Services and Technologies](#) (pp. 104-110). IARIA XPS Press.

([JUFO_ID = 7961; JUFO_LEVEL = 0](#)).

[\(Presentation slides are here\)](#).

Cochez, M., & Terziyan, V. (2012). [Quality of an Ontology as a Dynamic Optimisation Problem](#). In: V. Ermolayev, *et al.* (Eds.), [Proceedings of the 8th International Conference on ICT in Education, Research and Industrial Applications: Integration, Harmonization and Knowledge Transfer \(ICTERI-2012\)](#) (CEUR-WS.org/Vol-848, pp. 249-256). ISSN 1613-0073

(JUFO_ID = 53269; JUFO_LEVEL = 1).

[\(Presentation slides are here\)](#).

Terziyan, V. (2012). [Global Understanding Environment: Towards Self-Managed Web of Everything](#). In: M. Rautiainen *et al.* (Eds.), *Grid and Pervasive Computing Workshops, GPC-2011 (Lecture Notes in Computer Science, Vol. 7096, pp. 1-2)*. Springer, Berlin: Heidelberg. https://doi.org/10.1007/978-3-642-27916-4_1

(JUFO_ID = 62555; JUFO_LEVEL = 1).

[\(Slides of the Keynote Speech is here\)](#).

[\(Photo from the Keynote Speech\)](#).

Terziyan, V., & Kaykova, O. (2011). [Towards "Executable Reality": Business Intelligence on Top of Linked Data](#). In: [Proceedings of the First International Conference on Business Intelligence and Technology \(BUSTECH-2011\)](#) (pp. 26-33). IARIA XPS Press, ISBN: 978-1-61208-160-1

(JUFO_ID = 7961; JUFO_LEVEL = 0).

[\(Presentation slides are here\)](#).

[\(Best paper award\)](#).

(See also presentation at panel discussion titled: [Bridging Webs for Future Business: "Everything-as-a-User"](#)).

Nikitin, S., Terziyan, V., Nagy, M. (2010). [Mastering Intelligent Clouds: Engineering Intelligent Data Processing Services in the Cloud](#). In: J. Gilipe, J. Andrade & J.-L. Ferrier (Eds.), [Proceedings of the 7th International Conference on Informatics in Control, Automation and Robotics \(ICINCO-2010\)](#) (Vol.1, pp. 174-181). SciTePress. <https://doi.org/10.5220/0002950401740181>

([JUFO_ID = 8695; JUFO_LEVEL = 0](#)).
([Presentation slides are here](#)).

Khriyenko, O., Nikitin, S., & Terziyan, V. (2010). [Context-Policy-Configuration: Paradigm of Intelligent Autonomous System Creation](#). In: J. Filipe & J. Cordeiro (Eds.), *Proceedings of the 12th International Conference on Enterprise Information Systems (ICEIS-2010)* (Vol. 2, pp. 198-205). SciTePress. <https://doi.org/10.5220/0002887401980205>

([JUFO_ID = 8695; JUFO_LEVEL = 0](#)).
([Presentation slides are here](#)).

Nikitin, S., Terziyan, V., & Lappalainen, M. (2010). [SOFIA: Agent Scenario for Forest Industry - Tailoring UBIWARE Platform Towards Industrial Agent-driven Solutions](#). In: J. Filipe & J. Cordeiro (Eds.), *Proceedings of the 12th International Conference on Enterprise Information Systems (ICEIS-2010)* (Vol. 1, pp. 15-22). SciTePress. <https://doi.org/10.5220/0002890800150022>

([JUFO_ID = 8695; JUFO_LEVEL = 0](#)).
([Presentation slides are here](#)).

Terziyan, V., Kaykova, O., & Zhovtobryukh, D. (2010). [UbiRoad: Semantic Middleware for Context-Aware Smart Road Environments](#). In: G.O. Bellot, H. Sasaki, M. Ehmann & C. Dini (Eds.), *Proceedings of the Fifth International Conference on Internet and Web Applications and Services (ICIW-2010)* (pp. 295-302). IEEE. <https://doi.org/10.1109/ICIW.2010.50>

([JUFO_ID = 5475; JUFO_LEVEL = 1](#)).
([Presentation slides are here](#)).
([Best paper award](#)).

Terziyan, V. (2009). [Semantic and Agent Technologies for Distributed e-Health](#). In: *Sosiaali- ja Terveysthuollon Tietojen-käsittelyn Tutkimuspäivät (Social and Health Care Data-Processing Days)*. Keynote Speech, 28.05.2009. University of Jyväskylä.

Khriyenko, O., & Terziyan, V. (2009). [Similarity/Closeness-Based Resource Browser](#). In: J.J. Zhang (Ed.), [Visualization, Imaging and Image Processing \(VIIP-2009\)](#) (pp. 184-191). ACTA Press, ISBN: 978-0-88986-800-7

([JUFO_ID = 5019; JUFO_LEVEL = 1](#)).
([Presentation slides are here](#)).

Kesäniemi, J., Katasonov, A., & Terziyan, V. (2009). [An Observation Framework for Multi-Agent Systems](#). In: R. Calinescu *et al.* (Eds.), [Proceedings of the Fifth International Conference on Autonomic and Autonomous Systems \(ICAS 2009\)](#) (pp. 336-341). IEEE. <https://doi.org/10.1109/ICAS.2009.55>

([JUFO_ID = 5475; JUFO_LEVEL = 1](#)).
([Presentation slides are here](#)).

Katasonov, A., & Terziyan, V. (2009). [Semantic Approach to Dynamic Coordination in Autonomous Systems](#). In: R. Calinescu *et al.* (Eds.), [Proceedings of the Fifth International Conference on Autonomic and Autonomous Systems \(ICAS 2009\)](#) (pp. 321-329). IEEE. <https://doi.org/10.1109/ICAS.2009.32>

([JUFO_ID = 5475; JUFO_LEVEL = 1](#)).
([Presentation slides are here](#)).
([Best paper award](#)).

Nikitin, S., Katasonov, A., & Terziyan, V. (2009). [Ontonuts: Reusable Semantic Components for Multi-Agent Systems](#). In: R. Calinescu *et al.* (Eds.), [Proceedings of the Fifth International Conference on Autonomic and Autonomous Systems \(ICAS 2009\)](#) (pp. 200-207). IEEE. <https://doi.org/10.1109/ICAS.2009.34>

([JUFO_ID = 5475; JUFO_LEVEL = 1](#)).
([Presentation slides are here](#)).

Terziyan, V., Zhovtobryukh, D., & Katasonov, A. (2009). [Proactive Future Internet: Smart Semantic Middleware for Overlay Architecture](#). In: J. L. Mauri *et al.* (Eds.),

[Proceedings of the Fifth International Conference on Networking and Services \(ICNS-2009\)](#) (pp. 149-154). IEEE. <https://doi.org/10.1109/ICNS.2009.8>

(JUFO ID = 5475; JUFO LEVEL = 1).

[\(Presentation slides are here\)](#).

Katasonov, A., & Terziyan, V. (2008). [Semantic Agent Programming Language \(S-APL\): A Middleware Platform for the Semantic Web](#). In: [Proceedings of the Second IEEE International Conference on Semantic Computing \(ICSC-2008\)](#) (pp. 504-511). IEEE. <https://doi.org/10.1109/ICSC.2008.82>

(JUFO ID = 5475; JUFO LEVEL = 1).

[\(Presentation slides are here\)](#).

