

CURRICULUM VITAE

Name: Antonija (Tanja) Mitrovic
Present position: Professor

Academic Interests

Teaching: Databases, Artificial Intelligence
Research: Artificial Intelligence in Education, Student modeling

Education

1994 PhD. (Computer Science), University of Nis, Yugoslavia
“Reconstructive approach to student modeling in intelligent educational systems”
1991 MSc. (Computer Science), University of Nis, Yugoslavia
“Interactive induction of procedures using techniques of machine learning based on similarities in examples”
1989-90 Visiting graduate student
Computer Science Department, University of Calgary, Canada
Supervisor: Prof. Ian H. Witten
1987 B.Eng. (Computer Science and Engineering), University of Nis, Yugoslavia

Academic Positions

2009- Head of Department
2008 - Professor
Dept. of Computer Science & Software Engineering,
University of Canterbury, New Zealand
2005- 2007 Associate Professor
Dept. of Computer Science & Software Engineering,
University of Canterbury, New Zealand
1998-2004 Senior Lecturer
Computer Science Department,
University of Canterbury, New Zealand
2003 Visiting professor, University of Nis,
Serbia and Montenegro, Feb-June
1995 - 1997 Lecturer
Computer Science Department,
University of Canterbury, New Zealand
1987 - 1994 Assistant Lecturer
Department of Computer Science and Engineering, University of Nis, Nis,
Yugoslavia

Professional Affiliations, Activities & Achievements: (last 5 years)

President of the Artificial Intelligence in Education (AIED) Society (2013-2015)
Executive Committee Member of the Asia-Pacific Society for Computers in Education (APSCE)
Associate Editor, Journal of Research and Practice of Technology-Enhanced Learning
Associate Editor, IEEE Transactions on Learning Technologies
Associate Editor, Journal of Computing and Information Technology
Member of ACM, AAI, AIED, UM, IEEE (senior member)
Editorial Board Member for TICL, JUCS and UMUAI journals
Local chair, AIED 2011
Co-Chair of the 10th Int. Conference on User Modelling 2005
Co-Chair of the Int. Conference on Computers in Education in 2008, 2009 and 2010
Invited speaker for the AIED 2005 conference
External examiner for theses from the Massey, Otago, Waikato universities and Jyväskylä (Finland)

Research Grants:

External Competitive:	2011, Marsden 10-UOC-006 (\$830,000 for 3 years)
External Competitive:	2007, IDF 652 (\$250,000 for one year)
External Competitive:	2006, eCDF 592 (\$250,000 for one year)
External Competitive:	2005, eCDF 502 (\$417,000 for one year)
External Competitive:	HP Technology for Teaching (\$110,000)
Internal grants:	\$40,000

Some representative publications from the last five years

Articles/papers in refereed scholarly journals

1. Mitrovic, A., Martin, B. Suraweera, P., Zakharov, K., Milik, N., Holland, J., McGuigan, N. ASPIRE: an authoring system and deployment environment for constraint-based tutors. *Artificial Intelligence in Education*, 19(2), 155-188, 2009.
2. Weerasinghe, A., Mitrovic, A., Martin, B. Towards individualized dialogue support for ill-defined domains. *Artificial Intelligence in Education*, 19(4), 357-379, 2009.
3. Thomson, D., Mitrovic, A. Preliminary evaluation of a negotiable student model in a constraint-based ITS. *Research, Practice in Technology Enhanced Learning*, 5(1), 19-33, World Scientific Publishing Company & Asia-Pacific Society for Computers in Education, 2010.
4. Suraweera, P., Mitrovic, A., Martin, B. Widening the Knowledge Acquisition Bottleneck for Constraint-based Tutors. *Artificial Intelligence in Education*, 20(2), 137-173, IOS Press, 2010. DOI 10.3233/JAI-2010-0005
5. Martin, B., Mitrovic, A., Koedinger, K., Mathan, S. Evaluating and Improving Adaptive Educational Systems with Learning Curves. *User Modeling and User-Adapted Interaction*, vol 21, no 3, pp. 249-283, 2011. DOI 10.1007/s11257-010-9084-2, Winner of the 2011 James Chen award for the best UM paper in 2011.
6. Mitrovic, A. Fifteen years of Constraint-Based Tutors: What we have achieved and where we are going. *User Modeling and User-Adapted Interaction*, 22(1-2), 39-72, 2012 <http://dx.doi.org/10.1007/s11257-011-9105-9>
7. Mitrovic, A., Ohlsson, S., Barrow, D. The effect of positive feedback in a constraint-based intelligent tutoring system. *Computers & Education*, 60(1) 264-272, 2013. <http://dx.doi.org/10.1016/j.compedu.2012.07.002>
8. Amalathas, S., Mitrovic, A., Ravan, S. Decision-Making Tutor: Providing on-the-job training for oil palm plantation managers. *Research and Practice in Technology-Enhanced Learning RPTeL*, 7(3), 131-152, APSCE, 2012. http://www.apsce.net/RPTeL/RPTeL2012NovIssue-Article1_pp131-152.pdf
9. Guia, T.F., Rodrigo, M., Dagami, M. M., Sugay, J., Macam, F.J., Mitrovic, A. An exploratory study of factors indicative of affective states of students using SQL-Tutor. *Research and Practice in Technology Enhanced Learning*, 8(3), 411-430, 2013.

