
Curriculum Vitae

Christian Gütl

Personal Data

- April 15th, 1966 born in Graz, Austria
- Austrian citizen

Education

- 2009 Habilitation (second dissertation) in applied computer science at Graz University of Technology; Second doctoral thesis in topic “adaptive e-learning systems”; promoter Prof. Hermann Maurer
- 2002 Doctoral dissertation in computer science (with honor) at Graz University of Technology; focus on multimedia information systems
Doctoral thesis “enhanced approaches for knowledge discovery in the Internet”; first reader Prof. Hermann Maurer, second reader Prof. Frank Kappe
- 1997 Master in Communication Engineering and Economics (with honor) at Graz University of Technology; specialization in computer hardware and software
Master thesis in “stochastic signal processing” (hard and software); supervisor Prof. Willibald Riedler

Recent Appointments

- 10/2006 – current Assistant professor, key researcher, and Head of Educational Media Technology group, IICM, Graz University of Technology, Austria
- 09/2001 – 09/2006 Postdoctoral position and project manager, IICM, Graz University of Technology, Austria
- 08/1997 – 08/2001 Research assistant and lecturer, IICM, Graz University of Technology, Austria
- 03/1997 – 07/1997 Project manager for HW Information Server user interface and Web gateway, Hyperwave R&D, Graz, Austria

Research Areas

- Media Technologies and Multimedia information systems
- Information retrieval and visualization
- Natural Language Processing
- e-Education and e-Assessment
- Immersive Virtual Worlds for e-Education and Knowledge Transfer

Honor and Awards

- 2012 Research fellow scholarship, Curtin University of Technology, Perth, Western Australia
- 2011 Appointment as Visiting Professor, Universidad Galileo, Guatemala City
Research fellow scholarship, Curtin University of Technology, Perth, Western Australia
Research fellow scholarship, University of Technology Sydney, Sydney, New South Wales
- 2010 Research fellow scholarship, Curtin University of Technology, Perth, Western Australia
- 2009 Research fellow scholarship, Curtin University of Technology, Perth, Western Australia
Best paper award MIPRO 2009 (Conference Computers in Education)
Honor of Appreciation for learning ecosystem track chair, IEEE DEST 2009
- 2008 Adjunct Research Professor, School of Information Systems, Curtin University of Technology, Perth, Western Australia

	Research fellow scholarship, Curtin University of Technology, Perth, Western Australia
2007	Best paper award Medinfo 2007 (co-author)
2004	Employees award for outstanding performance (TU-Graz, IICM)
2002	Doctoral program finished with honor
1998	Best paper award EDMEDIA (co-author)
1997	Master program finished with honor

Visiting Positions

- Visiting professor, Curtin University of Technology (Western Australia), Curtin Business School (CBS), Prof. Vanessa Chang – Dean of Education CBS, Jan/March 2012 (funded by Curtin University)
- Visiting professor, University of Technology, Sydney, NSW, Australia, School of Computing and Communications, Prof. David Lowe, Jan 2012 (partly funded by Graz University of Technology)
- Visiting Academic, Universidad Galileo (Guatemala City), E-learning Lab, November 2011 (Universidad Galileo funding)
- Visiting Academic, City University of New York (CUNY) (NY, USA), LaGuardia Community College, November 2011 (TUG funding).
- Visiting Academic, MIT (USA), Center for Educational Computing Initiatives, Prof. Judson Harward and Prof. John Belcher, May 2011 (partly funded by Graz University of Technology for support of international relationships)
- Visiting professor, University of Technology, Sydney, NSW, Australia, School of Computing and Communications, Prof. David Lowe, Jan 2011 (funded by University of Technology, Sydney)
- Visiting professor, Curtin University of Technology (Western Australia), Curtin Business School (CBS) and Digital Ecosystems and Business Intelligence (DEBI) Institute, Prof. Vanessa Chang and Prof. Elisabeth Chang, Jan/March 2011 (funded by Curtin University)
- Visiting Academic, University of Technology, Sydney, NSW, Australia, School of Computing and Communications, Prof. David Lowe, Jan 2010 (funded by University of Technology, Sydney)
- Visiting professor, Curtin University of Technology (Western Australia), Curtin Business School (CBS) and Digital Ecosystems and Business Intelligence (DEBI) Institute, Prof. Elisabeth Chang and Dr. Vanessa Chang, Jan/Feb 2010 (funded by Curtin University)
- Visiting Academic, University of Sao Paulo, Integrated System Laboratory, Prof. Roseli de Deus Lopes, November 2009
- Visiting Academic, University of Salerno, Dipartimento di Matematica e Informatica, Andrea De Lucia, October 2009 (ERASMUS funding)
- Visiting Academic, MIT (USA), Center for Educational Computing Initiatives, Prof. Judson Harward, June 2009 (partly funded by Graz University of Technology for support of international relationships)
- Visiting professor, Curtin University of Technology (Western Australia), Curtin Business School (CBS) and Digital Ecosystems and Business Intelligence (DEBI) Institute, Prof. Elisabeth Chang and Dr. Vanessa Chang, Jan/Feb 2009 (funded by Curtin University)
- Visiting professor, University of Madeira, Institute for Mathematics and Engineering, Prof. Paulo Sampaio, Nov 2008 (ERASMUS funding)
- Visiting professor, Curtin University of Technology (Western Australia), Curtin Business School (CBS) and Digital Ecosystems and Business Intelligence (DEBI) Institute, Prof. Elisabeth Chang and Dr. Vanessa Chang, Jan/Feb 2008 (funded by Curtin University)
- Visiting academic, Curtin University of Technology (Western Australia), Curtin Business School (CBS), Prof. Heinz Dreher, Nov/Dec 2004 (partly funded by Graz University of Technology)