Katasonov, A., Kaykova, O., Khriyenko, O., Nikitin, S., & Terziyan, V. (2008). [Smart Semantic Middleware for the Internet of Things](#). In: J. Filipe, J. A. Cetto & J.-L. Ferrier (Eds.), [Proceedings of the 5-th International Conference on Informatics in Control, Automation and Robotics](#) (Vol. 1, pp. 169-178). SciTePress. <https://doi.org/10.5220/0001489001690178>

(JUFO ID = 8695; JUFO LEVEL = 0).

[\(Presentation slides are here\)](#).

Terziyan, V., Vitko, O., & Koreyko, N. (2007). The Ontological Scientific-Educational Portal. In: A. Hopkinson & T. Zargaryan (Eds.), [Proceedings of the International Conference "Information Technologies in Education in the 21st Century"](#) (pp. 42-45). Middlesex University Press. https://eprints.mdx.ac.uk/3848/1/Information_tech.pdf#page=42

(JUFO ID = 5689; JUFO LEVEL = 1).

Katasonov, A., & Terziyan, V. (2007). [SmartResource Platform and Semantic Agent Programming Language \(S-APL\)](#). In: P. Petta *et al.* (Eds.), [Proceedings of the 5-th German Conference on Multi-Agent System Technologies \(MATES'07\)](#) (*Lecture Notes in Computer Science*, Vol. 4687, pp. 25-36). Springer, Berlin, Heidelberg. https://doi.org/10.1007/978-3-540-74949-3_3

(JUFO ID = 62555; JUFO LEVEL = 1).

[\(Presentation slides are here\)](#).

Terziyan, V. (2007). [Predictive and Contextual Feature Separation for Bayesian Metanetworks](#). In: B. Apolloni, R. J. Howlett & L. Jain (Eds.), *Knowledge-Based Intelligent Information and Engineering Systems (KES 2007 – WIRN 2007) (Lecture Notes in Computer Science, Vol. 4694, pp. 634-644)*. Springer, Berlin, Heidelberg. https://doi.org/10.1007/978-3-540-74829-8_78

([JUFO ID = 62555; JUFO LEVEL = 1](#)).
([Presentation slides are here](#)).

Salmenjoki, K., Tsaruk, Y., Terziyan, V., & Viitala, M. (2007). [Agent-Based Approach for Electricity Distribution Systems](#). In: J. Cardoso & J. Filipe (Eds.), *Proceedings of the 9-th International Conference on Enterprise Information Systems (ICEIS-2007)* (Vol. 1, pp. 382-389). SciTePress. <https://doi.org/10.5220/0002350003820389>

([JUFO ID = 8695; JUFO LEVEL = 0](#)).
([Presentation slides are here](#)).

Nikitin, S., Terziyan, V., & Pyotsia, J. (2007). [Data Integration Solution for Paper Industry - A Semantic Storing Browsing and Annotation Mechanism for Online Fault Data](#). In: J. Zaytoon, J.-L. Ferrier, J. A. Cetto & J. Filipe (Eds.), *Proceedings of the 4th International Conference on Informatics in Control, Automation and Robotics (ICINCO-2007)* (Vol. 2, pp. 191-194). SciTePress. <https://doi.org/10.5220/0001621801910194>

([JUFO ID = 8695; JUFO LEVEL = 0](#)).
([Poster is here](#)).

Naumenko, A., Katasonov, A., & Terziyan, V. (2007). [A Security Framework for Smart Ubiquitous Industrial Resources](#). In: R. Goncalves, J. P. Müller, K. Mertins & M. Zelm (Eds.), *Enterprise Interoperability II: New Challenges and Approaches* (pp. 183-194). Springer, London. https://doi.org/10.1007/978-1-84628-858-6_19

([JUFO ID = 5952; JUFO LEVEL = 2](#)).
([Presentation slides are here](#)).

Terziyan, V. (2006). [Bayesian Metanetwork for Context-Sensitive Feature Relevance](#). In: G. Antoniou, G. Potamias, C. Spyropoulos & D. Plexousakis (Eds.), *Advances in Artificial Intelligence: Proceedings of the 4-th Hellenic Conference on Artificial Intelligence (SETN 2006)* (Lecture Notes in Computer Science, Vol. 3955, pp. 356-366). Springer, Berlin: Heidelberg. https://doi.org/10.1007/11752912_36
(JUFO_ID = 62555; JUFO_LEVEL = 1).
([Presentation slides are here](#)).

Naumenko, A., Nikitin, S., Terziyan, V., & Veijalainen, J. (2005). [Using UDDI for Publishing Metadata of the Semantic Web](#). In: M. Bramer & V. Terziyan (Eds.), *Industrial Applications of Semantic Web: Proceedings of the 1-st International IFIP/WG12.5 Working Conference (IASW-2005)* (pp. 141-159). Springer, Boston, MA. https://doi.org/10.1007/0-387-29248-9_8
(JUFO_ID = 5952; JUFO_LEVEL = 2).
([Presentation slides are here](#)).

Kaykova, O., Khriyenko, O., Terziyan, V., & Zharko, A. (2005). [RgbDF: Resource Goal and Behaviour Description Framework](#). In: M. Bramer & V. Terziyan (Eds.), *Industrial Applications of Semantic Web: Proceedings of the 1-st International IFIP/WG12.5 Working Conference (IASW-2005)* (pp. 83-99). Springer, Boston, MA. https://doi.org/10.1007/0-387-29248-9_5
(JUFO_ID = 5952; JUFO_LEVEL = 2).
([Presentation slides are here](#)).

Nikitin, S., Terziyan, V., Tsaruk, Y., & Zharko, A. (2005). [Querying Dynamic and Context-Sensitive Metadata in Semantic Web](#). In: V. Gorodetsky, J. Liu & V. A. Skormin (Eds.), *Autonomous Intelligent Systems: Agents and Data Mining (AIS-ADM-2005)* (Lecture Notes in Computer Science, Vol. 3505, pp. 200-214). Springer, Berlin: Heidelberg. https://doi.org/10.1007/11492870_17
(JUFO_ID = 62555; JUFO_LEVEL = 1).
([Presentation slides are here](#)).

Terziyan, V., Kaykova, O., Vitko, O., & Titova, L. (2005). [Ontology-Based International Degree Recognition](#). *Bulletin of the Technical Committee on Learning Technology*, 7(4), 38-40. ISSN 1438-0625. IEEE.

([JUFO_ID = 75698; JUFO_LEVEL = 1](#)).
([Presentation slides are here](#)).

Terziyan, V. (2005). [SmartResource: Utilizing Semantic Web Services to Monitor Industrial Devices](#). In: A. Heimbürger, T. Kauppinen, H. Lehtinen, J. Multisilta, M. Paajanen & K. Rytönen (Eds.), *XML - the Enabling Technology for Integrating Business Processes* (pp. 89-103). Tampere University of Technology. ISBN 952-15-1312-8, ISSN 1795-2166

([Presentation slides are here](#)).

Salmenjoki, K., & Terziyan, V. (2005). Approaching Web-Based Expertise with Semantic Web. In: G. Papadourakis & I. Lazaridis (Eds.), *New Horizons in Industry, Business and Education*. [Proceedings of the 4-th International Conference NHIBE-2005](#) (pp. 310-315).

([Presentation slides are here](#)).

Keleberda, I., Lesna, N., Makovetskiy, S., & Terziyan, V. (2004). [Personalized Distance Learning based on Multiagent Ontological System](#). In: E. Kinshuk *et al* (Eds.), [Proceedings of the 4-th IEEE International Conference on Advanced Learning Technologies](#) (777-779). IEEE.
<https://doi.org/10.1109/ICALT.2004.1357654>

([JUFO_ID = 5475; JUFO_LEVEL = 1](#)).
([Presentation slides are here](#)).

