

Dr. Christopher (Chris) Teplovs

CONTACT INFORMATION	Chief Technology Officer Problemshift Inc.	<i>Mobile:</i> +1-519-992-6736 <i>E-mail:</i> dr.chris@problemshift.com <i>WWW:</i> christeplovs.com
RESEARCH INTERESTS	Large-scale discourse-based and social learning analytics: quantitative analyses, educational data mining, design and implementation of collaborative learning software, design and implementation of assessment tools and metrics for learning, dynamics of learning networks, automated and semi-automated content analysis, and information visualization	
ACADEMIC APPOINTMENTS	Visiting Scholar Department of Earth and Environmental Sciences, University of Windsor	September 2012 to July 2013
	<ul style="list-style-type: none">• Focus: Modelling inter-program flow of students using enrolment data	
	Postdoctoral Research Fellow Department of IT Management, Copenhagen Business School	January 2011 to July 2011
	<ul style="list-style-type: none">• Next Generation Teaching, Education and Learning for Life (NEXT-TELL) NEXT-TELL is an Integrated Project (IP) in the ICT challenge of the 7th framework programme of the EC; its main objective is to provide, through research and development, computational and methodological support to teachers and students.<ul style="list-style-type: none">– Supervisor (co-PI): Professor Ravi Vatrapsu– PI: Professor Peter Reimann	
	Visiting Research Associate Professor Sciences Techniques Éducation Formation, École Normale Supérieure de Cachan	September 2010 to October 2010
	<ul style="list-style-type: none">• Hosts: Eric Bruillard and Christophe Reffay• Focus: My work focused on the extension of the Knowledge Space Visualizer to take into consideration the social networks of online education participants.	
	Senior Lecturer Division of the Environment, University of Toronto	January 1992 to August 2003
	<ul style="list-style-type: none">• Course coordination (approximately 350 students in total), hiring and training of approximately nine teaching assistants annually, construction and grading of tests and examinations, and compilation of grades.	
INDUSTRY EXPERIENCE	Chief Technology Officer Problemshift Inc.	July 2013 to present
	Problemshift specializes in the creation of interactive analytic representations of complex data, with a particular focus on learning analytics. Current projects:	
	<ul style="list-style-type: none">• Working with the University of Toronto on Bill and Melinda Gates Foundation funded MOOC Research Initiative project• Working with the Open University Netherlands on a platform that supports the social learning analytics.• Working with Tufts University on analytics to support STEM education in secondary school settings using an online collaboration environment	
	Chief Research Scientist Problemshift Inc.	July 2010 to July 2013
	Distance Education Project Coordinator Office of the Vice-Provost, Teaching and Learning, University of Windsor	January 2012 to June 2012

Research Scientist and Systems Software Programmer September 1998 to March 2011
Institute for Knowledge Innovation and Technology, University of Toronto

Proprietor

Knowledge Building Technologies

- WWW-based design and programming for Environment Canada, Groveware Inc., Knowledge Analysis Technologies LLC and the University of Toronto.

EDUCATION

University of Toronto, Toronto, Ontario, Canada

Ph.D., Education: Curriculum Studies and Teacher Development July 2010

- Thesis Title: *Visualization of Knowledge Spaces to Enable Concurrent, Embedded and Transformative Input to Knowledge Building Processes*
- Supervisor: Professor Marlene Scardamalia
- Committee: Professors Carl Bereiter, Jim Hewitt, Clare Brett, Robert McLean, and Elizabeth Smyth
- External Examiner: Professor Allan M. Collins
- Area of Study: Computer Application in Education

M.A., Education July 1997

- Thesis Title: *ELSA: An Internet Agent That Adapts World Wide Web Pages to Users' Learning Styles*
- Supervisor: Professor Robert S. McLean
- Area of Study: Computer Applications

B.Sc., Zoology July 1989

- With Distinction
- Specialization: Ecology and Evolution

AWARDS AND
SCHOLARSHIPS

Natural Sciences and Engineering Research Council Visiting Fellowship (declined)	2011
ORION Learning Award	2007
Best Poster (Research) Telelearning Network of Centres of Excellence	2001
Best Demonstration TeleLearning- NCE Sixth Annual Meeting.	2001
Best Demonstrations TeleLearning-NCE Fifth Annual Meeting.	2000
Best Demonstration TeleLearnig-NCE Annual Conference.	1999
OISE/UT Scholarship	1998
Bernard J. Shapiro Scholarship	1998
Dean's Award of Excellence, Faculty of Arts & Science, University of Toronto	1996
Dean's Award of Excellence, Faculty of Arts & Science, University of Toronto	1993
Natural Science and Engineering Council Postgraduate Scholarship III (declined)	1991
NSERC Postgraduate Scholarship II	1990
Ontario Graduate Scholarship	1989
University of Toronto Open Fellowship	1989
NSERC Undergraduate Research Scholarship	1988