Teaching Experience

Courses and Seminars

- Knowledge Processing, master program (1998 – 2001)
- Multimedia Information Systems II, master program (2002 – 2003)
- Information Search and Retrieval, master program (2004 - current)
- Project Management, bachelor program (computer Science) (2006 - current)
- Project Management, bachelor program (software Design) (2006 - current)
- Programming project and seminar papers (master level) (1996 – current)
- Programming project and seminar papers (bachelor level) (1998 – current)
- Advanced Media Technologies (doctoral studies) (2010 – current)
- Scientific Work (doctoral studies) (2011)

Overall rating of teaching quality is in the upper range between 1 and 2 on a scale between 1 (best) and 5 (worst).

Supervision Experience

- 2 doctoral theses successfully co-supervised
- 35 master theses (also international students) successfully supervised or co-supervised
- 40+ programming project and seminar papers (master level)

Research Experience

Scientific Research Projects

- Adaptive Learning via Intuitive/Interactive, Collaborative and Emotional Systems (ALICE), 2010 – 2012, European Commission FP7 program, key researcher & local project manager
- Cross Boarder Virtual Incubator (CBVI), European Commission Lifelong Learning Program, multilateral projects, key researcher & local project manager
- Understanding People Power on the Web: A Multidisciplinary Approach, 2010 – 2011, International Program Development Fund (IPDF), Australian Research Grand, international research partner, key researcher
- SPRICHWORT (e-learning research project in language training), 11/2008 – 10/2010, EC-funded in the program line “Life-Long Learning/Transversal Programmes”, key researcher
- Collaborative Learning and Experimentation applying Immersive Virtual Environments, 10/2008 – current, collaboration with MIT - CECI
- Classroom of the Future (virtual reality, social software, AI, e-learning), 04/2008 – current, faculty research grant; key researcher
- E-Assessment (automatic skill & knowledge assessment and feedback in learning and working settings), 01/2008 – current, internal research project; initiator and project manager
- BERNSTEIN - The Memory of Papers (digital library, IR), 09/2006 – 02/2009, EC funded project; key researcher
- E-Learning Ecosystem (ELES) (e-learning, knowledge management, digital business ecosystem, web services), 09/2006 – current, research initiative in cooperation with CBS, Curtin University of Technology (Western Australia); co-initiator and key researcher
- DELOS (Network of Excellence on Digital Libraries), 01/2004 – 12/2007, EC funded project; key researcher
- Adaptive e-Learning with Eye-Tracking (AdeLE) (e-learning, adaptive systems, SOA, enhanced HCI methods), 11/2003 – 10/2007, nationally funded research project; team leader IICM and key researcher
- Measurable Intelligent and Reliable Semantic Extraction and Retrieval of Multimedia Data (MISTRAL) (multimodal information processing, automatic semantic annotation, cross-media retrieval, information visualization), 01/2004 – 12/2006, nationally funded research project; general project manager, team leader IICM and key researcher
- Extended Framework for Information Discovery (xFIND) (IR, Web search methods, information visualization), 01/1998 – 12/2006, open source system; initiator and manager

- Knowledge Discovery in WWW (IR, Web search systems), 01/1999-12/2000, nationally funded research project, team leader

Application-oriented Research Projects

- Virtual 3D World Applications for Museums and Virtual Exhibitions (Research and Prototype for Internet Studio-Isser, Funding program by Federal Ministry of Economy, Family and Youth of the Republic of Austria), 2010
- Intelligent Search Guidance (Research and Prototype for Internet Xohana, Funding program by Federal Ministry of Economy, Family and Youth of the Republic of Austria), 2010
- Virtual 3D World for Business Meetings (Research and Prototype for Sony Austria), 2008
- Consulting for Hyperwave R&D (Research and Design for HW Information Management System, Knowledge Management and E-Learning Suite), 1997 – 2004
- VA-TECH Intranet Application (Hyperwave Information Server, knowledge management), 2002 – 2003, project manager
- Credit Anstalt (CA) Intranet Application (Hyperwave Information Server), 1998 – 2001, project manager
- Infomed Austria, (Hyperwave Information Server Application, Web search system), 1997-1998, project manager
- Public Information System of Styrian Government (Hyperwave Information Server, Web search system), 1997-1998, group leader
- Lufthansa Intranet Application (Hyperwave Information Server), 1997, project manager

Administrative Experience

- Member of the institute commission (period 1998 - 1999)
- Responsible for the Institute's Website (2002 – 2004)
- Responsible for the Institute's Library (since 2006)
- Serving as jury member of final examinations (since 2006) at Graz University of Technology
- Serving as jury member of final examinations (since 2008) at University of Madeira
- Serving as jury member of final examinations (since 2009) at Curtin University
- Initiator and local contact for a student exchange program between Computer Science Faculty, Graz University of Technology and Curtin Business School, Curtin University, Perth, Western Australia
- Initiator and local contact for a student exchange program between Computer Science Faculty, Graz University of Technology and School of Information Systems, University of Western Australia, Perth, Western Australia
- Initiator and local contact for a student exchange program between Computer Science Faculty, Graz University of Technology and School of Computing and Communications, University of Technology, Sydney, NSW, Australia
- Computer Science Faculty, Graz University of Technology and School of Information Systems, University of Western Australia, Perth, Western Australia
- Initiator and local contact for a student exchange program between Computer Science Faculty, Graz University of Technology and Faculty of Mathematics, University of Madeira, Portugal
- Initiator and local contact for a student exchange program between Computer Science Faculty, Graz University of Technology and Center for Educational Computing Initiatives, MIT, USA.