Terziyan, V., & Vitko, O. (2004). [Learning Bayesian Metanetworks from Data with Multilevel Uncertainty](#). In: M. Bramer & V. Devedzic (Eds.), [Proceedings of the First International Conference on Artificial Intelligence Applications and Innovations \(AIAI-2014\)](#) (pp. 187-196). Springer, Boston, MA.
https://doi.org/10.1007/1-4020-8151-0_17

([JUFO_ID = 5952; JUFO_LEVEL = 2](#)).

[\(Presentation slides are here\)](#).

Khriyenko, O., & Terziyan, V. (2004). [OntoSmartResource: An Industrial Resource Generation in Semantic Web](#). In: R. Schoop, A. Colombo, R. Bernhardt & G. Schreck (Eds.), [Proceedings of the 2nd IEEE International Conference on Industrial Informatics \(INDIN'04\)](#) (pp. 175-179). IEEE. <https://doi.org/10.1109/INDIN.2004.1417325>

(JUFO_ID = 5475; JUFO_LEVEL = 1).

[\(Presentation slides are here\)](#).

Kaykova, O., Kononenko, O., Terziyan, V., & Zharko, A. (2004). [Community Formation Scenarios in Peer-to-Peer Web Service Environments](#). In: M. H. Hamza (Ed.), [Databases and Applications \(DBA 2004\)](#) (pp. 62-67). ACTA Press.

(JUFO_ID = 5019; JUFO_LEVEL = 1).

[\(Presentation slides are here\)](#).

Khriyenko, O., Kononenko, O., & Terziyan, V. (2004). [OntoEnvironment: An Integration Infrastructure for Distributed Heterogeneous Resources](#). In: M. H. Hamza (Ed.), [Parallel and Distributed Computing and Networks \(PDCN 2004\)](#) (pp. 319-324). ACTA Press.

(JUFO_ID = 5019; JUFO_LEVEL = 1).

[\(Presentation slides are here\)](#).

Terziyan, V. (2004). [Semantic Web Services for Smart Devices Based on Mobile Agents](#). In: J. M. Gomez (Ed.), [Proceedings of the First Workshop on Intelligent Mobile Agents in Peer-To-Peer Networks: Forth International Symposium on Engineering of Intelligent Systems \(EIS'2004\)](#) (pp. 10-16). ICSC Academic Press, Canada.

[\(Presentation slides are here\)](#).

Terziyan, V. (2003). [Semantic Web Services for Smart Devices in a “Global Understanding Environment”](#). In: R. Meersman & Z. Tari (Eds.), [On the Move to Meaningful Internet Systems 2003: OTM 2003 Workshops](#) (Lecture Notes in Computer Science, Vol. 2889, pp. 279-291). Springer, Berlin, Heidelberg. https://doi.org/10.1007/978-3-540-39962-9_37

([JUFO ID = 62555; JUFO LEVEL = 1](#)).
([Presentation slides are here](#)).

Terziyan, V., & Vitko, O. (2003). [Bayesian Metanetwork for Modelling User Preferences in Mobile Environment](#). In: A. Gunter, R. Kruse & B. Neumann (Eds.), [KI 2003: Advances in Artificial Intelligence](#) (Lecture Notes in Computer Science, Vol. 2821, pp. 370-384). Springer, Berlin, Heidelberg. https://doi.org/10.1007/978-3-540-39451-8_27

([JUFO ID = 62555; JUFO LEVEL = 1](#)).
([Presentation poster is here](#)).

Terziyan, V., & Kononenko, O. (2003). [Semantic Web Enabled Web Services: State-of-Art and Industrial Challenges](#). In: M. Jeckle & L.-J. Zhang (Eds.), [Web Services - ICWS-Europe 2003](#) (Lecture Notes in Computer Science, Vol. 2853, pp. 183-197). Springer, Berlin, Heidelberg. https://doi.org/10.1007/978-3-540-39872-1_15

([JUFO ID = 62555; JUFO LEVEL = 1](#)).
([Presentation slides are here](#)).

Jonker, C., Terziyan, V., & Treur, J. (2003). [Temporal and Spatial Analysis to Personalize an Agent’s Dynamic Belief, Desire and Intention Profiles](#). In: M. Klush, A. Omicini, S. Ossowski & H. Laamanen (Eds.), [Cooperative Information Agents VII: Proceedings of the 7-th International Workshop on Cooperative Information Agents \(CIA-2003\)](#) (Lecture Notes in Computer Science, Vol. 2782, pp. 298-315). Springer, Berlin, Heidelberg. https://doi.org/10.1007/978-3-540-45217-1_22

([JUFO ID = 62555; JUFO LEVEL = 1](#)).
([Presentation slides are here](#)).
([Link to the full text of the paper](#)).

Terziyan, V., & Ryabov, V. (2003). [Abstract Diagnostics Based on Uncertain Temporal Scenarios](#). In: M. Mohammadian (Ed.), *[Proceedings of the International Conference on Computational Intelligence for Modelling Control and Automation \(CIMCA-2003\)](#)* (pp. 327-337). ISBN 1740880684. University of Canberra, Australia.

Ryabov, V., & Terziyan, V. (2003). [Industrial Diagnostics Using Algebra of Uncertain Temporal Relations](#). In: M. H. Hamza (Ed.), *[Applied Informatics \(AI-2003\)](#)* (pp.351-356). ACTA Press.

([JUFO ID = 5019; JUFO LEVEL = 1](#)).

([Presentation slides are here](#)).

Veijalainen, J., Terziyan, V., & Tirri, H. (2003). [Transaction Management for M-Commerce at a Mobile Terminal](#). In: *[Proceedings of the 36-th Annual Hawaii International Conference on System Sciences \(HICSS'03\)](#)* (10 pp.). IEEE. <https://doi.org/10.1109/HICSS.2003.1174215>

([JUFO ID = 56894; JUFO LEVEL = 1](#)).

([Presentation slides are here](#)).

([Link to the full text of the paper](#)).

Terziyan, V. (2002). [Ontological Modelling of E-Services to Ensure Appropriate Mobile Transactions](#). In: D. O'Leary & A. Preece (Eds.), *[AI for Intelligent Business: Workshop in conjunction with ES2002: the 22nd Annual International Conference of the British Computer Society's Specialist Group on Artificial Intelligence](#)* (pp. 13-26). SGAI, UK.

([Presentation slides are here](#)).

Terziyan, V. (2002). [Ontology-Driven Transaction Monitor for Mobile Services](#). In: *[Proceedings of the KR 2002 Workshop on Formal Ontology, Knowledge Representation and Intelligent Systems for the World Wide Web \(SemWeb@KR2002\)](#)* (12 pp.). Toulouse, France.

Virrantaus, K., Veijalainen, J., Markkula, J., Katasonov, A., Garmash, A., Tirri, H., & Terziyan, V. (2001). [Developing GIS-Supported Location-Based Services](#). In: [Proceedings of the Second International Conference on Web Information Systems Engineering](#) (Vol. 2, pp. 66-75). IEEE. <https://doi.org/10.1109/WISE.2001.996708>
(JUFO_ID = 5475; JUFO_LEVEL = 1).
([Link to the full text of the paper](#)).

Terziyan, V. (2001). [Architecture for Mobile P-Commerce: Multilevel Profiling Framework](#). In: A. Preece (Ed.), *Proceedings of the IJCAI-2001 International Workshop "E-Business and the Intelligent Web"* (12 pp.).