EXTERNALLY-
AWARDED
GRANTS

Role	Principal Investigator	Agency	Amount	Dates
Co-PI	C. Rolheiser, L. Harrison, L., S. Haklev, C. Teplovs	Bill and Melinda Gates Foundation (MOOC Research Initiative)	\$25,000	2013-2014
Co-PI	L. Freeman-Gibb, C. Teplovs, & N. Baker	Sigma Theta Tau International	\$5,000	2012-2013
Postdoctoral Fellow	P. Reimann	European Union	€12,000,000	2011-2014
Technical lead	M. Scardamalia	William and Flora Hewlett Foundation	\$60,000	2010-2011
Researcher	M. Scardamalia	Canadian Council on Learning	\$70,000	2007-2009
Researcher	M. Scardamalia	Social Sciences and Humanities Research Council	\$2,995,834	2002-2008
Researcher	M. Scardamalia	Networks of Centres of Excellence	\$223,633	2002-2004
Technology advisor	C. Bereiter	Canadian Foundation for Innovation	\$1,541,465	2002

REFEREED
JOURNAL
PUBLICATIONS

- [1] Schruers, B., de Laat, M., Teplovs, C. & Voogd, S. (2014). Social Learning Analytics applied in a MOOC-environment. *eLearning Papers* 36:45-48.
- [2] Chuy, M., Scardamalia, M., Bereiter, C., Prinsen, F., Resendes, M., Messina, R., Hunsburger, W., Teplovs, C., Chow, A. (2010). Understanding the nature of science and scientific progress: A theory-building approach. *Canadian Journal of Learning and Technology* 36(1).
- [3] Teplovs, C. (2003). Latent Semantic Analysis: Automating content analysis of online discourse. In Bereiter, C. (Ed.) *Learning Technology Innovation in Canada: A supplement to Journal of Distance Education TeleLearning Special Issue*, 17(3), 52-53.

REFEREED
CONFERENCE
PROCEEDINGS

- [4] Teplovs, C., Schneider, L., & Danahy, E., (In press). Tools for sustained student engagement in InterLACE (Interactive Learning and Collaboration Environment). In *Proceedings of the International Conference of the Learning Sciences 2014*. Boulder, CO.
- [5] Martínez-Monés, A., Reffay, C. & Teplovs, C. (2013). Beyond sociograms inspection: What social network analysis has to offer to measure cohesion in CSCL. *Proceedings of the Computer Supported Collaborative Learning Conference 2013*. Madison, WI.
- [6] Fujita, N. & Teplovs, C. (2013). Using social media for formative assessment in online and blended learning environments. In *Proceedings of the Computer Supported Collaborative Learning Conference 2013*. Madison, WI.
- [7] Schruers, B., Teplovs, C., de Laat, M., Buckingham Shum, S., & Ferguson, R., (2013). Visualizing social learning ties by type and topic: Rationale and concept demonstrator. *LAK13: 3th International Conference on Learning Analytics and Knowledge* (30 April - 2 May), Leuven, Belgium.
- [8] Fujita, N. & Teplovs, C. (2012). Exploring Online Formative Assessment Using Repertory Grid Technique via Facebook. In T. Bastiaens, & G. Marks (Eds.), *Proceedings of World Conference on E-Learning in Corporate, Government, Healthcare, and Higher Education 2012* (pp. 591-597). Chesapeake, VA: AACE.