External Professional Activities

Chair and Organizational Committees

- International Workshop on Computer-based Knowledge & Skill Assessment and Feedback in Learning Settings (CAF), initiator and chair, since 2008
- International Workshop on Virtual Worlds for academic, organizational, and life-long learning (ViWo), initiator and co-chair, since 2009
- International Conference on Data Engineering and Management (ICDEM), co-chair for 2009

- IEEE – DEST (Digital Ecosystems and Technologies), e-learning track chair, 2009 and 2010
- ICWL (International Conference on Web-based Learning), Publicity Co-Chairs for 2009
- ICL (International Conference on Interactive Computer aided Learning), Special Track Chair, 2009 until now
- IEEE EDUCON (International Conference of Global Learning in Engineering Education), program co-chair 2010
- Spain ACM SIG Chapter on Computer Science Education (SIGCSE), international advisory board since 2009
- ICBL (International Conference on Blended Learning), advisory board.
- International Workshop on Knowledge Management and e-Human Resources Practices for Innovation (eER-KM2011), Workshop Co-Chair

Editorial Boards and Special Issues Review

- International Journal of Knowledge and Learning (IJKL) – Co-Editor
- IEEE Transactions on Learning Technologies
- Journal of Universal Science and Technology of Learning (JUSTL)
- Journal of Information Technology Research (JITR)
- International Journal of Emerging Technologies in Learning (iJET)
- Cypriot Journal of Educational Sciences (CJES)
- International Journal of Engineering Education (IJEE)
- International Journal of Knowledge and Learning (IJKL)
- Infocommunications Journal
- Computers & Education
- World Wide Web Journal (W3J)
- JUKM Special Issue (Multimedia Metadata)
- Journal of Universal Computer Science (J.UCS)
- IEEE Multimedia Journal Special Issue (Multimedia-Metadata and Semantic Management)
- IEEE Transaction on Industrial Electronics (Reviewer)
- M. Granitzer, M. Lux, and M. Spaniol (Eds.) Multimedia Semantics – The Role of Metadata. Springer, book chapter reviews
- C. Pahl (Ed.) Architecture Solutions for E-Learning Systems. Idea Group Inc., Hershey, USA, book chapter reviews
- C. Mourlas, N. Tsianos and P. Germanakos (Eds.) Cognitive and Emotional Processes in Web-based Education: Integrating Human Factors and Personalization. Hershey, USA, book chapter reviews
- M. Ebner and M. Schiefner (Eds.) Looking Toward the Future of Technology Enhanced Education: Ubiquitous Learning and the Digital Native. IGI Global, book chapter review
- A.V.Senthil Kumar (Ed.) Knowledge discovery practices and emerging applications of data mining: Trends and new domains, IGI Global, book chapter review
- Francesca Pozzi & Donatella Persico (Eds.) Techniques for Fostering Collaboration in Online Learning Communities: Theoretical and Practical Perspectives, IGI Global, book chapter review
- Abul K. M. Azad, Michael E. Auer & V. Judson Harward (Eds.) Internet Accessible Remote Laboratories: Scalable E-learning Tools for Engineering and Science Disciplines
- A.V.Senthil Kumar & Hakikur Rahman (Eds.) Mobile Computing Techniques in Emerging Markets : Systems, Applications and Services

Program Committee and Reviews

- IEEE DEST (Conference on Digital Ecosystems and Technologies)
- IEEE ICDEM (International Conference on Data Engineering and Management)
- IEEE ETFA (International Conference on Emerging Technologies)
- IEEE EDUCON (Annual Global Engineering Education Conference)

- IEEE INDIN (International Conference on Industrial Informatics)
- IEEE ICIT (International Conference on Industrial Technology)
- IEEE ISIE (International Symposium on Industrial Electronics)
- IEEE IECON (International Conference of Industrial Electronics Society)
- IEEE INCoS 2009 (International Conference on Intelligent Networking and Collaborative Systems)
- IEEE OPTIM 2010 (International Conference on Optimization of Electrical and Electronic Equipment)
- ACM SIGITE (Special Interest Group on Information Technology Education) Conference
- ACM MEDES'09 (Conference on Management of Emergent Digital EcoSystems)
- ACM International Workshop on Multimedia Technologies for Distance Learning (MTDL 2010)
- ACM Conference on Information and Knowledge Management 2011
- CADGME, Computer Algebra and Dynamic Geometry Systems in Mathematics Education, working group ConMAs, Convergence on Mathematics Assistants.
- CLEF 2010 LABs (Conference on Multilingual and Multimodal Information Access Evaluation)
- EISTA (International Conference on Education and Information Systems, Technologies and Applications)
- EC-TEL 2010, 2011 (European Conference on Technology Enhanced Learning)
- HIS 2009 (International Conference on Human System Interaction)
- ICL (International Conference on Interactive Computer Aided Learning)
- IMCL 2009 (International Conference on Interactive Mobile and Computer Aided Learning)
- ICDEM 2010 (International Conference on Data Engineering and Management)
- ICWL 2009, 2010 (International Conference on Web-based Learning)
- INCoS 2009 and 2010 (2nd International Conference on Intelligent Networking and Collaborative Systems)
- CSEDU 2009, 2010 (International Conference on Computer Supported Education)
- CITA Conference
- IKNOW 2006 and 2007 (Special Track for Knowledge Visualization and Knowledge Discovery)
- WMSRM 2007 (Workshop Multimedia Semantics - The Role of Metadata)
- M3R 2008 (Workshop on Multimedia Metadata Management & Retrieval)
- OnToContent 2010 (International Workshop on Ontology Content)
- TIR 2008 - 2010 (Text-based Information Retrieval)
- PAN Workshop 2008 and 2009 (Uncovering Plagiarism, Authorship, and Social Software Misuse)
- STEG 2008 and 2009 (Story-Telling and Educational Games)
- GRIT 2009 (GRIT is Remote Instrumentation and Telerobotics for the industry, distance learning and laboratories)
- SeMuDaTe 2009 Workshop at SAMT 2009 (4th International Conference on Semantic and Digital Media Technologies)
- WM2011 (6th Conference Professional Knowledge Management)