(JUFO_ID = 58173; JUFO_LEVEL = 2).
([Brief presentation of the concept is here](#)).

Terziyan, V. (2001). [Dynamic Integration of Virtual Predictors](#). In: L. I. Kuncheva, F. Steimann, C. Haefke, M. Aladjem & V. Novak (Eds.), [Proceedings of the International ICSC Congress on Computational Intelligence: Methods and Applications \(CIMA'2001\)](#) (pp. 463-469). ICSC Academic Press, Canada/The Netherlands.

([Presentation slides are here](#)).

Puuronen, S., & Terziyan, V. (2000). [A Similarity Evaluation Technique for Data Mining with an Ensemble of Classifiers](#). In: A. M. Tjoa, R. R. Wagner & A. Al-Zobaidie (Eds.), [Proceedings of the 11th International Workshop on Database and Expert Systems Applications](#) (pp. 1155-1159). IEEE CS Press, Los Alamitos, CA. <https://doi.org/10.1109/DEXA.2000.875172>

(JUFO_ID = 5474; JUFO_LEVEL = 1).
([Presentation slides are here](#)).

Kaikova, H., Terziyan, V., & Omelayenko, B. (2000). [Recognizing Bounds of Context Change in On-Line Learning](#). In: M. Khosrowpour (Ed.), [Challenges of Information Technology Management in the 21st Century](#) (pp. 236-239). Hershey, PA: Idea Group Publishing.

([JUFO_ID = 5471; JUFO_LEVEL = 1](#)).

Puuronen, S., Terziyan, V., & Omelayenko, B. (2000). [Rational Ordering and Clustering Examples for Incremental Learning](#). In: [Intelligent Methods: Proceedings of the International Conference on Artificial and Computational Intelligence for Decision, Control and Automation in Engineering and Industrial Applications \(ACIDCA'2000\)](#) (pp. 9-14).

Puuronen, S., Tsymbal, A., & Terziyan, V. (2000). [Distance Functions in Dynamic Integration of Data Mining Techniques](#). In: B. V. Dasarathy (Ed.), [Data Mining and Knowledge Discovery: Theory, Tools and Technology II \(Proceedings of SPIE, Vol. 4057, pp. 22-32\)](#). <https://doi.org/10.1117/12.381747>

([JUFO_ID = 71479; JUFO_LEVEL = 0](#)).

Terziyan V., Omelayenko B., & Puuronen, S. (2000). [Expanding Context Against Weighted Voting of Classifiers](#). In: B. V. Dasarathy (Ed.), [Sensor Fusion: Architectures, Algorithms, and Applications IV \(Proceedings of SPIE, Vol. 4051, pp. 35-42\)](#). <https://doi.org/10.1117/12.381649>

([JUFO_ID = 71479; JUFO_LEVEL = 0](#)).

Akimov, A., Terziyan, V., & Garmash, A. (2000). [Pilot Clinical Evaluation of Prototype System for Visually Reporting the Results of Ultrasound Examination](#). In: E. A. Krupinski (Ed.), [Medical Imaging 2000: Image Perception and Performance \(Proceedings of SPIE, Vol. 3981, pp. 201-207\)](#). <https://doi.org/10.1117/12.383110>

([JUFO_ID = 71479; JUFO_LEVEL = 0](#)).

Terziyan, V., Puuronen, S., & Kaikova, H. (2000). [An Interval Approach to Discover Knowledge from Multiple Fuzzy Estimations](#). In: B. Radig, H. Niemann, Y. Zhuravlev & I. Gourevitch (Eds.), *Pattern Recognition and Image Understanding. 5th Open German-Russian Workshop* (pp. 235-243). Amsterdam: IOS Press.

([JUFO_ID = 5548; JUFO_LEVEL = 1](#)).

([Presentation slides are here](#)).

([The complete paper is here](#)).

([More details are here](#)).

Tsymbal, A., Puuronen, S., & Terziyan, V. (1999). [Arbiter Meta-Learning with Dynamic Selection of Classifiers and its Experimental Investigation](#). In: J. Eder, I. Rozman & T. Welzer (Eds.), *Advances in Databases and Information Systems (Lecture Notes in Computer Science, Vol. 1691, pp. 205-217)*. Springer, Berlin, Heidelberg. https://doi.org/10.1007/3-540-48252-0_16

([JUFO_ID = 62555; JUFO_LEVEL = 1](#)).

Skrypnik, I., Terziyan, V., Puuronen, S., & Tsymbal, A. (1999). [Learning Feature Selection for Medical Databases](#). In: *Proceedings of the 12th IEEE Symposium on Computer-Based Medical Systems CBMS'99* (pp. 53-58). Stamford: CT. IEEE CS Press. <https://doi.org/10.1109/CBMS.1999.781248>

([JUFO_ID = 65469; JUFO_LEVEL = 1](#)).

Puuronen, S., Terziyan, V., Katasonov, A., & Tsymbal, A. (1999). [Dynamic Integration of Multiple Data Mining Techniques in a Knowledge Discovery Management System](#). In: B. V. Dasarathy (Ed.), *Data Mining and Knowledge Discovery: Theory, Tools, and Technology (Proceedings of SPIE, Vol. 3695, pp. 128-139)*. <https://doi.org/10.1117/12.339975>

([JUFO_ID = 71479; JUFO_LEVEL = 0](#)).

Omelayenko, B., Terziyan, V., & Puuronen, S. (1999). [Managing Training Examples for Fast Learning of Classifiers Ranks](#). In: Ch. Freytag & V. Wolfengagen (Eds.), *CSIT'99 - Proceedings of the 1st International Workshop on Computer Science and Information Technologies* (pp. 139-148). MEPhI Publishing: Moscow.

[\(The complete paper is here\)](#).

Puuronen, S., Terziyan, V., & Tsymbal, A. (1999). [Dynamic Integration of Data Mining Methods Using Selection in a Knowledge Discovery Management System](#). In: M. Mohammadian (Ed.), [Computational Intelligence for Modelling, Control & Automation: Intelligent Image Processing, Data Analysis & Information Retrieval](#) (pp. 272-277). Amsterdam: IOS Press.

[\(JUFO ID = 5548; JUFO LEVEL = 1\)](#).

[\(Presentation slides are here\)](#).

Puuronen, S., Terziyan, V., & Logvinovsky, A. (1999). [Mining Several Data Bases with an Ensemble of Classifiers](#). In: T. Bench-Capon, G. Soda & M. Tjoa (Eds.), [Database and Expert Systems Applications \(Lecture Notes in Computer Science, Vol. 1677, pp. 882-891\)](#). Springer, Berlin, Heidelberg. https://doi.org/10.1007/3-540-48309-8_83

[\(JUFO ID = 62555; JUFO LEVEL = 1\)](#).

[\(Presentation slides are here\)](#).

[\(The paper at IEEE\)](#).

<https://doi.org/10.1109/DEXA.1999.795169>.

Terziyan, V., Puuronen, S., & Kaikova, H. (1999). [Handling Uncertainty by Decontextualizing Estimated Intervals](#). In: J. Vehí & M. Á. Sainz (Eds.), [Proceedings of MISC'99 - Workshop on Applications of Interval Analysis to Systems and Control with Special Emphasis on Recent Advances in Modal Interval Analysis](#) (pp. 111-121). Girona: Univ., Dep. of Publications.