- [9] Leng, J., Yuen, J., Wong, W., Law, N., Zhang, Y., Allaire, S., Perreault, C., Laferriere, T., & Teplovs, C. (2011). Automated Data Analysis to Support Teachers' Knowledge Building Practice. Spada, H., Stahl, G., Miyake, N. & Law, N. (Eds.) Connecting Research to Policy and Practice: Proceedings of the 9th International Conference on Computer Supported Collaborative Learning (CSCL2011) - Volume 2, Short Papers & Posters (pp. 846-850). Hong Kong: International Society of the Learning Sciences.
- [10] Suthers, D., Lund, K., Rose, C., Dyke, G., Law, N., Teplovs, C., Chen, W., Chiu, M., Jeong, H., Looi, C., Medina, R., Oshima, J., Sawyer, K., Shirouzu, H., Strijbos, J., Trausan-Matu, S., van Aalst, J. Towards Productive Multivocality in the Analysis of Collaborative Learning. Spada, H., Stahl, G., Miyake, N. & Law, N. (Eds.) Connecting Research to Policy and Practice: Proceedings of the 9th International Conference on Computer Supported Collaborative Learning (CSCL2011) - Volume 3, Keynotes, Symposia, Practitioner-oriented Events, Pre-conference and Post-conference (pp. 1015-1022). Hong Kong: International Society of the Learning Sciences.
- [11] Reffay, C., Teplovs, C., & Blondel, F.-M. (2011). Productive re-use of CSCL data and analytic tools to provide a new perspective on group cohesion. Spada, H., Stahl, G., Miyake, N. & Law, N. (Eds.) Connecting Research to Policy and Practice: Proceedings of the 9th International Conference on Computer Supported Collaborative Learning (CSCL2011) - Volume 2, Short Papers & Posters (pp. 1168-1169), Hong Kong: International Society of the Learning Sciences.
- [12] Reffay, C., & Teplovs, C. (2011). Réutilisation d'un corpus pour une nouvelle analyse des réseaux sociaux grâce à l'adaptation de l'outil KSV. Actes de la conférence EIAH 2011 (pp. 139-150). Mons, Belgium.
- [13] Teplovs, C., Fujita, N., & Vatrappu, R. (2011). Generating predictive models of learner community dynamics. In P. Long, G. Siemens, G. Conole, & D. Gasevic (Eds.), Proceedings of the First International Conference on Learning Analytics & Knowledge 2011 (pp. 147-152). New York, NY: ACM.
- [14] Vatrappu, R., Teplovs, C., Fujita, N. & Bull, S. (2011). Towards visual analytics for teachers' dynamic diagnostic pedagogical decision-making. In P. Long, G. Siemens, G. Conole, & D. Gasevic (Eds.), Proceedings of the First International Conference on Learning Analytics & Knowledge 2011 (pp. 93-98). New York, NY: ACM.
http://blip.tv/solaresearch/10-ravi_vatrapu-5693473
- [15] Fujita, N. & Teplovs, C. (2010). Software-based scaffolding: Supporting the development of knowledge building discourse in online courses. In K. Gomez, L. Lyons, & J. Radinsky (Eds.) Learning in the Disciplines: Proceedings of the 9th International Conference of the Learning Sciences (ICLS 2010) - Volume 1, Full Papers (pp. 1056-1062). Chicago IL: International Society of the Learning Sciences.
- [16] Sha, L., Teplovs, C., & van Aalst, J. (2010). A visualization of group cognition: Semantic network analysis of a CSCL community. In K. Gomez, L. Lyons, & J. Radinsky (Eds.) Learning in the Disciplines: Proceedings of the 9th International Conference of the Learning Sciences (ICLS 2010) - Volume 1, Full Papers (pp. 929-936). Chicago IL: International Society of the Learning Sciences.
- [17] Teplovs, C. & Fujita, N. (2009). Determining curricular coverage of student contributions to an online discourse environment: Using latent semantic analysis to construct differential term clouds. Proceedings of the 9th International Conference of Computer Supported Collaborative Learning 2009 - Volume 2 (pp.165-167). Rhodes, Greece: International Society of the Learning Sciences.

- [18] Fujita, N. & Teplovs, C. (2009). Automating analysis of collaborative discourse: Identifying idea clusters. *Proceedings of the International Conference of Computer Supported Collaborative Learning 2009 - Volume 2* (pp.162-164). Rhodes, Greece, International Society of the Learning Sciences.
- [19] Teplovs, C., Green, A., & Scardamalia, M. (2008). The ZooLib Tuplebase: An open-source, scalable database architecture for learning sciences research. In G. Kanselaar, V. Jonker, P. Kirschner, & F. Prins, (Eds.), *Proceedings of the International Conference of the Learning Sciences 2008*. Utrecht, NL: International Society of the Learning Sciences.
- [20] Teplovs, C., Donoahue, Z., Scardamalia, M. and Philip, D. (2007). Tools for concurrent, embedded, and transformative assessment of knowledge building processes and progress. Chinn, C.A., Erkens, G., and Puntambekar, S. (Eds.) *Proceedings of the 8th International Conference on Computer Supported Collaborative Learning (CSCL'07)* (pp. 721-723). New Brunswick, NJ: International Society of the Learning Sciences.
- [21] Brett, C., Freeman, W., Fujita, N., & Teplovs, C. (2006). Investigating Research Apprenticeship Online. In C. Crawford, R. Carlsen, K. McFerrin, J. Price, R. Weber, & D. Willis (Eds.) *Proceedings of the Society for Information Technology and Teacher Education 2006* (pp.2476-2479). Chesapeake, VA: Association for the Advancement of Computing in Education.
- [22] Hewitt, J. & Teplovs, C. (1999). An analysis of growth patterns in computer conferencing threads. In C. Hoadley & J. Roschelle (Eds.), *Proceedings of the 1999 Conference on Computer Supported Collaborative Learning*. Palo Alto, CA: Lawrence Erlbaum Associates.
- BOOKS [23] Suthers, D., Lund, K., Rose, C., Law, N., Teplovs, C., & Dyke, G. (Eds.) (2013). *Productive multivocality in the analysis of collaborative learning*. New York, NY: Springer.
- BOOK CHAPTERS [24] Dyke, G., Lund, K., Suthers, D., & Teplovs, C. (2013). Analytic Representations and Affordances for Productive Multivocality. In Suthers, D., Lund, K., Rose, C., Teplovs, C., & Law, N. (Eds.) *Productive multivocality in the analysis of collaborative learning* (pp. 639-658). New York, NY: Springer.
- [25] Suthers, D., Lund, K., Rose, C. & Teplovs, C. (2013). Achieving Productive Multivocality in the Analysis of Group Interactions. In Suthers, D., Lund, K., Rose, C., Teplovs, C., & Law, N. (Eds.) *Productive multivocality in the analysis of collaborative learning* (pp. 577-612). New York, NY: Springer.
- [26] Suthers, D., Rose, C., Lund, K. & Teplovs, C. (2013). A Reader's Guide to the Productive Multivocality Project. In Suthers, D., Lund, K., Rose, C., Teplovs, C., & Law, N. (Eds.) *Productive multivocality in the analysis of collaborative learning* (pp. 37-59). New York, NY: Springer.
- [27] Teplovs, C., & Fujita, N. (2013). Socio-dynamic latent semantic learner models. In Suthers, D., Lund, K., Rose, C., Teplovs, C., & Law, N. (Eds.) *Productive multivocality in the analysis of collaborative learning* (pp. 383-396). New York, NY: Springer.
- [28] Fujita, N. & Teplovs, C. (2013). Formative assessment using Repertory Grid online: Using a social media tool to assess for learning in online and blended education. In S. Koc, P. Wachira, & X. Liu (Eds.). *Assessment in online and blended learning environments*. Charlotte, NC: Information Age Publishing.