Other Professional Activities

- Since 2005 independent expert for the European Commission in the FP 6, FP 7 and E-Content Plus program (multiple research project reviews and research project proposal evaluation involvements)
- Since 2009 reviews for NSF, USA
- Since 2010 reviews for Cyprus Research Council, Cyprus
- Since 2011 reviews for Belgium Research Council, Belgium

- Founder and since 2000 head of Gütl IT Research & Consulting (Graz, Austria), main scope on consulting in information systems and knowledge management
- Co-founder and since 2000 partner of Infodelio Information Systems (Graz, Austria), main scope in information retrieval and wireless applications

Communities Involved

- Board members and co-initiator of the Europe chapter of the Immersive Education Initiative
- Global Online Laboratory Consortium (GOLC) – Founding Member
- Member of IEEE
- Member of ACM
- IEEE Education Society members
- ACM Special Interest Group on Information Retrieval
- Sun Immersion Special Interest Group
- European MPEG-7 Interest Group
- Study Group-Competencies (standardization effort for competences)
- OCG (Austrian Computer Society)
- Future Internet Austria Initiative

Publications and Talks

Peer-reviewed Publications

- [1] Mohamed Soliman, and Christian Gütl (2011). A Survey of Pedagogical Functions of Intelligent Agents in Virtual Learning Environments. *Journal of Internet Technology, Special Issue on Agent Technology in Cyberspace*, Vol. 12 No. 6, 175-187.
- [2] Mohammad AL-Smadi, Margit Hoefler, and Christian Gütl (2011). An Integrated Model for e-Assessment of Learning Experiences Enriched with Complex Learning Resources. *Proceedings of International Workshop on Adaptive Learning via Interactive, Collaborative and Emotional Approaches (ALICE 2011)*, 3d IEEE INCoS-2011 conference: Third International Conference on Intelligent Networking and Collaborative Systems, November 30 - December 2, 2011, Fukuoka, JAPAN.
- [3] Vanessa Chang, Christian Gütl, and Mirza Hadzi (2011). Using 3D Virtual Worlds to Support Geographically Distributed Software Development Team. In *Proc. of the European Immersive Education Summit (E-iED 2011)*, Madrid, Spain, November 2011, proceedings <http://www.it.uc3m.es/rueda/Final.pdf>, 16 – 27.
- [4] Mohammad AL-Smadi, Margit Höfler, and Christian Gütl (2011). Enhancing Wikis with Visualization Tools to Support Groups Production Function and to Maintain Task and Social Awareness. *International Conference on Interactive Computer Aided Blended Learning (ICBL 2011)*, Antigua Guatemala, Nov. 2011, 6 pages.
- [5] Weinberger, A., Dreher, H., AL-Smadi, M. & Guetl, C. (2011). Analytical Assessment Rubrics to facilitate Semi-Automated Essay Grading and Feedback Provision. *Proceedings of the ATN Assessment Conference 2011*, 20-21 October, Curtin University Perth, Western Australia, pp. 170 – 177. http://otl.curtin.edu.au/atna2011/files/ATNA_2011_Proceedings.pdf, 170-177.
- [6] Mohamed Soliman, and Christian Gütl (2011). Evaluation of Intelligent Agent Frameworks for Human Learning. *International Conference on Interactive Computer-Aided Learning, ICL2011*, Sept. 2011, Piestany, Slovakia, pp. 191 – 194.
- [7] Mohammad AL-Smadi, Margit Hoefler, and Christian Gütl (2011). Integrated and Enhanced e-Assessment Forms for Learning: Scenarios from ALICE Project. *Proceedings of Special Track on Computer-based Knowledge & Skill Assessment and Feedback in Learning Settings (CAF 2011)*, ICL 2011, Piestany, Slovakia, 21 - 23 September 2011, pp. 626-631.
- [8] Stefanie Boruta, Christian Gütl, Vanessa Chang, and Arthur Edwards (2011). Foreign Language Learning Environment built on Web 2.0 Technologies. *International Conference on Interactive Computer-Aided Learning, ICL2011*, Sept. 2011, Piestany, Slovakia, pp. 82 – 88.
- [9] Christian Gütl and Johanna Pirker (2011). Implementation and Evaluation of a Collaborative Learning, Training and Networking Environment for Start-Up Entrepreneurs in Virtual 3D Worlds. *International Conference on Interactive Computer-Aided Learning, ICL2011*, Sept. 2011, Piestany, Slovakia, pp. 56 – 66.
- [10] Mohamed Soliman, and Christian Gütl (2011). Evaluation of Intelligent Agent Frameworks for Human Learning in Virtual Worlds. *International Journal of Engineering Pedagogy (iJEP)*, Vol 1, No 3 (2011), 45-48.
- [11] Mohammad AL-Smadi and Christian Gütl (2011). Service-oriented flexible and interoperable assessment: towards a standardised e-assessment system. *Int. J. Continuing Engineering Education and Life-Long Learning*, Vol. 21, No. 4, 289–307.
- [12] Rocael Hernández, Christian Gütl, and Hector R. Amado-Salvatierra (2011). Facebook for e-Moderation - A Latin-American Experience. *Proceedings of the 11th International Conference on Knowledge Management and Knowledge Technologies (IKNOW 2011)*, Graz, Austria, September 2011, 4 pages (short paper).
- [13] Markus Lanthaler, and Christian Gütl (2011). Aligning Web Services with the Semantic Web to Create a Global Read Write Graph of Data. *Proceedings of the 9th IEEE European Conference on Web Services, ECOWS 2011*, Lugano, Switzerland, September 14-16, 2011, pp. 15-22.
- [14] Christian Gütl, Tina Scheucher, Philip H. Bailey, John Belcher, Fabio Ricardo dos Santos, and Stefan Berger (2011). Towards an Immersive Virtual Environment for Physics Experiments supporting Collaborative Settings in Higher Education. In Abul K. M. Azad, Michael E. Auer and