Edited Books

1. Cristina Conati and Antonija Mitrovic, Proceedings of the AIED 2009 Workshop on Closing the Affect Loop, 2009. <http://aspire.cosc.canterbury.ac.nz/AIED2009-AffectiveLoopWorkshopProceedings.pdf>
2. Kong, S.C., Ogata, H., Arnseth, H.C., Chan, C.K.K., Hirashima, T., Klett, F., Lee, J.H.M., Liu, C.C., Looi, C.K., Milrad, M., Mitrovic, A., Nakabayashi, K., Wong, S.L., Yang, S.J.H. (eds.) (2009). Proceedings of the 17th International Conference on Computers in Education [CDROM]. Hong Kong: Asia-Pacific Society for Computers in Education.
3. Tsukasa Hirashima, Tomoko Kojiri, Tanja Mitrovic and Fu-Yun Yu (eds) Proceedings of the ICCE 2009 Workshop on Modeling, Management and Generation of Problems/Questions in Technology-Enhanced Learning, Hong Kong, 30.11-4.12.2009.
4. Biswas, G., Bull, S., Kay, J., Mitrovic, A. (eds.) Proceedings of the 15th International Conference on Artificial Intelligence in Education, Auckland, Springer-Verlag, Lecture Notes in Artificial Intelligence LNAI 6738, 638p, 2011. DOI 10.1007/978-3-642-21869-9

Book Chapters

1. Suraweera, P., Mitrovic, A., Martin, B., Holland, J., Milik, N., Zakharov, K., McGuigan, N. Ontologies for authoring instructional systems. D. Dicheva, R. Mizoguchi, J. Greer (eds.) **Semantic Web Technologies for e-Learning**. IOS Press, ISBN: 978-1-60750-062-9, pp. 77-95, 2009.
2. Sosnovsky, S., Brusilovsky, P., Yudelson, M., Mitrovic, A., Mathews, M., Kumar, A. Semantic integration of adaptive educational systems. In: T. Kuflik, S. Berkovsky, F. Carmagnola, and D.

- Heckmann (eds), *Advances in Ubiquitous User Modelling: Revised Selected Papers*, Springer LCNS, vol 5830, pp. 134-158, 2009. <http://www.springerlink.com/content/t363512p0x2q7780/>
3. Mitrovic, A. Modeling Domains and Students with Constraint-Based Modeling. In: R. Nkambou, J. Bordeaux, R. Mizoguchi (eds) *Advances in Intelligent Tutoring Systems. Studies in Computational Intelligence*, Springer, Volume 308, 2010, pp. 63-80, DOI: 10.1007/978-3-642-14363-2.
 4. Baker, R. S. J. d., Corbett, A. T., Roll, I., Koedinger, K. R., Alevan, V., Cocea, M., Hershkovitz, A., de Carvalho, A. M. J. B., Mitrovic, A., Mathews, M. Modeling and studying gaming the system with educational data mining. In R. Azevedo, & V. Alevan (Eds.), *International Handbook of Metacognition and Learning Technologies*. Springer International Handbooks of Education 26, pp. 97-115, 2013. DOI 10.1007/978-1-4419-5546-3_7
 5. Conati, C., Alevan, V., Mitrovic, A. Eye-tracking for student modeling in intelligent tutoring systems. In Sottolare, R., Graesser, A., Hu, X., & Holden, H. (Eds.) *Design Recommendations for Intelligent Tutoring Systems - Volume 1 - Learner Modeling* (1st edition). Orlando, Florida: U.S. Army Research Laboratory, pp. 229-238, 2013.
 6. Pavlik Jr., P.I., Brawner, K., Olney, A., Mitrovic, A. A review of learner models used in intelligent tutoring systems. In Sottolare, R., Graesser, A., Hu, X., & Holden, H. (Eds.) *Design Recommendations for Intelligent Tutoring Systems - Volume 1 - Learner Modeling* (1st edition). Orlando, Florida: U.S. Army Research Laboratory, pp. 39-68, 2013.