Ryabov, V., Puuronen, S., & Terziyan, V. (1999). [Representation and Reasoning with Uncertain Temporal Relations](#). In: A. M. Kumar & I. Russel (Eds.), [Proceedings of the Twelfth International Florida Artificial Intelligence Research Symposium Conference \(FLAIRS-99\)](#) (pp. 449-453). AAAI Press, Menlo-Park, CA.

[\(JUFO ID = 5001; JUFO LEVEL = 1\)](#).

Terziyan, V., Tsymbal, A., & Puuronen, S. (1999). [Flexible Arithmetic for Huge Numbers with Recursive Series of Operations](#). In: *Proceedings of the 13-th AAEECC Symposium on Applied Algebra, Algebraic Algorithms, and Error-Correcting Codes* (33-34).

[\(Presentation slides are here\)](#).

Puuronen, S., Terziyan, V., & Tsymbal, A. (1999). [A Dynamic Integration Algorithm for an Ensemble of Classifiers](#). In: Z. W. Ras, A. Skowron (Eds.), *Foundations of Intelligent Systems: 11th International Symposium ISMIS'99 (Lecture Notes in Computer Science, Vol. 1609, pp. 592-600)*. Springer, Berlin, Heidelberg. <https://doi.org/10.1007/BFb0095148>

[\(JUFO ID = 62555; JUFO LEVEL = 1\)](#).

Terziyan, V., & Puuronen, S. (1999). [Knowledge Acquisition Based on Semantic Balance of Internal and External Knowledge](#). In: I. Imam, Y. Kondratoff, A. El-Dessouki & A. Moonis (Eds.), *Multiple Approaches to Intelligent Systems (Lecture Notes in Computer Science, Vol. 1611, pp. 353-361)*. Springer, Berlin, Heidelberg. https://doi.org/10.1007/978-3-540-48765-4_39

[\(JUFO ID = 62555; JUFO LEVEL = 1\)](#).

[\(Brief presentation of the concept is here\)](#).

[\(More details are here\)](#).

Puuronen, S., & Terziyan, V. (1999). [Knowledge Acquisition from Multiple Experts Based on Semantics of Concepts](#). In: D. Fensel & R. Studer (Eds.), *Knowledge Acquisition, Modeling and Management (Lecture Notes in Computer Science, Vol. 1621, pp. 259-273)*. Springer, Berlin, Heidelberg. https://doi.org/10.1007/3-540-48775-1_16

[\(JUFO ID = 62555; JUFO LEVEL = 1\)](#).

[\(Link to the full text of the paper\)](#).

Puuronen, S., & Terziyan, V. (1999). [A Similarity Evaluation Technique for Cooperative Problem Solving with a Group of Agents](#). In: M. Klush, O. M. Shehory

& G. Weiss (Eds.), [*Cooperative Information Agents III*](#) (*Lecture Notes in Computer Science*, Vol. 1652, pp. 163-174). Springer, Berlin, Heidelberg. https://doi.org/10.1007/3-540-48414-0_11

([JUFO_ID = 62555](#); [JUFO_LEVEL = 1](#)).
([Presentation slides are here](#)).

Puuronen, S., Terziyan, V., & Omelayenko, B. (1999). [Multiple Experts Voting: Two Rank Refinement Strategies](#). In: K. Despotidis & C. Zopounidis (Eds.), *Integrating Technology and Human Decisions: Global Bridges into the 21st Century, Proceedings of the DSI'99 5-th International Conference* (Vol. 1, pp. 634-636).

Tsymbal, A., Puuronen, S., & Terziyan, V. (1998). [Advanced Dynamic Selection of Diagnostic Methods](#). In: [Proceedings of the 11th IEEE Symposium on Computer-Based Medical Systems CBMS'98](#) (pp. 50-54). Lubbock: TX. IEEE CS Press. <https://doi.org/10.1109/CBMS.1998.701229>

([JUFO_ID = 65469](#); [JUFO_LEVEL = 1](#)).

Logvinovsky, A., Terziyan, V., & Puuronen, S. (1998). [Handling Mutual Inconsistencies of Numerical Data in Multiple Databases](#). In: [STeP-98 - Human and Artificial Information Processing](#) (*Publications of the Finnish AI Society*, 1998, pp. 80-87).

Omelayenko, B., Terziyan, V., & Puuronen, S. (1998). [Multiple Expert Knowledge Acquisition: Experimental Investigation of Three Voting Strategies](#). In: [STeP-98 - Human and Artificial Information Processing](#) (*Publications of the Finnish AI Society*, 1998, pp. 88-97).

Ryabov, V., Puuronen, S., & Terziyan, V. (1998). Uncertain Relations between Temporal Points. In: [STeP-98 - Human and Artificial Information Processing](#) (*Publications of the Finnish AI Society*, 1998, pp. 114-123).

Tsymbal, A., Puuronen, S., & Terziyan, V. (1998). [A Technique for Advanced Dynamic Integration of Multiple Classifiers](#). In: *STeP-98 - Human and Artificial Information Processing* (Publications of the Finnish AI Society, 1998, pp. 71-79).
([Presentation slides are here](#)).

Kaikova, H., & Terziyan, V. (1997). [Temporal Knowledge Acquisition From Multiple Experts](#). In: P. Shoval & A. Silberschatz (Eds.), *Proceedings of NGITS'97 - The Third International Workshop on Next Generation Information Technologies and Systems* (pp. 44 - 55).
([Presentation slides are here](#)).

Terziyan, V., Puuronen, S., & Kovalainen, M. (1997). [Decision Support System for Telemedicine Based on Multiple Expertise](#). In: *Proceedings of the 10th IEEE Symposium on Computer-Based Medical Systems CBMS'97* (pp. 8-13). Maribor: Slovenia. IEEE CS Press. <https://doi.org/10.1109/CBMS.1997.596401>
([JUFO_ID = 65469; JUFO_LEVEL = 1](#)).

Puuronen, S., & Terziyan, V. (1997). [The Voting-type Technique in the Refinement of Multiple Expert Knowledge](#). In: R. H. Sprague (Ed.), *Proceedings of the Thirtieth Hawaii International Conference on System Sciences* (Vol. 5, pp. 287-296). IEEE. <https://doi.org/10.1109/HICSS.1997.663355>
([JUFO_ID = 56894; JUFO_LEVEL = 1](#)).
([Presentation material is here](#)).

Kaikova, H., Terziyan, V., & Puuronen, S. (1997). [The Role of Ukrainian Universities in the Development of the Global Information Society](#). In: J. Berleur & D. Whitehouse (Eds.), *An Ethical Global Information Society: Culture and Democracy Revisited* (pp. 215-225). Springer, Boston, MA. https://doi.org/10.1007/978-0-387-35327-2_20
([JUFO_ID = 5952; JUFO_LEVEL = 2](#)).

Kaikova, H., Ryabov, V., & Terziyan, V. (1997). [Development Methods and Tools to Study Information Balance in Medical Applications](#). In: *Organism Functions and Conditions Evaluation: Proceedings of the Second International Conference Radiomed-97* (pp. 20-23). Moscow.

Puuronen, S., Terziyan, V., & Tsymbal, A. (1997). Multiple Expertise in Telemedicine Decision Support System. In: *International Meeting on Information Technology: Printed matters of the [MicroCAD](#)'97* (Vol. 5, pp. 367-371). Kharkov-Miskolc.