- V. Judson Harward (Eds.): *Internet Accessible Remote Laboratories: Scalable E-learning Tools for Engineering and Science Disciplines*, IGI Global, pp. 543-562.
- [15] Amir Mujkanovic, David. Lowe, Christian Guetl, and Thorsten Kostulski (2011). An architecture for automated group formation within remote laboratories. *REV 2011: 8th International Conference on Remote Engineering and Virtual Instrumentation*, Brasov, Romania, June 2011, pp. 91-100.
- [16] Markus Lanthaler and Christian Guetl (2011). SAPS: Semantic AtomPub-based Services. 2011 IEEE/IPSJ 11th International Symposium on Applications and the Internet (SAINT 2011), Munich, Germany, July 2011, 382 – 387.
- [17] Höfler, M., AL-Smadi, M., & Gütl, C. (2011). Investigating content quality of automatically and manually generated questions to support self-directed learning. In Whitelock, D., Warburton, W., Wills, G., and Gilbert, L. (Eds.), *CAA 2011 International Conference*, University of Southampton, July 2011, 9 pages, <http://caaconference.co.uk/wp-content/uploads/Hofler-CAA2011.pdf>
- [18] Markus Lanthaler and Christian Guetl (2011). A Semantic Description Language for RESTful Data Services to Combat Semaphobia. 5th IEEE International Conference on Digital Ecosystems and Technologies Conference (DEST 2011), Daejeon, May 2011, pp. 47 – 53.
- [19] Christian Gütl, Klaus Lankmayr, Joachim Weinhofer, and Margit Höfler (2011). Enhanced Approach of Automatic Creation of Test Items to foster Modern Learning Setting. *Electronic Journal of e-Learning*, 9, 1, ECEL 2010 special issue Apr 2011, 23-38.
- [20] Mohammad AL-Smadi and Christian Gütl (2011). Supporting Self-Regulated Learners with Formative Assessments using Automatically created QTI-Questions. *IEEE EDUCON 2011*, Amman, Jordan, 04-06 April 2011, pp. 288–294.
- [21] Mohammad AL-Smadi, Christian Gütl and Vanessa Chang (2011). Addressing e-Assessment Practices in Modern Learning Settings: A Review. *Global Learn Asia Pacific 2011*, Melbourne, Australia, March 28-April 1, 2011, pp. 448-459.
- [22] Christian Gütl (2011). The Support of Virtual 3D Worlds for enhancing Collaboration in Learning Settings. In Francesca Pozzi and Donatella Persico (Eds.) *Techniques for Fostering Collaboration in Online Learning Communities: Theoretical and Practical Perspectives*, IGI Global, 2011, 278-299.
- [23] Markus Lanthaler, Michael Granitzer and Christian Gütl (2010). Semantic Web Services: State of the Art. In *Proc. of IADIS International Conference on International Higher Education 2010*, Perth, Western Australia, 29th Nov. – 1st Dec., 2010.
- [24] Syed Nadeem Ahsan, Muhammad Tanvir Afzal, Safdar Zaman, Christian Gütel, Franz Wotawa (2010). Mining Effort Data from the OSS Repository of Developer's Bug Fix Activity. *Journal of IT in Asia*, Vol 3 (2010), 67-80.
- [25] Piedad Garrido, Francisco J. Martinez, and Christian Gütl (2010). Adding Semantic Web Knowledge to Intelligent Personal Assistant Agents. In *Proc. of SERES-2010 (Semantic Repositories for the Web)*, ISWC 2010, Shanghai, China, November 7, 2010, pp. 1-12.
- [26] Piedad Garrido, Francisco J. Martinez, Christian Gütl, and Inmaculada Plaza (2010). Enhancing Intelligent Pedagogical Agents in Virtual Worlds. In *Workshop Proceedings of the 18th International Conference on Computers in Education*. Putrajaya, Malaysia: Asia-Pacific Society for Computers in Education, pp. 11-18.
- [27] Christian Gütl, Klaus Lankmayr and Joachim Weinhofer (2010). Enhanced Approach of Automatic Creation of Test Items to Foster Modern Learning Setting. In *Proc. of the 9th European Conference on e-Learning*, Porto, Portugal, 4-5 November 2010, 225-234.
- [28] Christian Gütl, Vanessa Chang, and Stefan Freudenthaler (2010). How to Support More Flexible Learning Settings in Second Life. In *Proc. of the ICL 2010*, Hasselt, Belgium, September 2010 129-141.
- [29] Mohamed Soliman and Christian Guetl (2010). Realizing Intelligent Pedagogical Agents in Immersive Virtual Learning Environments. In *Proc. of the ICL 2010*, Hasselt, Belgium, September 2010, 909-915.
- [30] Alexander Nussbaumer, Christian Gütl, and Walther Neuper (2010). Adaptive Competence Assessment for ISAC. In *Proc. of the ICL 2010*, Hasselt, Belgium, September 2010, 1136-1139.
- [31] Mohammad Al-Smadi, Christian Guetl, Frank Kappe (2010). Peer Assessment System for Modern Learning Settings: Towards a Flexible E-Assessment System. *iJET*, Vol 5 (2010), 5-11.