REFEREED
CONFERENCE
PRESENTATIONS

- [29] Urbancic, A. & Teplovs, C. (1996). Where is downtown: hypermedia module in urban semiotics. In Bass, R. and Finley, J. (Eds.) So what can I do with it: A practical guide for using technology in teaching american culture. Washington, DC: American Studies Crossroads Project.
- [30] Schruers, B., Teplovs, C., de Laat, M., Buckingham Shum, S., & Ferguson, R., (2013). Visualizing social learning ties by type and topic: Rationale and concept demonstrator. To be presented at the 2013 Learning Analytics and Knowledge Conference, Leuven, Belgium.
- [31] Leng, J., Yuen, J., Wong, W., Law, N., Zhang, Y., Allaire, S., Perreault, C., Laferriere, T., & Teplovs, C. (2011). Automated Data Analysis to Support Teachers' Knowledge Building Practice. Presented at the 9th International Conference on Computer Supporter Collaborative Learning (CSCL2011). Hong Kong.
- [32] Suthers, D., Lund, K., Rose, C., Dyke, G., Law, N., Teplovs, C., Chen, W., Chiu, M., Jeong, H., Looi, C., Medina, R., Oshima, J., Sawyer, K., Shirouzu, H., Strijbos, J., Trausan-Matu, S., van Aalst, J. Towards Productive Multivocality in the Analysis of Collaborative Learning. Presented at the 9th International Conference on Computer Supporter Collaborative Learning (CSCL2011). Hong Kong.
- [33] Reffay, C., Teplovs, C., & Blondel, F.-M. (2011). Productive re-use of CSCL data and analytic tools to provide a new perspective on group cohesion. Spada, H., Stahl, G., Miyake, N. & Law, N. (Eds.) Presented at the 9th International Conference on Computer Supporter Collaborative Learning (CSCL2011). Hong Kong.
- [34] Reffay, C., & Teplovs, C. (2011). Réutilisation d'un corpus pour une nouvelle analyse des réseaux sociaux grâce à l'adaptation de l'outil KSV. Actes de la conférence EIAH 2011 (pp. 139-150). Mons, Belgium.
- [35] Teplovs, C., Fujita, N., & Vatrappu, R. (2011). Generating predictive models of learner community dynamics. Paper presented at the 1st International Conference on Learning Analytics and Knowledge, Banff, Alberta, Canada.
- [36] Vatrappu, R., Teplovs, C., Fujita, N. & Bull, S. (2011). Towards visual analytics for teachers' dynamic diagnostic pedagogical decision-making. Paper presented at the 1st International Conference on Learning Analytics and Knowledge, Banff, Alberta, Canada.
- [37] Fujita, N. & Teplovs, C. (2010). Software-based scaffolding: Supporting the development of knowledge building discourse in online courses. Paper presented at the 9th International Conference of the Learning Sciences (ICLS2010). Chicago, IL.
- [38] Sha, L., Teplovs, C., & van Aalst, J. (2010, June). A visualization of group cognition: Semantic network analysis of a CSCL community. Paper presented at the 9th International Conference of the Learning Sciences (ICLS2010). Chicago, IL.
- [39] Teplovs, C. & Fujita, N. (2009, December). Presentation and Analysis of Data Set #2 in Pinpointing Pivotal Moments in Collaboration Workshop. STELLAR Alpine Rendez-Vous 2009, Garmisch-Partenkirchen, Germany.
- [40] Teplovs, C. (2007). Visualizations for Knowledge Building. Poster presented at the 11th Annual Knowledge Building Summer Institute, Toronto, Ontario, Canada.
- [41] Teplovs, C. (2007). Tag clouds for knowledge building: Web 2.0 meets Knowledge Forum. Poster presented at the 11th Annual Knowledge Building Summer Institute, Toronto, Ontario, Canada.

