Tibor Dulai
Curriculum Vitae

University of Pannonia, Faculty of Information Technology, Department of Electrical Engineering and Information Systems

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Education:
June 2002   M.S. in Informatics, University of Veszprém, Veszprém, Hungary

Professional Experience:
Okt. 2002 –   Assistant lecturer, University of Pannonia (former University of Veszprém), Department of Electrical Engineering and Information Systems, Veszprém, Hungary
Okt. 2017-   Master teacher, University of Pannonia, Department of Electrical Engineering and Information Systems, Veszprém, Hungary

Current Fields of Interest:
Operation research, computer networks, process mining and artificial intelligence

I am the member of the Research Laboratory of Intelligent Control Systems of the Faculty of Information Technology.

Lecture:
C and C++ programming, Web programming, Mobile programming, Artificial intelligence, Enterprise integration patterns

Award, assistantship, study visit:
2002 TARNAY, K., MEDVE, A., DULAI, T., MUHI, D. Development of electronic education materials based on service discovery. IKTA grant, IKTA5-128/2002.
2004 DULAI, T. Non-cooperative games for self-adaptive telecommunication protocols, The Fourth Conference of PhD Students in Computer Science, Szeged, Hungary, 2004. July, "The Best Talk of the Session"
2010 WERNER-STARK, Á., DULAI, T. The Role of Genetic Algorithms in the Solution of VRP Variants, 7. National Conference on Economy-Informatics, Pécs, Hungary, 2010. Nov., Grant of the Sponsor: "Prominent theoretical-methodological results"

Membership:
2002 Regional Committee of the Hungarian Academy of Sciences, Communication Working Committee, Member

Research project:

2002. „Development of electronic education materials based on service discovery", IKTA5-128/2002, (participant: **Tibor Dulai**)

2004. Management of e-learning building blocks, OTKA T 049190 (participant: **Tibor Dulai**)

2004. Possibilities of positioning applications in mobile environment, OTKA T 049195 (participant: **Tibor Dulai**)

2004-2005. PPKE ITK and VE MIK course development, HEFOP-3.3.1-P.2004-06-0018/1.0 2006. Baross-7-2005-0268 OMFB-00854/2006 (participant: **Tibor Dulai**)

2006. Baross-7-2005-0214 OMFB-00863/2006 (participant: **Tibor Dulai**)

2008-2010. NeuroWeb: Integration and sharing of information and knowledge in neurology and neurosciences, Project co-funded by the European Commission within the Sixth Framework Programme, Project No. 518513 (participant: **Tibor Dulai**)

2008-2010. ALPHA (HomeHealth) project (Jedlik, together with GE Healthcare) (participant: **Tibor Dulai**)

2010. GOP-1.1.1-09/1-2010-0025: „Development of an Augmented Enterprise Framework at Infomatix Ltd." (participant: **Tibor Dulai**)

2010.05.01.-2012.04.30. „The Hungarian State and the European Union under the TAMOP-4.2.1/B-09/1/ KONV-2010-0003 project – Vehicle industrial fault events detection and isolation using process mining" (participant: **Tibor Dulai**)

2012.11.01.-2015.02.28. TÁMOP-4.2.2.A-11/1/KONV-2012-0072 „Execution of decision support methods for solving of production and control tasks of energy optimal networks." (participant: **Tibor Dulai**)

2013.01.01. - 2015.03.31. TÁMOP-4.2.2.C-11/1/KONV-2012-0004 „Developing of an agent system to support the management of cooperation and rival resources." (participant: **Tibor Dulai**)

2013.03.01. - 2015.02.28. TÁMOP-4.1.1.C-12/1/KONV „Facility management – The description of elements commonly used by research infrastructure and the implementation of these." (participant: **Tibor Dulai**)

2014. "Improvement of the quality and dissemination of students' scientific work at University of Pannonia", NTP-TDK-13-047, (participant: **Tibor Dulai**)

2015. "Physics-inspired control and diagnostics of nonlinear dynamic systems", OTKA, (participant: **Tibor Dulai**)