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- [32] Mohamed Soliman, Christian Gütl (2010). Intelligent Pedagogical Agents in Virtual Learning Environments: A Review. MIPRO 2010, 24-28 May 2010, Opatija, Croatia, pp. 827 – 832.
- [33] Dominik Schrank, Christian Gütl, Frank Kappe (2010). Design and Implementation of a Payment System for Virtual Worlds. World Academy of Science, Engineering and Technology, Issue 66, June 2010, 828-835.
- [34] Markus Lanthaler, and Christian Gütl (2010). Towards a RESTful service ecosystem: Perspectives and challenges. IEEE DEST 2010, Dubai, 13-16 April 2010, pp. 209 – 214.
- [35] Mohammad Al-Smadi, Christian Guehl and Frank Kappe (2010). An Enhanced Approach for Peer-Assessment Activities. ICALT 2010, Sousse, Sousse Tunisia, 5-7th July, 2010, pp.637-641.
- [36] Mohamed Soliman, Christian Gütl (2010). Review and Perspectives on Intelligent Multi-Agent Systems' Support for Group Learning. In Proceedings of World Conference on Educational Multimedia, Hypermedia and Telecommunications 2010 (Edmedia 2010), Toronto, Canada, June 2010, pp. 2998-3006.
- [37] Vanessa Chang, Christian Gütl (2010). Generation Y Learning in the 21st Century: Integration of Virtual Worlds and Cloud Computing Services. In Z. Abas et al. (Eds.), Proceedings of Global Learn Asia Pacific 2010 (pp. 1888-1897). AACE, Penang, Malaysia, May 17 - 20, 2010.
- [38] Fabio Ricardo Dos Santos, Christian Gütl, Phillip H. Bailey, V. Judson Harward, (2010). Dynamic Virtual Environment for multiple Physics Experiments in Higher Education. IEEE EDUCON 2010, Madrid, Spain, 14-16 April 2010, pp. 731 - 736.
- [39] Mohammad Al-Smadi and Guehl, Christian (2010). SOA-based Architecture for a Generic and Flexible E-assessment System. IEEE EDUCON 2010, Madrid, Spain, 14-16 April 2010, pp. 493 – 500.
- [40] Georg Petritsch, Stephan Spat, Christian Gütl, Peter Beck (2010). An approach for a medical ontology based on UMLS to improve information retrieval in German language clinical text documents. In MEDINFO 2010, Stud Health Tech Informat (Vol. 160), September 2010, Kapstadt, South Africa, p. 1496.
- [41] Emanuel Reiterer, Heinz Dreher and Christian Gütl (2010). Automatic Concept Retrieval with Rubrico. MKWI 2010, Göttingen, Germany, 2010, pp. 3-14.
- [42] Nadine Abu Rumman, Samir Abou El-Seoud, Khalaf F Khatatneh and Christian Gütl (2010). Geometry Compression for 3D Polygonal Models using a Neural Network. International Journal of Computer Applications 1(29):13–22, February 2010.
- [43] Mohammad AL-Smadi, Christian Gütl and Rajkumar Kannan (2010). Modular Assessment System for Modern Learning Settings: MASS. International Journal of Computer Applications, V01, No 9, 43-49.
- [44] Rajkumar Kannan, Frederic Andres and Christian Gütl (2009). DanVideo: an MPEG-7 authoring and retrieval system for dance videos. Multimedia Tools and Applications, Springer Netherlands, October 22nd, 2009 (Online), retrieved from <http://www.springerlink.com/content/3858428730083007/fulltext.pdf>.
- [45] Vanessa Chang, Christian Gütl, Simone Kopeinik, Robert Williams (2009). Evaluation of Collaborative Learning Settings in 3D Virtual Worlds. International Journal of Emerging Technologies in Learning (iJET), Vol 4 (2009): Special Issue: ICL2009, 6-17.
- [46] Tina Scheucher, Phil H. Bailey, Christian Gütl, V. Judson Harward (2009). Collaborative Virtual 3D Environment for Internet-accessible Physics Experiments. International Journal of Online Engineering (iJOE), (republished), Vol 5 (2009), Special Issue 1: REV2009, August 2009, 65-71.
- [47] Mohammad AL-Smadi, Christian Guehl and Frank Kappe (2009). PASS: Peer-ASSESSment Approach for Modern Learning Settings. ICWL 2009, Aachen, Germany, in M. Spaniol et al. (Eds.) Advances in Web Based Learning, Springer Berlin, Volume 5686/2009, 44-47.
- [48] Mohammad AL-Smadi, Christian Guehl and Denis Helic (2009). Towards a Standardized e-Assessment System: Motivations, Challenges and First Findings. iJET, Vol 4 (2009) Special Issue: IMCL2009, 6-12.
- [49] Mohammad AL-Smadi, Christian Gütl and Denis Helic (2009). Using Computers to Enhance Peer-assessment Activities: Towards a Flexible e-Assessment System. Special Track “Computer-based Knowledge & Skill Assessment and Feedback in Learning Settings (CAF)”, ICL 2009, Villach, Austria, September 2009, 1098-1105.
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Other Publications