Papers published in refereed conference proceedings (last 5 years only)

1. Mitrovic, A., Weerasinghe, A. Revisiting the Ill-Definedness and Consequences for ITSs. Dimitrova, V., Mizoguchi, R., du Boulay, B., Graesser, A (eds) Proc 14th Int Conf AIED 2009, pp. 375-382.
2. Brusilovsky p., Mitrovic, A., Sosnovsky, S., Mathews, M., Yudelson, M., Lee, D.H., Zadorozhny, V. Database Exploratorium: A Semantically Integrated Adaptive Educational System. Paper accepted for the UbiqUM Workshop at UM 2009, Trento, Italy, 2009, pp. 24-48.
3. Martin, B., Kirkbride, T., Mitrovic, A., Holland, J. & Zakharov, K. (2009). An Intelligent Tutoring System for Medical Imaging. In Bastiaens, T., Dron, J. and Xin, C. (Eds.), *Proceedings of World Conference on E-Learning in Corporate, Government, Healthcare, and Higher Education 2009* (pp. 502-509). Vancouver CA: AACE.
4. Thomson, D., Mitrovic, A. Towards a negotiable student model for constraint-based ITSs. In: Kong, S.C., Ogata, H., Arnseth, H.C., Chan, C.K.K., Hirashima, T., Klett, F., Lee, J.H.M., Liu, C.C., Looi, C.K., Milrad, M., Mitrovic, A., Nakabayashi, K., Wong, S.L., Yang, S.J.H. (Eds.) Proc. 17th Int. Conf. Computers in Education ICCE 2009, Hong Kong: Asia-Pacific Society for Computers in Education, pp. 83-90, 2009.
5. Mathews, M., Mitrovic, A. Does framing a problem-solving scenario influence learning? In: Kong, S.C., Ogata, H., Arnseth, H.C., Chan, C.K.K., Hirashima, T., Klett, F., Lee, J.H.M., Liu, C.C., Looi, C.K., Milrad, M., Mitrovic, A., Nakabayashi, K., Wong, S.L., Yang, S.J.H. (Eds.) Proc. 17th Int. Conf. Computers in Education ICCE 2009, Hong Kong: Asia-Pacific Society for Computers in Education, pp. 27-34, 2009.
6. Holland, J., Mitrovic, A., Martin, B. A Constraint-Based Tutor for Java. In: Kong, S.C., Ogata, H., Arnseth, H.C., Chan, C.K.K., Hirashima, T., Klett, F., Lee, J.H.M., Liu, C.C., Looi, C.K., Milrad, M., Mitrovic, A., Nakabayashi, K., Wong, S.L., Yang, S.J.H. (Eds.) Proc. 17th Int. Conf. Computers in Education ICCE 2009, Hong Kong: Asia-Pacific Society for Computers in Education, pp. 142-146.
7. Amalathas, S., Mitrovic, A. & Ravan, S. (2009) Towards an ITS for decision making on managing palm oil Plantations. Workshop Proceedings of the 17th International Conference on Computers in Education (ICCE 2009), Hong Kong. APSCE. pp 157-162.
8. Baker, R., Mitrovic, A., Mathews, M. Detecting Gaming the System in Constraint-based Tutors. P. De Bra, A. Kobsa, and D. Chin (Eds.): Proc. UMAP 2010, LNCS 6075, pp. 267–278, 2010, 20-24 June 2010, Hawaii.
9. Yudelson, M., Brusilovsky, P., Mitrovic, A., Mathews, M. Using Numeric Optimization To Refine Semantic User Model Integration Of Adaptive Educational Systems. In: Baker, R.S.J.d., Merceron, A., Pavlik, P.I. Jr. (Eds.) Proc. 3rd Int. Conf. Educational Data Mining EDM 2010, pp. 221-230.
10. Yudelson, M., Brusilovsky, P., Mitrovic, A., Mathews, M. Towards incorporating confidence measure into user modeling. Adjunct Proc. 18th Int. Conf on User Modeling, Adaptation and Personalization, F. Bohnert, L. M. Quiroga (eds), pp. 40-42, 2010.
11. Weerasinghe, A., Mitrovic, A., Martin, B. Evaluating the effectiveness of adaptive tutorial dialogues in database design. S.L.Wong et al. (eds) Proc. 18th Int. Conf. Computers in Education ICCE 2010, APSCE, pp. 33-40.