Terziyan, V., Maryin, S., Stephan, A., & Huebenthal, F. (1997). A Multilevel Metarules Models with Flexible Level Management. In: [42. Internationales Wissenschaftliches Kolloquium](#) (Vortragsreihen, Vol. 2, pp. 21-23). Technical University of Ilmenau. ISSN 0943-7207

Kaikova, H., Terziyan, V., & Puuronen, S. (1997). [Software Engineering Education in the Ukraine: Towards Co-operation with Finnish Universities](#). In: Taipale M. (Ed.), *Proceedings of the [ISSEU'97 - International Symposium on Software Engineering in Universities](#)* (pp.109-116). Rovaniemi, Finland.

Terziyan, V., & Puuronen, S. (1997). [Multilevel Context Representation Using Semantic Metanetwork](#). In: *[Context-97 - Proceedings of the First International and Interdisciplinary Conference on Modeling and Using Context](#)* (pp. 21-32). Federal University of Rio de Janeiro.

([Presentation slides are here](#)).

Puuronen, S., & Terziyan, V. (1997). [Colleague-Oriented Interpretation of Knowledge Acquired from Multiple Experts](#). In D. Patterson, G. Leedham, K.

Warendorf & T. A. Hwee (Eds.), [Proceedings of the Joint 1997 Pacific Asian Conference on Expert Systems/Singapore International Conference on Intelligent Systems \(PACES/SPICIS'97\)](#) (pp. 737-741). Singapore: Nanyang Technological University.

[\(Presentation slides are here\)](#).

Kaikova, H., Terziyan, V., & Puuronen, S. (1997). [Technique to Evaluate a Comprehension-Based Interface for Multiple Experts](#). In: T. Ciftcibasi, M. Karaman & V. Atalay (Eds.), *New Trends in Artificial Intelligence and Neural Networks. Proceedings of the 6th Turkish Symposium on Artificial Intelligence and Neural Networks (TAINN'97)* (pp. 267-271). Ankara: EMO Scientific Books.

Puuronen, S., & Terziyan, V. (1996). [Modeling Consensus Knowledge from Multiple Sources Based on Semantics of Concepts](#). In: M. Albrecht & B. Thalheim (Eds.), *Proceedings of the Workshop Challenges of Application and Challenges of Design, 15-th International Conference on Conceptual Modeling ER'96* (pp. 133-146). Brandenburg Technical University.

[\(Presentation slides are here\)](#).

Huebenthal, F., Dudar, Z., Mokry, Y., & Terziyan, V. (1996). Introduction to Graphical Modeling Based on Cellular Metaautomata. In: *Signal / Image Processing and Pattern Recognition: Proceedings of the Third All-Ukrainian International Conference UkrOBRAZ'96* (pp. 273-275). Kiev: [UAsIPPR](#).

Puuronen, S., Terziyan, V., Kaikova, H., Lesnaya, N., & Mokry, Y. (1996). Introduction to Statistical Models of Cellular Automata in Systems for Emergency Situations Prediction. In: *Signal / Image Processing and Pattern Recognition: Proceedings of the Third All-Ukrainian International Conference UkrOBRAZ'96* (pp. 282-284). Kiev: [UAsIPPR](#).

Grebenyuk, V., Kaikova, H., Terziyan, V., & Puuronen, S. (1996). The Law of Semantic Balance and its Use in Modeling Possible Worlds. In: [*STeP-96 - Genes, Nets and Symbols*](#) (*Publications of the Finnish AI Society*, 1996, pp. 97-103).

([Brief presentation of the Semantic Balance concept is here](#) and [here](#)).

Grebenyuk, V., Kaikova, H., & Terziyan, V. (1995). Multilevel Automatic Diagnostics Based on Models of Speech Behavior. In: *Radioelectronics in Medicine Diagnostics: Proceedings of the First International Conference Radiomed-95* (pp. 131-139). Moscow.

Terziyan, V., & Tkachuk, A. (1995). Multilevel Models for Speech-Based Diagnostics. In: *Radioelectronics in Medicine Diagnostics: Proceedings of the First International Conference Radiomed-95* (pp. 140-143). Moscow.

Grebenyuk, V., Kaikova, H., & Terziyan, V. (1994). Fundamentals of Multilevel Pattern Recognition. In: *Signal / Image Processing and Pattern Recognition: Proceedings of the Third All-Ukrainian International Conference UkrOBRAZ'94* (pp. 25-29). Kiev: [UAsIPPR](#).

Bondarenko, M., Terziyan, V., & Tkachuk, A. (1994). Multilevel Models for Representation of Quasi-Periodical Temporal Patterns. In: *Signal / Image Processing and Pattern Recognition: Proceedings of the Third All-Ukrainian International Conference UkrOBRAZ'94* (pp. 76-80). Kiev: [UAsIPPR](#).

Puuronen, S., & Terziyan, V. (1992). A Metasemantic Network. In: E. Hyvonen, J. Seppanen & M. Syrjanen (Eds.), *SteP-92 - New Directions in Artificial Intelligence* (*Publications of the Finnish AI Society*, 1992, Vol. 1, pp. 136-143).

Bondarenko, M., & Terziyan, V. (1990). Methods of Natural Language Control in Artificial Intelligence Systems. In: *Artificial Intelligence-90: Proceedings of the II Joint Conference on Artificial Intelligence* (pp. 99-102). Minsk.

Preprints (arXiv)

Semenets, V., Gryshko, S., Golovianko, M., Shevchenko, O., Titova, L., Kaikova, O., Terziyan, V., & Tiihonen, T. (2021). [How the University Portal Inspired Changes in the Academic Assessment Culture](#). *arXiv preprint arXiv:2105.14154*.

([JUFO_ID = 75650; JUFO_LEVEL = 0](#)).

Semenets, V., Terziyan, V., Gryshko, S., & Golovianko, M. (2021). [Assessment and Decision-Making in Universities: Analytics of the Administration-Staff Compromises](#). *arXiv preprint arXiv:2105.10560*.

([JUFO_ID = 75650; JUFO_LEVEL = 0](#)).

Terziyan, V., & Nikulin, A. (2019). [Ignorance-Aware Approaches and Algorithms for Prototype Selection in Machine Learning](#). *arXiv preprint arXiv:1905.06054*.

([JUFO_ID = 75650; JUFO_LEVEL = 0](#)).

Dissertations

Terziyan, V. (1993). [Multilevel Models for Knowledge Bases Control and Their Applications to Automated Information Systems](#), *Doctor of Technical Sciences Degree Thesis* (409 pp.). Kharkov State Technical University of Radioelectronics. (Original title: [Многоуровневые динамические модели управления базами знаний и их применение в автоматизированных информационных системах](#)).

Terziyan, V. (1984). [Theoretical and Experimental Investigation of the Semantic Analysis Problem for Natural Language Texts](#). *Candidate of Technical Sciences Degree Thesis* (210 pp.). Kharkov State Technical University of Radioelectronics. (Original title: [Теоретическое и экспериментальное исследование проблемы семантического анализа естественно-языковых высказываний](#)).