- [42] Teplovs, C. & Morrow, M. (2007). Linking Knowledge Forum to a learning management system: Lessons learned from (the) Blackboard. Poster presented at the 11th Annual Knowledge Building Summer Institute, Toronto, Ontario, Canada.
- [43] Teplovs, C. & Scardamalia, M. (2007). Visualizations for Knowledge Building Assessment. Paper presented at the AgileViz workshop, CSCL 2007.
- [44] Zhang, J., Scardamalia, M., Lamon, M., Messina, R., Reeve, R., & Teplovs, C. (2005). The growing networks of inquiry threads in online knowledge building environments. Paper presented at the Annual Meeting of the American Educational Research Association, Montreal, PQ.
- [45] Teplovs, C. (2005). Semanta: Harnessing the power of Latent Semantic Analysis for automated assessment of online discourse. A series of papers presented at the Annual Summer Institute of the Institute for Knowledge Innovation and Technology (IKIT), Toronto, ON.
- [46] Teplovs, C., Reeve, R., & Scardamalia, M. (2003). The measurement of idea diversity. Paper presented at the Annual Meeting of the American Educational Research Association, Chicago, IL.
- [47] Teplovs, C. (2001). Assessment of online discourse: The knowledge-building metric. Poster presented at the Annual Meeting of the Telelearning Network of Centres of Excellence, Vancouver, BC.
- [48] Teplovs, C., Reeve, R., & Scardamalia, M. (2000). Assessing coverage and coherence in Knowledge Forum. Paper presented at the Annual Meeting of the American Educational Research Association, New Orleans, LA.
- [49] Bereiter, C., Scardamalia, M., Lamon, M., Teplovs, C., Godbout, C., Hakarainen, K., Rahikainen, M., de Jong, F., Laferriere, T., McAuley, S., Jarvela, S., Kllias, V., Vosniadou, S., van der Meijden, H., Trimpe, J., Slighte, H., & Cooper, E. Virtual Visits to Knowledge Society Network Sites. Interactive presentation presented at Computer Supported Collaborative Learning 1999.
- [50] Teplovs, C., Scardamalia, M., Burtis, J., O'Neill, K., & Bereiter, C. (1999). Effects on process of the use of Knowledge Forum. Paper presented at the Annual Meeting of the Telelearning Network of Centres of Excellence, Montreal, PQ.
- [51] Reeve, R., Scardamalia, M., Lamon, M., & Teplovs, C. (1999). The evolving knowledge building curriculum: Coherence, coverage and the growth of a Knowledge Forum database. Poster presented at the Annual Meeting of the Telelearning Network of Centres of Excellence, Montreal, PQ.
- [52] Teplovs, C., Laham, D., Scardamalia, M., Bereiter, C. and Landauer, T. (1999). Automated text analysis to assess cognitive outcomes. Poster presented at the Annual Meeting of the Center for Innovative Learning Technologies. San Jose, CA.
- [53] van Aalst, J., Teplovs, C., Burtis, J. & Scardamalia, M. (1999). Latent semantic indexing and data analysis in computer supported collaborative learning. Paper presented at the Annual Meeting of the American Educational Research Association, Montreal, PQ.
- [54] Hewitt, J.G. & Teplovs, C. (1999). Patterns of electronic discourse. Paper presented at the Annual Meeting of the American Educational Research Association, Montreal, PQ.
- [55] Teplovs, C. & van Aalst, J. (1998). Latent semantic analysis of CSILE/KF databases. Poster presented at the Annual Meeting of the Telelearning Network of Centres of Excellence, Vancouver, BC.