- [1] Christian Gütl (2008). Enhanced Computer-based Support for Personalized Learning Activities. Post Doctoral Lecture Thesis. Graz University of Technology, Austria.
- [2] Christian Gütl (2004). Smart Information Retrieval Concepts - A Study for the Application in Digital Libraries. Position paper for the Gradl Project. TU-Graz, 2004.
- [3] Gerald Eigenstuhler, Victor Manuel García-Barríos, Christian Gütl, Hermann Maurer, Felix Mödrtscher (2003). Information Systems for Museums - Feasibility Studie für das System "Informationssystem für Museen. TU-Graz, 2003.
- [4] Victor Manuel García-Barríos, Christian Gütl, Helmut Leitner, Hermann Maurer, Felix Mödrtscher, Andreas Opelt, Martin Ruhmer, Thomas Volcan (2002). Firewall Systems - Feasibility Studie für das Viren- und Firewall System "Webguard", 2002.
- [5] Christian Gütl (2002). Ansätze zur modernen Wissensauffindung im Internet. - Eine Annäherung an das Information Gathering and Organizing System xFIND (Extended Framework for INformation Discovery) [Approaches to Modern Knowledge Discovery for the Internet. - An Approach to the Information Gathering and Organizing System xFIND (Extended Framework for INformation Discovery)]. Disertation thesis, Graz University of Technology.
- [6] Christian Gütl, Hermann Maurer (2000). Modern Knowledge Management in WWW - Final Report. Intelligente Wissenserfassung und Wiederauffindung in künftigen WWW-Systemen, Forschungsendbericht, BMWF, 2000.
- [7] Christian Gütl, Keith Andrews, Herman Maurer (1998). Future Information Harvesting and Processing on the Web. Invited paper, presented at conference " European Telematics: advancing the information society", Barcelona, 4-7 February 1998
- [8] Christian Gütl (1996). Erfassung akustischer Vorgänge bei Strömungskavitation [Detection of acoustics processes with reference to fluid cavitation]. Master thesis, Graz University of Technology.

Talks (paper presentations excluded)

- [1] Recent Research of Advanced Educational Media Technologies Group, City University of New York (CUNY), LaGuardia Community College, New York, USA (invited talk)
- [2] Recent Research in Immersive Education, Universidad Galileo, Guatemala City, November 2011 (invited talk)

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- [3] Recent Research of Advanced Educational Media Technologies Group, Universidad Galileo, Guatemala City, November 2011 (invited talk)
 - [4] Entrepreneurship Training using Immersive Virtual Worlds (Talk in German Language), ÖAD, Vienna, September 2011 (invited talk)
 - [5] E-Assessment. Introductory speech, Third Special Track on Computer-based Knowledge & Skill Assessment and Feedback in Learning Settings (CAF), September 2011, Piestany, Slovakia.
 - [6] Recent Research of Advanced Educational Media Technologies Group, iED Summit 2011 in Boston, May 2011 (invited talk)
 - [7] Enhances Approaches of Automatic Creation of Test Items to foster Modern Learning Settings, Curtin University, invited research seminar February 2011 (invited research seminar)
 - [8] Automatic Creation of Test Items to foster Modern Learning Settings, UWA, February 2011, (invited research seminar)
 - [9] Virtual 3D Environments for Learning& Training. Introductory speech, Thired Special Track on Virtual 3D Worlds for Learning and Training Activities (ViWo), 2010, Kuala Lumpur, Malaysia.
 - [10] E-Assessment. Introductory speech, Third Special Track on Computer-based Knowledge & Skill Assessment and Feedback in Learning Settings (CAF), September 2010, Hasselt, Beldium
 - [11] Immersive Collaborative Virtual Learning Environments for Science Education. Key Note, MIPRO – Computers in Education (CE), May 2010, Opatia, Croatia (invited talk).
 - [12] Immersive Learning Environments for Science Education. Invited talk at EURECOM, Nice, France, May 2010 (invited talk).
 - [13] Collaborative Virtual Environments for Learning and Training. Invited talk IEEE Section Slovenia, University of Maribor, November 2009, Maribor, Slovenia (invited talk).
 - [14] Immersive Collaborative Virtual Environments for Learning and Training Activities. Key Note, ICBL - International Conference on Interactive Computer aided Blended Learning, November 2009, Florianópolis, Brazil (invited talk).
 - [15] Collaborative Virtual Environments for Learning and Training. University of Sao Paulo, Integrated System Laboratory, November 2009, Sao Paulo, Brazil.
 - [16] Immersive Collaborative Virtual Environments for Learning and Training Activities. University of Salerno, Dipartimento di Matematica e Informatica, October 2009, Salerno, Italy.
 - [17] E-Assessment. Introductory speech, Second Special Track on Computer-based Knowledge & Skill Assessment and Feedback in Learning Settings (CAF), September 2009, Villach, Austria
 - [18] Enhanced Computer-based Support for Personalized Learning Activities. Graz University of Technology, June 2009.
 - [19] Virtual 3D Environments for Learning& Training. Introductory speech, First Special Track on Virtual 3D Worlds for Learning and Training Activities (ViWo), 2009, Amman, Jordan.
 - [20] Ecosystem-based Theoretical Models for Learning in Environments of the 21st Century, Digital Ecosystems and Business Intelligence Institute, Curtin University of Technology, February 2009.
 - [21] e-Assessment Approaches supporting Personalization in Modern Learning Settings, School of Information Systems, Curtin University of Technology, February 2009,
 - [22] E-Learning in modern Learning Settings: Selected Research Activities. Guest Lecture. University of Madeira, Portugal.
 - [23] E-Assessment. Introductory speech, First Special Track on Computer-based Knowledge & Skill Assessment and Feedback in Learning Settings (CAF), 2008, Villach, Austria.
 - [24] Enhancements of Meeting Information Management and Application for Knowledge Access and Learning Activities, Curtin Business School, Curtin University of Technology, February 2008.
 - [25] Towards a flexible Computer-Based Assessment System, School of Information Systems – Semantic Eagle Research Group, Curtin University of Technology, February 2008.
 - [26] Overview of Current Research Work, Digital Ecosystems and Business Intelligence Institute, Curtin University of Technology, February 2008.
 - [27] Christian Gütl (2005). Information Retrieval and Visualization of MPEG-7-based Meeting Information applying the Open Source Tool xFIND. 3rd MPEG-7 Workshop, Aachen, Nov. 2005 (Invited talk).
 - [28] MPEG-7 Requirements and Application for a Multi-Modal Meeting Information System. Insights and Prospects within the MISTRAL Research Project. MPEG-7 Workshop, IKNOW 05, Graz, Austria, 2005 (Invited talk).
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- [29] Horst Bischof, Christian Gütl und Peter Lipp (2005). How to get a research grant: Insider information from EU grant evaluations. Informatik Fakultät, TU-Graz, May 2005.
- [30] Christian Gütl (2004). Research in Information Retrieval - An introduction in current research projects (xFIND, AdeLE, MISTRAL). Curtin Business School, Curtin University of Technology, 10th Dec. 2004.
- [31] Future Information Harvesting and Processing on the Web. "European Telematics: advancing the information society", Barcelona, 4-7 February 1998 (invited talk).