Technical Reports

Terziyan, V., Golovianko, M., Branytskyi, V., Malyk, D., & Gryshko, S. (2021). [Implementing and Training the Immune System \(Attack Detector\)](#). *Technical Report* (Annex 3, Deliverable 3, pp. 1-19). NATO SPS G511 Project IMMUNE: “Cyber-Defence for Intelligent Systems”. http://recode.bg/natog5511/wp-content/uploads/2021/05/ANNEX-3-Deliverable-3_NURE-and-JYU-G5511.pdf

Golovianko, M., Gryshko, S., Kaikova, O., Terziyan, V., & Titova, L. (2013). [Концепція забезпечення якості вищої освіти України](#). ([A Quality Assurance Concept for Higher Education of Ukraine](#)). *Technical Report* (25 pp.). [TRUST Project](#) (516935-TEMPUS-1-2011-1-FITEMPUS-SMGR): Kharkiv National University of Radioelectronics. <http://openarchive.nure.ua/handle/document/3430>

Cochez, M., Periaux, J., Terziyan, V., Kamlyk, K., & Tuovinen, T. (2014). [Evolutionary Cloud for Cooperative UAV Coordination](#). *Reports of the Department of Mathematical Information Technology*. (Series C: *Software and Computational Engineering*, No. C 1/2014, 20 pp.). ISBN 9789513957292, ISSN 14564378. University of Jyvaskyla.

Khriyenko, O., & Terziyan, V. (Eds.). (2010). [UBIWARE \(Smart Semantic Middleware for Ubiquitous Computing\) Final Project Report](#). *Technical Report* (50 pp.). [UBIWARE Project](#): University of Jyvaskyla.
([Brief presentation of the UBIWARE Final Report is here](#)).

([Find UBIWARE platform documentation and UBIWARE download package here](#)).

Khriyenko, O., & Terziyan, V. (Eds.). (2010). [UBIWARE \(Smart Semantic Middleware for Ubiquitous Computing\) Annual \(2010\) Report](#). *Technical Report* (32 pp.). [UBIWARE Project](#): University of Jyvaskyla.

Terziyan, V., Nagy, M., Cochez, M., Pilli-Sihvola, V., Kesäniemi, J., & Khriyenko, O. (2010). [UBIWARE Platform Prototype v. 3.1 \(Deliverable 3.4\)](#). *Technical Report* (21 pp.). [UBIWARE Project](#): University of Jyvaskyla.

([Brief presentation of the UBIWARE Platform Prototype v. 3.1 is here](#)).

([Find UBIWARE platform documentation and UBIWARE download package here](#)).

Terziyan, V., Khriyenko, O., Nikitin, S., Nagy, M., Kesäniemi, J., Cochez, M., & Pulkkis, A. (2010). [UBIWARE Platform Prototype v. 3.0 \(Deliverable 3.3\)](#). *Technical Report* (45 pp.). [UBIWARE Project](#): University of Jyvaskyla.

([Brief presentation of the UBIWARE Platform Prototype v. 3.0 is here](#)).

Terziyan, V., Khriyenko, O., Nagy, M., Nikitin, S., & Pulkkis, A. (2010). [UBIWARE: Industrial Cases \(Deliverable 3.2\)](#). *Technical Report* (40 pp.). [UBIWARE Project](#): University of Jyvaskyla.

([Brief presentation of the UBIWARE Industrial Cases is here](#)).

Terziyan, V., Kaykova, O., Khriyenko, O., Nagy, M., & Nikitin, S. (2009). [Individual Multi-Resource Orchestration in UBIWARE \(Deliverable 3.1\)](#). *Technical Report* (63 pp.). [UBIWARE Project](#): University of Jyvaskyla.

([Brief presentation of the Individual Multi-Resource Orchestration in UBIWARE is here](#)).

Khriyenko, O., & Terziyan, V. (Eds.). (2009). [UBIWARE \(Smart Semantic Middleware for Ubiquitous Computing\) Annual \(2009\) Report](#). *Technical Report* (30 pp.). [UBIWARE Project](#): University of Jyväskylä.

Terziyan, V., Khriyenko, O., Nikitin, S., & Nagy, M. (2009). [UBIWARE Platform Prototype v. 2.0 \(Deliverable 2.3\)](#). *Technical Report* (26 pp.). [UBIWARE Project](#): University of Jyväskylä.

([Brief presentation of the UBIWARE Platform Prototype v. 2.0 is here](#)).

Terziyan, V., Katasonov, A., Khriyenko, O., Nagy, M., Nikitin, S., & Vapa, M. (2009). [UBIWARE: Industrial Cases – Second Status Report \(Deliverable 2.2\)](#). *Technical Report* (35 pp.). [UBIWARE Project](#): University of Jyväskylä.

([Brief presentation of the UBIWARE Industrial Cases – Second Status Report is here](#)).

Terziyan, V., Bleier, A., Ivanchenko, Y., Katasonov, A., Kaykova, O., Kesäniemi, J., Khriyenko, O., Nagy, M., Nikitin, S., Szydłowski, M., & Vapa, M. (2008). [Individual Resources and Inter-Resource Communication in UBIWARE \(Deliverable 2.1\)](#). *Technical Report* (116 pp.). [UBIWARE Project](#): University of Jyväskylä.

([Brief presentation of the Individual Resources and Inter-Resource Communication in UBIWARE is here](#)).

Khriyenko, O., & Terziyan, V. (Eds.). (2008). [UBIWARE \(Smart Semantic Middleware for Ubiquitous Computing\) Annual \(2008\) Report](#). *Technical Report* (31 pp.). [UBIWARE Project](#): University of Jyväskylä.

Katasonov, A., Kaykova, O., Khriyenko, O., Nikitin, S., & Terziyan, V. (2008). [UBIWARE Platform Prototype v. 1.0 \(Deliverable 1.3\)](#). *Technical Report* (46 pp.). [UBIWARE Project](#): University of Jyvaskyla.
([Brief presentation of the UBIWARE Platform Prototype v. 1.0 is here](#)).

Katasonov, A., Loboda, O., Nikitin, S., & Terziyan, V. (2008). [UBIWARE: Progress Statuses of the Industrial Cases \(Deliverable 1.2\)](#). *Technical Report* (37 pp.). [UBIWARE Project](#): University of Jyvaskyla.
([Brief presentation of the UBIWARE Progress Statuses of the Industrial Cases is here](#)).

Katasonov, A., Kaykova, O., Khriyenko, O., Loboda, O., Naumenko, A., Nikitin, S., & Terziyan, V. (2007). [The Central Principles and Tools of UBIWARE \(Deliverable 1.1\)](#). *Technical Report* (119 pp.). [UBIWARE Project](#): University of Jyvaskyla.
([Brief presentation of the Central Principles and Tools of UBIWARE is here](#)).

Terziyan, V. (Ed.). (2007). [Smart Resource \(Proactive Self-Maintained Resources in Semantic Web\) Final Project Report](#). *Technical Report* (98 pp.). [SmartResource Project](#): University of Jyvaskyla.
([Presentation of the SmartResource Final Report is here](#)).

Terziyan, V. (Ed.). (2006). [SmartResource Annual 2006 Report](#). *Technical Report* (13 pp.). [SmartResource Project](#): University of Jyvaskyla.

Katasonov, A., Khriyenko, O., Nikitin, S., & Terziyan, V. (2006). [SmartResource Platform for Web-Service Interaction's Semantic Log \(Deliverable 3.3\)](#). *Technical Report* (18 pp.). [SmartResource Project](#): University of Jyvaskyla.
([Presentation of the SmartResource platform is here](#)).
([Download SmartResource platform here](#)).

Katasonov, A., Khriyenko, O., Terziyan, V., & Tsaruk, Y. (2006). [SmartResource Platform in Distributed Power Networks Maintenance \(Deliverable 3.2\)](#). *Technical Report* (28 pp.). [SmartResource Project](#): University of Jyvaskyla.
([Presentation of the SmartResource platform is here](#)).
([Download SmartResource platform here](#)).

Kaykova, O., Khriyenko, O., & Terziyan, V. (2006). [General Networking Framework \(Deliverable 3.1\)](#). *Technical Report* (24 pp.). [SmartResource Project](#): University of Jyvaskyla.
([Presentation of the General Networking Framework is here](#)).