- [56] McLean, R.S. & Teplovs, C. (1998). Object orientation with Perl 5. Paper presented at the Education Computing Organization of Ontario Annual Conference, Toronto, ON.
- [57] Lorch, P., Wagner, J., Smith, B., & Teplovs, C. (1995). EcoMOO: A virtual reality system for teaching ecological techniques to undergraduates. Ecological Society of America Annual Meeting.
- INVITED PRESENTATIONS
- [58] Fujita, N. & Teplovs, C (2011). Visualizing 21st Century Learning. Invited presentation, Masters in ICT and Learning Programme, Danish Pedagogical University, Copenhagen, Denmark.
- [59] Fujita, N. & Teplovs, C. (2010, August). Knowledge Building for inquiry-based teaching in K-6 science classrooms. Invited presentation, Additional Qualifications Course, Instructional Design Models Inquiry Process, a Primary/Junior Science course. OISE/UT and Dr. Eric Jackman Institute of Child Study. Toronto, ON.
- [60] Teplovs, C. (2008). Visualizations of Online Discourse. Invited Lecture, Centre for Information Technology in Education, The University of Hong Kong.
- [61] Teplovs, C. (2008). Knowledge Forum: Technological Innovation. Invited lecture, 1st Annual Knowledge Building Colloquium, Puebla, Mexico.
- [62] Teplovs, C. (2001). Automated Content Analysis. Invited lecture, Resource Centre for Academic Technology, University of Toronto.
- [63] Teplovs, C. (1999). The psychopathology of online teaching. Invited presentation, Centre for Academic Technology, University of Toronto.
- [64] Teplovs, C. (1998). Web-based online instruction: a matter of choice. Invited presentation, Centre for Academic Technology, University of Toronto.
- [65] Teplovs, C. (1998). Databases and SQL for dynamic web interactions. Invited lecture, EDT 1500H, OISE/UT.
- [66] Teplovs, C. (1995). Text-based virtual reality systems in higher education. Invited lecture, Centre for Computing in the Humanities, University of Toronto.
- [67] Teplovs, C. (1996). Current trends in Internet technology. Presented to approximately 90 high-school students as part of the Saturday Morning Seminar Series sponsored by the Faculty of Arts and Science, University of Toronto.
- [68] Teplovs, C. & Zimmerman, A.P. (1996). Educational Uses of World Wide Web Technology. Presented to Chairs of Arts and Science Departments, University of Toronto.
- [69] Teplovs, C. (1996). Design and implementation considerations for highly specialized MOOs: lessons learned from MathMOO.
- WORKSHOPS TAUGHT
- [70] Suthers, D., Teplovs, C., de Laat, M., Oshima, J., Zeini, S., (2011). Connecting levels of learning in networked communities. Workshop conducted at the 9th International Conference on Computer Supported Collaborative Learning 2011, Hong Kong.
- [71] Rose, C., Lund, K., Suthers, D., Law, N., Teplovs, C., & Dyke, G. (2011). Leveraging researcher multivocality for insights on collaborative learning. Workshop conducted at the 2nd STELLARnet Alpine Rendez-Vous. La Clusaz, France.
- [72] van Aalst, J., Chan, Y.Y., Chan, C.K.K., Wan, W.-S., Chan, C.-F. & Teplovs, C., (2010, August). Development of formative assessment tools for knowledge building. Workshop conducted at the 14th Annual Knowledge Building Summer Institute (KBSI2010). Toronto, ON.

- [73] Teplovs, C., Rinderle, J., Scardamalia, M., & Thille, C. (2010, August). Open Learning Initiative and Knowledge Forum: Toward making any web object an object of knowledge building. Interactive design session presented at the 14th Annual Knowledge Building Summer Institute (KBSI2010). Toronto, ON.
- [74] Lund, K., Suthers, D., Law, N., Rose, C., & Teplovs, C. (2010). Productive multivocality in the analysis of collaborative learning. Workshop conducted at the International Conference of the Learning Sciences (ICLS2010), Chicago, IL.
- [75] Suthers, D., Law, N., Lund, K., Rose, C., & Teplovs, C. (2009). Common objects for productive multivocality in analysis. Workshop conducted at the Conference for Computer Supported Collaborative Learning (CSCL2009), Rhodes, Greece.
- [76] Teplovs, C. (2008). Community source and collaborative co-design of next-generation knowledge building environments. Workshop conducted at the 12th Annual Knowledge Building Summer Institute, Toronto, Ontario, Canada.
- [77] Teplovs, C. (2008). The Knowledge Space Visualizer: A tool for visualizing online discourse. Paper presented at the Common Framework for CSCL Interaction Analysis Workshop at the International Conference of the Learning Sciences 2008. Utrecht, NL.
- [78] Teplovs, C. & Reeve, R. (2007). Introduction to Knowledge Forum 4.7 and the Summer Institute database "SI 2007". Workshop conducted at the 11th Annual Knowledge Building Summer Institute, Toronto, Ontario, Canada.
- [79] Teplovs, C. , Cooper, E., & Green, A. (2007). Open sourcing Knowledge Forum. Workshop conducted at the 11th Annual Knowledge Building Summer Institute, Toronto, Ontario, Canada.
- [80] Teplovs, C. (2007). Customizing analysis tools for Non-English Contexts. Workshop conducted at the 11th Annual Knowledge Building Summer Institute, Toronto, Ontario, Canada.
- DEMONSTRATIONS [81] Schruers, B., de Laat, M., & Teplovs, C. (2011). Network awareness tool for learning analytics in the workplace: Detecting and analyzing informal workplace learning. Demonstration presented at the 2nd International Conference on Learning Analytics and Knowledge (LAK 2012). Vancouver, British Columbia, Canada.
- [82] Teplovs, C. and the Knowledge Building Team. (2001). Knowledge Forum: Groupware for Knowledge Building. Demonstration presented at the Annual Meeting of the Telelearning Network of Centres of Excellence, Vancouver, BC.
- [83] Teplovs, C. (1999). PalmKF: A Knowledge Forum Client for Handheld Devices. Demonstration presented at the Annual Meeting of the Telelearning Network of Centres of Excellence, Montreal, PQ.
- [84] Lamon, M., Scardamalia, M., Reeve, R., and Teplovs, C. (1999). Knowledge Forum: A Demonstration. Demonstration presented at the Annual Meeting of the Center for Innovative Learning Technologies (CILT99), San Jose, CA.
- [85] Teplovs, C. (1996). Comparative merits of CGI, JavaScript, and Java. Demonstration presented at Java Day, University of Toronto, October 29, 1996.
- UNPUBLISHED THESES [86] Teplovs, C. (2010). Visualization of Knowledge Spaces to Enable Concurrent, Embedded and Transformative Input to Knowledge Building Processes. Unpublished Doctoral Dissertation. University of Toronto.
- [87] Teplovs, C. (1996). ELSA: An Internet Agent That Tailors Web Pages to Users' Learning Styles. Unpublished Master's Thesis, University of Toronto.