Supervision Experience

Supervised and Co-Supervised Doctoral Theses (finished)

- [1] Victor Manuel Garcia Barrios (2007). Personalisation in Adaptive E-Learning Systems: A Service-Oriented Solution Approach for Multi-Purpose User Modelling Systems. Graz University of Technology.
- [2] Felix Moedritscher (2007). Implementation and Evaluation of Pedagogical Strategies in Adaptive E-Learning Environments. Graz University of Technology.

Supervised and Co-Supervised Doctoral Theses (running)

- [1] Mohammad A. Smadi. E-Assessment. Graz University of Technology (supervisor).
- [2] Alexander Nussbaumer. Adaptive Control of Learning Management Systems based on the Knowledge Space Theory. Graz University of Technology (supervisor).
- [3] Charles Zhao. Web-based technologies for Knowledge Management in Higher Educational Institutions. Curtin University of Technology (external co-supervisor).
- [4] Markus Lantaler. Intelligent service composition in knowledge management and learning applications (supervisor).
- [5] Mohamed Soliman. Intelligent Pedagogical Agents in Immersive Virtual Learning Environments (supervisor).

Supervised and Co-Supervised Diploma Theses (finished)

- [1] Stefan Freudenthaler (2011). Flexible Learning Settings in Second Life. In Cooperation with Curtin University of Technology, Perth, WA.
- [2] Daniel Berger (2011). Supporting Tool for Moderation in the Grading Process of Summative Assessments Design and Prototype of a Software Tool for Moderation and Assessment with Variable Rubrics. In Cooperation with Curtin University of Technology, Perth, WA.
- [3] Emanuel Reiterer (2010). Deriving ontologies and assessment rubrics for electronic documents with human support for automatic assessment purposes. In Cooperation with Curtin University of Technology, Perth, WA.
- [4] Simone Kopeinik (2010). Virtual 3D World for Distance Learning in Higher Education. In Cooperation with Curtin University of Technology, Perth, WA.
- [5] Klaus Lankmayr (2010). Entwurf und Entwicklung von Konzepten zur automatischen Fragengenerierung [Design and Development of Concepts for Automatic Exercise Creation]. Graz University of Technology.
- [6] Joachim Weinhofer (2010). Extraktion semantisch relevanter Daten aus natürlich sprachlichen Inhalten in Hinblick auf eine automatische Fragengenerierung [Extraction of relevant semantic data from natural language texts in the view of automatic question generation]. Graz University of Technology.
- [7] Mirza Hadzic (2010). Supporting Distributed Software Teams with 3D Virtual Worlds - Design and prototype of a 3D virtual world environment for virtual collaboration in software engineering. Graz University of Technology.
- [8] Tina Scheucher (2010). Virtual 3D Worlds for virtual or remote laboratories at learning processes. In cooperation with MIT, USA.
- [9] Domink Schrank (2009). A Trustful Payment System for virtual Worlds. Graz University of Technology.
- [10] Josef Robert Moser (2009). The Electronic Assessor - Automatic Knowledge Assessment in the AdeLE E-Learning Environment. Graz University of Technology.
- [11] Ângelo Manuel Franco Spínola (2008). Improved Management, Retrieval and Access of Presentation Recordings for Enhanced Learning Processes. University of Madeira, Portugal.
- [12] Fatima da Cruz Bras Brazao (2008). Improved Skill Model Applied to Business Processes Management. University of Madeira, Portugal.
- [13] Stephan Spat (2007). Prototype of a Medical Information Retrieval System for Electronic Patient Records. Graz University of Technology.

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- [14] Helmut Mader (2007). Visualizing Multidimensional Metadata Development of the Visualization Framework MD2VS. Graz University of Technology.
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