Terziyan, V. (Ed.). (2005). [SmartResource Annual 2005 Report](#). *Technical Report* (19 pp.). [SmartResource Project](#): University of Jyvaskyla.

Naumenko, A., Nikitin, S., Terziyan, V., & Zharko, A. (2005). [SmartResource Prototype Environment: Version 2.0 \(Deliverable 2.3\)](#). *Technical Report* (28 pp.). [SmartResource Project](#): University of Jyvaskyla.
([Presentation of the SmartResource prototype environment v. 2.0 is here](#)).

Kaykova, O., Khriyenko, O., Terziyan, V., & Zharko, A. (2005). [Design of the SmartResource Platform \(Deliverable 2.2\)](#). *Technical Report* (26 pp.). [SmartResource Project](#): University of Jyvaskyla.
([Presentation of the SmartResource platform design is here](#)).

Kaykova, O., Khriyenko, O., Terziyan, V., & Zharko, A. (2005). [General Proactivity Framework \(Pro-GAF\) \(Deliverable 2.1\)](#). *Technical Report* (16 pp.). [SmartResource Project](#): University of Jyvaskyla.

([Presentation of the General Proactivity Framework is here](#)).
([Find XML-serialized RGBDF-schema here](#)).

Terziyan, V. (Ed.). [SmartResource Annual 2004 Report](#). *Technical Report* (20 pp.). [SmartResource Project](#): University of Jyvaskyla.

Kaykova, O., Khriyenko, O., Kovtun, D., Marttinen, J., Naumenko, A., Nikitin, S., Terziyan, V., Tsaruk, Y., & Zharko, A. (2004). [SmartResource Prototype Environment: Version 1.0 \(Deliverable 1.3\)](#). *Technical Report* (79 pp.). [SmartResource Project](#): University of Jyvaskyla.

([Presentation of the SmartResource prototype environment v. 1.0 is here](#)).
([Find SmartResource v. 1.0 source code and documentation here](#)).
([Find SmartResource v. 1.0 installation package here](#)).

Kaykova, O., Khriyenko, O., Kovtun, D., Marttinen, J., Naumenko, A., Nikitin, S., Terziyan, V., Tsaruk, Y., & Zharko, A. (2004). [General Adaptation Framework: Framework for Semantic Adaptation of Maintenance Resources \(Deliverable 1.2\)](#). *Technical Report* (45 pp.). [SmartResource Project](#): University of Jyvaskyla.

([Presentation of the General Adaptation Framework is here](#))

Kaykova, O., Khriyenko, O., Naumenko, A., Terziyan, V., & Zharko, A. (2004). [Resource State/Condition Description Framework \(RscDF\) \(Deliverable 1.1\)](#). *Technical Report* (27 pp.). [SmartResource Project](#): University of Jyvaskyla.

([Presentation of the Resource State/Condition Description Framework is here](#)).
([Find XML-serialized RscDF-schema here](#)).
([Find samples of maintenance ontologies here](#)).

Terziyan, V., Kaykova, H., Klochko, O., Taranov, A., Khriyenko, O., Kononenko, O., & Zharko, A. (2004). [Semantic Search Facilitator: Concept and Current State of Development](#). *Technical Report* (Chapter 3.1.3: “Industrial Ontologies and Semantic Web”). [InBCT project](#): University of Jyvaskyla.

([Brief presentation on the Semantic Search Facilitator is here](#)).

Terziyan, V., Zharko, A., Kononenko, O., Khriyenko, A., & Pyotsia, J. (2003). [Semantic Web: The Future Starts Today](#). *Technical Report*. [InBCT project](#): University of Jyvaskyla.

Veijalainen, J., Terziyan, V., Garmash, A., Katasonov, A., & Markkula, J. (2001). [Transaction Monitor for Mobile Environment \(TM-M\)](#). *Research Prototype Demo*. Multimeetmobile Project: University of Jyvaskyla. In: J. Parsons & O. Sheng (Eds.), *Proceedings of the 11th Annual Workshop on Information Technologies and Systems (In conjunction with ICIS 2001 conference)*. LSU: Baton Rouge, LA, USA.

Terziyan, V., & Veijalainen, J. (2001). [M-Commerce Transaction Model Implementation at a Mobile Terminal](#). *Technical Report* (56 pp.). Multimeetmobile Project: University of Jyvaskyla.

Terziyan, V., Veijalainen, J., & Tirri, H. (2000). [Mobile e-Commerce Transaction Model](#). *Technical Report* (40 pp.). Multimeetmobile Project: University of Jyvaskyla.

Terziyan, V., *et al.* (Eds.). (1998). [Virtual and Distant Learning Laboratory \(Video Presentation\)](#). East Ukrainian Virtual University Project: Kharkov State Technical University of Radioelectronics.

Teaching Manuals

Terziyan, V., Kaykova, O., Klymova, M., Shevchenko, O., Biloivanenko, M., & Vitko, O. (2008). [Manual for Resource Management within the Educational Ontology Web Portal](#). *Teaching Manual* (40 pp.). Kharkov State Technical University of Radioelectronics: [EU Tempus-Tacis SCM # T020B06 Project](#). (Original title: [Методичні вказівки з менеджменту ресурсів з використанням онтологічного WEB-порталу](#)).

Terziyan, V., Kaykova O., Shevchenko, O., Klymova, M., Biloivanenko, M., & Titova, L. (2008). [Manual for Ontology-Based Annotation of Educational Resources](#). *Teaching Manual* (20 pp.). Kharkov State Technical University of Radioelectronics: [EU Tempus-Tacis SCM # T020B06 Project](#). (Original title: [Методичні вказівки з анування освітніх ресурсів з використанням онтологічного підходу](#)).

Vitko, O., & Terziyan, V. (2000). [The Set of Manuals for Management of Students' M.Sc. Thesis Work](#). *Teaching Manual* (70 pp.). Kharkov State Technical University of Radioelectronics: [EU Tempus-Tacis Compact Project UM CP-20560](#). (Ukrainian version: [Збірник методичних вказівок з менеджменту дипломування магістрів](#)).

Bondarenko, M., Grebenyuk, V., & Terziyan, V. (1997). [Teaching Manual for the Computer-Supported Master of Science Thesis Work](#). *Teaching Manual* (24 pp.). Kharkov State Technical University of Radioelectronics. (Original title: [Методические указания к дипломному проектированию с применением ЭВМ](#)).

Terziyan, V., Bondarenko, M., Grebenyuk, V., & Kaikova, H. (1997). [Theory of Multilevel Semantic Networks](#). *Teaching Manual* (76 pp.). Kharkov State Technical University of Radioelectronics. ISBN 5-7763-8326-9. (Original title: [Теория многоуровневых семантических сетей](#)).

Terziyan, V., Bondarenko, M., Dudar, Z., Kaikova, H., & Lesna, N. (1995). [Multilevel Dynamic Decision Support Systems](#). *Teaching Manual* (100 pp.). Kharkov State Technical University of Radioelectronics. ISBN 5-7763-9955-6. (Original title: [Многоуровневые динамические модели принятия решений](#)).

Bondarenko, M., Terziyan, V., & Popkov, I. (1992). *Modelling Linguistic Knowledge for Intelligent Natural Language Interfaces*. [UKR INTEI](#), 1414-UK92, 235 pp. (Original title: Моделирование лингвистических знаний в интеллектуальных естественно языковых интерфейсах).