REPORTS

- [88] Rolheiser, C., Chen, B., Haklev, S., Harrison, L., Najafi, H., & Teplovs, C. (2014). Hatch, match, and dispatch: Examining the relationship between student intent, expectations, behaviours and outcomes in six Coursera MOOCs at the University of Toronto.
- [89] Johnson, M., Vatrupu, R., Bull, S., Teplovs, C., & Reimann, P. (2011). Student Model Tools R1 (No. 285114, D4.2), Birmingham, UK: University of Birmingham.
- [90] Bull, S., Johnson, M. Teplovs, C., Fujita, N. & Vatrupu, R. (2011). Methods and Specifications for Student Model V1 (No. 285114, D4.1), Birmingham, UK: University of Birmingham.
- [91] Teplovs, C., Fujita, N., Vatrupu, R., Bødker, M., & Nielsen, J. (2011). Participatory Design Workshop Report. Copenhagen, DK: Copenhagen Business School.
- [92] Teplovs, C. (2008). A Semantic Analysis of the “What did you do in School Today” Open-Ended Question. Report prepared for the Canadian Education Association, October 24, 2008.
- [93] Lamon, M., Teplovs, C., and McGuire, J. (2005). A needs assessment analysis: E-learning tools for HIV/AIDS related education to the Canadian AIDS Treatment Information Exchange.
- [94] Scardamalia, M. and Teplovs, C. (2001). Authentic Assessment of Literacy. Paper presented to the Committee on Improving Learning With Information Technology of the National Research Council, Palo Alto, CA.
- [95] Teplovs, C. (1996). Internet Security for Educators. Invited lecture, EDT1503H, Ontario Institute for Studies in Education/University of Toronto.

TEACHING EXPERIENCE

University of Toronto

Graduate Courses

- CTL1922H: Instructional Technology: Seminar in Interactive Graphics 2004
We focused on going “beyond best practice” in the field of interactive video, audio, graphics and text in instructional technology. Topics covered included: human-computer interaction, interface design, design research methodology, and the use of multimedia for knowledge building. Participants prepared an in-depth analysis of a selected sub-topic.
- CTL1604H: Instructional Technology: Video/Multimedia Design 2003
A course on the production of educational multimedia and its applications to education and training. Experience was provided in applying principles of instructional systems design and production to the creation and integration of images, video, sound and text in an educational project in the multimedia laboratory. In this course students engaged in personal and collaborative building of knowledge of Educational Multimedia Design.
- CTL1602S: Introduction to Computer Applications in Education 1999
A cross-listed course open to initial teacher education (B.Ed.) students in combined programs leading to a master’s degree, this course offers an overview of the uses of computers in education and consideration of the critical issues of those uses. Topics included: computers in the schools, educational software evaluation, interactive instructional technologies, multimedia, curriculum applications, computer networks, Internet resources, computer-mediated communication and artificial intelligence applications.
- CTL1920H: Computer-Supported Intentional Learning Environments 1999
Computer-supported intentional learning environments have two principal objectives: (a) to upgrade the conceptual quality of what is learned; and (b) to increase students’ abilities to monitor, control, and improve their own learning. In

this course students helped design, pilot test, and revise intentional learning environments. Co-taught with Marlene Scardamalia.