2015. "Modeling and knowledge-based diagnosis of process Systems using process mining and artificial intelligence", OMAA (91öu5), (participant: **Tibor Dulai**)

2015. "Process modeling and knowledge-based diagnosis", OMAA, (participant: **Tibor Dulai**)

2016. „Development of cloud based smart IT solutions by IBM Hungary in cooperation with the University of Pannonia", VKSZ_12-1-2013-0088, (participant: **Tibor Dulai**)

2016. „Process Mining, Reinforcement Learning, Scheduling and Integration", AÖU AKTION Österreich-Ungarn Wissenschafts- und Erziehungskooperation, (participant: **Tibor Dulai**)

2017. "Improvement of the quality and accessability of higher education at University of Pannonia ", EFOP-3.4.3-16-2016-00009, (participant: **Tibor Dulai**)

Most relevant publications:

1. Dulai, T., Werner-Stark, Á., Hangos, K.M. (2017). Algorithm for directing cooperative vehicles of a vehicle routing problem for improving fault-tolerance. Optimization and Engineering, pp. 1-32, DOI: 10.1007/s11081-017-9353-6, ISSN: 1573-2924

2. Dulai, T., Werner-Stark, Á., Ábrahám, Gy. (2016). Support of efficient resource allocation of technological processes by a heuristic solution and agent technology, Data Envelopment Analysis and its Applications, Proceedings of the 13th International Conference on Data Envelopment Analysis (DEA 2015), pp. 153-158, DOI: 10.13140/RG.2.1.4082.9202, ISBN: 978 1 85449 497 9

3. Dulai, T., Werner-Stark, A (2015) A Database-oriented Workflow Scheduler with Historical Data and Resource Substitution Possibilities, In: Vitoriano B, Parlier GH (ed.), 4th International Conference on Operations Research and Enterprise Systems, ICORES 2015, Lisbon, Portugal, Proceedings of the International Conference on Operations Research and Enterprise Systems. SciTePress, pp. 325-330., ISBN 9789897580758

4. Werner-Stark, A., Dulai, T., Ábrahám, Gy. (2014) Modeling of an agent system to support the management of cooperating and rival resources for business workflows, Proceedings of SIMULTECH 2014 – Fourth International Conference on Simulation and Modeling Methodologies, Technologies and Applications, SCITEPRESS, pp. 407-412.

5. Dulai, T., Werner-Stark, Á., Hangos, K. M. (2013). Immediate event-aware model and algorithm of a general scheduler. Hungarian Journal of Industry and Chemistry (HJIC), 41(1), pp. 27-34.

6. Werner-Stark, Á., Dulai, T. (2012), Agent-based analysis and detection of functional faults of vehicle industry processes: a process mining approach, Lecture Notes in Artificial Intelligence, 2012, Volume 7327, Subseries of Lecture Notes in Computer Science, pp. 424-433., ISBN 978-3-642-30946-5

7. Dulai, T., Werner-Stark, Á. (2012). Immediate event-aware routing based on cooperative agents, Proceeding of Factory Automation 2012, Veszprém, Hungary, 2012. May, pp. 144-148., ISBN: 978-615-5044-57-1

8. Tarnay, K., Adamis, G., Dulai, T. (ed.) (2011). Advanced Communicaton Protocol Technologies – Solutions, Methods and Applications, IGI-Global, USA, ISBN 978-1-60960-732-6 (hardcover), ISBN 978-1-60960-733-3 (ebook), ISBN 978-1-60960-734-0 (print & peretual access)

9. Jasko, SZ., Dulai, T., Muhi, D., Tarnay, K. (2010). Test aspect of requirement specification. Computer Standards & Interfaces, 32(1-2), pp. 1-9, ISSN : 0920-5489, SCI: 1.373

10. Dulai, T. (2005). Non-cooperative games for self-adaptive telecommunication protocols. *Periodica Polytechnica,* Vol. 49, No. 3-4, pp. 223-237.