12. Amalathas, S., Mitrovic, A., Saravanan, R., Evison, D. Developing an Intelligent Tutoring System for palm oil in ASPIRE. S. L. Wong et al. (eds) Proc. 18th Int. Conf. Computers in Education ICCE 2010, APSCE, pp. 101-103.
13. Duan, D., Mitrovic, A., Churcher, N. Evaluating the effectiveness of multiple open student models in EER-Tutor. S. L. Wong et al. (eds) Proc. 18th Int. Conf. Computers in Education ICCE 2010, APSCE, pp. 86-88.
14. Mitrovic, A., Williamson, C., Bebbington, A., Mathews, M., Suraweera, P., Martin, B., Thomson, D., Holland, J. An Intelligent Tutoring System for Thermodynamics. EDUCON 2011, Amman, Jordan, pp. 378-385, April 4 - 6, 2011. http://www.psut.edu.jo/sites/EDUCON/program/contribution1211_b.pdf
15. Thomson, D., Mitrovic, A. Opponent-based Tactic Selection for a First-Person Shooter Game. 3rd International Conference on Agents and Artificial Intelligence (ICAART 2011) ICAART 2011, Rome, pp. 591-594.
16. Holland, J., Baghaei, N., Mathews, M., Mitrovic, A. The effects of Domain and Collaboration Feedback on Learning in a Collaborative Intelligent Tutoring System. In: Biswas, G., Bull, S., Kay, J., Mitrovic, A. (eds.) Proc AIED 2011, Springer, LNAI 6738, pp. 456-458, 2011.
17. Weerasinghe, A., Mitrovic, A., Thomson, D., Mogin, P., Martin, B. Evaluating a General Model of Adaptive Tutorial Dialogues. In: Biswas, G., Bull, S., Kay, J., Mitrovic, A. (eds.), Proc. 15th Int AIED conference, Springer, LNAI 6738, pp. 394-402, 2011.
18. Mathews, M., Mitrovic, A. Incorporating Framing into SQL-Tutor. Mohd Ayub A. F. et al. (Eds.) Workshop Proceedings of the 19th Int. Conf. on Computers in Education ICCE 2011, Chiang Mai, Thailand, Asia-Pacific Society for Computers in Education, 5th Workshop on Modeling, Management and Generation of Problems/Questions in Technology-Enhanced Learning, pp. 391-398, 2011.
19. Amalathas, S., Mitrovic, A., Ravan, S., Evison, D. Evaluation of DM-Tutor, an ITS for Training on Plantation Decision Making. Mohd Ayub A. F. et al. (Eds.) Workshop Proceedings of the 19th Int. Conf. on Computers in Education ICCE 2011, Chiang Mai, Thailand, Asia-Pacific Society for Computers in Education, Workshop on Applications of Information and Communication Technologies in Adult and Continuing Education, pp. 577-584, 2011.
20. Mitrovic, A., Mathews, M., Holland, J. Exploring two strategies for teaching procedures. S.A. Cerri, B. Clancey (Eds.) 11th Int. Conf. ITS 2012, LCNS 7315, Crete, Greece, pp. 502-507, 14-18 June 2012.
21. Mathews, M., Mitrovic, A., Lin, B., Holland, J., Churcher, N. Do your eyes give it away? Using eye tracking data to understand students' attitudes towards open student model representations. S.A. Cerri and B. Clancey (Eds.) Proc. 11th Int. Conf ITS 2012, Crete, Greece, Springer-Verlag, LCNS 7315, pp. 424-429, 2012.
22. Guia, T.F., Rodrigo, M. TY., Dagami, M. M., Sugay, J. O., Francis Jan P. Macam, F. J., Mitrovic, A., Modeling the Affective States of Students using SQL-Tutor. S.A. Cerri and B. Clancey (Eds.) Proc. ITS 2012, Crete, Greece, Springer-Verlag, LCNS 7315, pp. 637-638, 2012.
23. Shareghi Najar, A., Mitrovic, A. Using examples in Intelligent Tutoring Systems. S.A. Cerri and B. Clancey (Eds.) Proc. 11th Int. Conf ITS 2012, Crete, Greece, Springer-Verlag, LCNS 7315, YRT track, pp. 582-588, 2012.
24. Elmadani, M., Mathews, M., Mitrovic, A. Concept tagging in Moodle. S. Retalis, M. Dougiamas (Eds) Proc. 1st Int. Moodle Research Conference, pp. 53-60, Heraklion, Crete, Greece 14-15 September 2012. ISBN: 978-960-98516-2-6
25. Elmadani, M., Mathews, M., Mitrovic, A. Data-Driven Misconception Discovery in Constraint-based Intelligent Tutoring Systems. In: G. Biswas, L-H. Wong, T. Hirashima, W. Chen (Eds.) Proceedings of the 20th Int. Conf. on Computers in Education ICCE 2012, Singapore, No 26 – Nov 30, 2012, APSCE, pp. 9-16. (Nominated for the best student paper award <http://www.lsl.nie.edu.sg/icce2012/program/best-paper-awards/>)
26. Shareghi, A., Mitrovic, A. Should we use examples in intelligent tutors? In: G. Biswas, L-H. Wong, T. Hirashima, W. Chen (Eds.) Proceedings of the 20th Int. Conf. on Computers in Education ICCE 2012, Singapore, No 26 – Nov 30, 2012, APSCE, pp. 112-114.
27. Weerasinghe, A., Mitrovic, A., Mathews, M., Holland, J., Elmadani, M. Supporting self-directed learning skills in Learning Management Systems. In: B. Chang, S. C. Tan, T. Matsui, G. Biswas, L-H. Wong, T. Hirashima, W. Chen (Eds) Workshop Proceedings of the 20th Int. Conf. on Computers in Education ICCE 2012, Singapore, No 26 – Nov 30, 2012, APSCE, pp. 770-776.
28. Shareghi, A., Mitrovic, A. Examples and tutored problems: How can self-explanation make a difference to learning? In: K. Yacef et al. (Eds.): AIED 2013, LNAI 7926, pp. 339--348. Springer, Heidelberg (2013)