Undergraduate Courses

- ENV200Y: Assessing Global Change: Science and the Environment 1991-1998
The perspective scientists bring to the understanding and resolution of environmental concerns having global implications: atmospheric systems and climate change, the biosphere and conservation of biodiversity are explored. This Science course is intended to fulfill the environmental literacy requirement for students in the BA programs of the Centre for Environment or the science distribution course requirement for Commerce, Humanities and Social Science students. This course has an annual enrollment of approximately 300 students. I was responsible for the allocation of students to tutorial sections, for generating student computer accounts, for hiring and training up to six teaching assistants, and for maintaining the course's web pages.
- ENV221Y: Approaches to Environmental Issues I 1992-1998
Diverse approaches to environmental issues from a variety of perspectives are introduced, compared and analyzed, using topical case studies. Perspectives explored in previous years include aboriginal, scientific and psychological. This course has an annual enrollment of approximately 70 students. I acted as course coordinator. In addition to convening the teaching team, I was responsible for the hiring and training of teaching assistants, as well as assembly and administration of the final examination.
- ENV321Y: Approaches to Environmental Issues II 1993-1998
A continuation of ENV221Y, this course uses a global environmental issue as a common starting point for a variety of disciplinary perspectives. My role in this course was an advisory one. I met regularly with the instructor and the teaching assistant to discuss issues about instruction in the course.
- ENV481H/482H: Special Topics in the Environment 1995-1998
I tabled the initial proposal for these courses, which were designed to provide small-group seminar experiences for senior undergraduates enrolled in the Division's programs. Students chose from such diverse options as attending study groups, enrolling in selected graduate courses, and compiling portfolios based on lectures from visiting speakers.
- ZOO324Y: Evolution 1989-1991
As a teaching assistant in this course, I was responsible for teaching statistical computing techniques to approximately 30 undergraduate students each year.

Undergraduate Program Development

I worked with multidisciplinary teams of faculty members to develop two new undergraduate programs in the Division of the Environment at the University of Toronto.

SOFTWARE
DEVELOPED

Formative Assessment using Repertory Grid Online (FARGO)

I designed and implemented a Facebook-based research platform called FARGO (Formative Assessment using Repertory Grid Online). We have been using this cloud-computing based environment to collect data about students' personal psychological constructs that are elicited based on the curricular content of an undergraduate course. The platform includes facilities for visualization of the results and the sharing of student-generated artifacts in a way that promotes artifact-centered discourse.

Knowledge Space Visualizer (KSV)

The Knowledge Space Visualizer (KSV) projects writings from participants into a two-dimensional space and shows relationships and interactions between notes as a graph. These relationships can be structural, authorial, semantic, or derived from codings applied by researchers. In the case of semantic links, similarity is determined by using Latent Semantic Analysis. The KSV employs a force directed layout algorithm to minimize the distortion of the relationships as viewed in two dimensions.

Knowledge Forum Software Engineering

I worked as part of geographically distributed team on the continual improvement of Knowledge Forum, a second-generation CSILE (Computer Supported Intentional Learning Environment) product that supports communal knowledge building. The software is a client/server architecture implemented in C++ and Java. It is available for Linux, Windows, Macintosh platforms. I was responsible for the creation of an integrated web server in the Knowledge Forum architecture, as well as the creation of conduits to facilitate the exchange of data between Knowledge Forum and other software systems.

Analysis of Online Collaboration Systems

- I was the lead developer of a suite of analytic applets for online collaboration systems. These applets are used for a wide range of purposes: educational research, assessment of students in distance education, and performance management systems are but a few examples. The analyses focus on the creation of specific metrics that measure social interaction, vocabulary growth and usage, and knowledge transfer.

PROFESSIONAL SERVICE

Committee Membership

- Program Committee, Computer Supported Collaborative Learning Conference 2012
- Program Committee, International Conference for the Learning Sciences 2011
- Technology Infrastructure Subcommittee of the International Society of the Learning Sciences 2010-2012
- Computers in Quantitative and Empirical Science Teaching Advisory Committee 1992-2003
- Department of Zoology Computer Committee 1991-2003

Review Work

- Educational Technology & Society
- Journal of the Learning Sciences
- International Journal of Computer Supported Collaborative Learning (ijCSCL)
- Computers and Education
- Journal of Research and Practice in Technology Enhanced Learning
- Journal of Research in Science Teaching
- American Educational Research Association
- International Conference of the Learning Sciences
- Computer-Supported Collaborative Learning Conference
- Institute for Knowledge Innovation and Technology Summer Institute

PROFESSIONAL MEMBERSHIPS

- American Educational Research Association (AERA)
- International Society of the Learning Sciences (ISLS)

SOFTWARE SKILLS

Programming Languages:

- Python, Java, Javascript, C++, C, PHP, perl

Software Development Environments:

- Eclipse, NetBeans, XCode

Frameworks and APIs

- Django, Google App Engine
- MMBase
- Facebook API, Twitter API

Databases:

- MySQL, postgres
- MongoDB, CouchDB

Data and Statistical Analysis:

- R, SPSS, SAS, Tableau

Visualization:

- D3.js, Javascript Infovis Toolkit, Illustrator, InkScape

MORE
INFORMATION

More information can be found at christeplovs.com.