29. Westerfield, G., Mitrovic, A., Billingham, M. Intelligent Augmented Reality Training for Assembly Tasks. In: K. Yacef et al. (Eds.): AIED 2013, LNAI 7926, pp. 542-551. Springer, Heidelberg (2013)
30. Weerasinghe, A., Mitrovic, A., Shareghi, A., Holland, J. The Effect of Interaction Granularity on Learning with a Data Normalization Tutor. In: K. Yacef et al. (Eds.): AIED 2013, LNAI 7926, pp. 463-472. Springer, Heidelberg (2013)
31. Weerasinghe, A., Shareghi Najjar, A., Mitrovic, A. How should SE be supported – during problem solving or separately? In E. Walker, C-K Looi (Eds.) AIED 2013 Workshop Proceedings, Workshop on self-regulated learning in educational technologies, pp. 13-17. http://ceur-ws.org/Vol-1009/aied2013ws_volume10.pdf
32. Shareghi, A., Mitrovic, A. Do novices and advanced students benefit differently from worked examples and ITS? L. H. Wong, C-C Liu, T. Hirashima, P. Sumedi, M. Lukman (Eds.) Proc. 21st Int. Conf. on Computers in Education, Bali, 18-22.11.2013, pp. 20-29. Uhamka Press, 2013. ISBN 978-602-8040-71-6 Best student paper award <http://icce2013bali.org/best-paper-awards/>
33. Elmadani, M., Mitrovic, A., Weerasinghe, A. Understanding Student Interactions with Tutorial Dialogues in EER-Tutor. L. H. Wong, C-C Liu, T. Hirashima, P. Sumedi, M. Lukman (Eds.) Proc. 21st Int. Conf. on Computers in Education, Bali, 18-22.11.2013, pp. 30-40. Uhamka Press, 2013.