

Gregory DYKE
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28 years old, British/Swiss national
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Research

- 2012 – current Post-Doc at ASLAN (Ecole Normale Supérieure de Lyon/CNRS) with Dr Kristine Lund
- 2010 – 2012 Post-Doc at LTI/PSLC (Carnegie Mellon University), with Prof. Carolyn P. Rosé.
- 2009 – 2010 Research Assistant at LIST (EMSE), with Prof. Jean-Jacques Girardot.

Education

- 2006 – 2009 PhD in Computer Science, École des Mines de Saint-Étienne under the supervision of Jean-Jacques Girardot (EMSE) and Kristine Lund (ICAR, CNRS/Lyon University). *A model for managing and capitalising on the analyses of traces of activity in collaborative interaction.*
- 2001 – 2006 Master of Science in Computer Science. Swiss Federal Institute of Technology, Lausanne, Switzerland

Research Projects & Interests

- 2012 – Current **Temporal models and visualisations of linguistic production contexts in multimodal interaction.** How do past phenomena at different timescales affect the likelihood of occurrence of a particular event? How does the occurrence of a new event modify the current context and result in consequences reaching into the future? The goal of such characterisation is to identify (through quantification and visualisation) the regularities, irregularities and changes which occur in multimodal interactions at various timescales, to draw relations between them, and to submit them for further qualitative investigation.
- 2010 – Current **Analysing temporal complexity in scripted online discussion.** How can analysts rapidly obtain an overview of the unfolding of an interaction over time? How can salient features such as deviance from the norm, or change over time be discovered? How can the role of events within contexts at multiple time scales be understood?
- 2010 – 2012 **Introducing Accountable Talk practices in 9th grade biology classrooms.** How can computer-mediated discussion scaffolded by conversational agents improve students' explanation and reasoning skills? How can conversational agents be designed in a way that does not hamper the natural flow of collaboration while providing support for augmenting discussion productivity?
- 2011 – 2012 **Supporting learning, fun, persistence, and positive interdependence: data-driven development of a physics game for young children.** Can socio-emotional growth be encouraged through game mechanics? How can socio-emotional growth in normal children be assessed within and outside of a game?
- 2008 – Current **Productive multivocality in the analysis of group interactions.** How can researchers from different theoretical and methodological backgrounds achieve mutual understanding. Can corpora serve as a boundary object in this process? How can computational models assist in the coordination of analytic representations to support productive multivocality?
- 2009 – 2010 **Predicting learning outcomes from students' use of programming environments.** Can students patterns of usage of programming environments be data-mined to predict their future exam performance?
- 2006 – 2010 **A model for managing and capitalising on the analyses of traces of activity in collaborative interaction.** How can analyses of interactions be described so that they can be shared and re-used? How can such a framework inform the design of software to support such analyses?

Publications

In Preparation

Dyke, G., Adamson, D., Howley, I., Rosé, C. (submitted). Enhancing Scientific Reasoning and Explanation Skills with Conversational Agents.

Dyke, G., Lund, K. (journal article in preparation). A framework for coordinating analytic representations in interaction analysis.

Dyke, G., Lund, K., Girardot, J.-J. (journal article in preparation for resubmission). L'étude des interactions humaines au travers des objets rejouables.

Suthers, D. D., Lund, K., Rosé, C., Law, N., Dyke, G., Teplovs, C., et al. (book in preparation, publication scheduled for 2013, first author of 2 chapters/co-author of 2 chapters). Productive Multivocality in the Analysis of Group Interactions.

Journals

Dyke, G., Lund, K., Girardot, J.-J. (2010). Tatiana: un environnement d'aide à l'analyse de traces d'interactions humaines. *Technique et Science Informatiques*, 29(10), 1179–1205.

Book Chapters

Reffay, C., Dyke, G., Betbeder, M.-L., (2011) Data sharing in CSCR: towards in-depth long term collaboration. In Juan, A., Daradoumis, T., Roca, M., Grasman, S., Faulin, J (eds.) *Collaborative and Distributed E-Research: Innovations in Technologies, Strategies and Applications*, IGI Global, 111–134.

International conferences with peer review

Dyke, G., Adamson, D., Howley, I., Rosé, C. (2012) Towards Academically Productive Talk Supported by Conversational Agents. *ITS 2012*.

Dyke, G., Kumar, R., Ai, H., Rosé, C. (2012). Challenging Assumptions: using sliding window visualizations to reveal time-based irregularities in CSCL processes. *ICLS 2012*. (among 5 finalists for **Best Paper**)

Dyke, G., Lund, K., Jeong, H., Medina R., Suthers, D. D., van Aalst, J., Chen, W., Looi, C.-K. (2011). Technological affordances for productive multivocality in analysis. *CSCL 2011*, Hong Kong.

Suthers, D. D., Lund, K., Rosé, C., Dyke, G., Law, N., Teplovs, C., et al. (2011). Towards productive multivocality in the analysis of collaborative learning. *Symposium at CSCL 2011*, Hong Kong.

Dyke, G. (2011). Which Aspects of Novice Programmers' Usage of an IDE Predict Learning Outcomes? *ACM SIGCSE 2011*, Dallas.

Dyke, G., Lund, K., Girardot, J.-J. (2009). Tatiana: an environment to support the CSCL analysis process. *CSCL 2009*, Rhodes, Greece, 58–67. (awarded **Best Student Paper**)

Lund, K., van Diggelen, W., Dyke, G., Overdijk, M., Girardot, J.-J., & Corbel, A (2008). A researcher perspective on the analysis and presentation of interaction log files from CSCL situations within the LEAD project. *ICLS 2008*, Utrecht, The Netherlands.

National conferences with peer review

Dyke, G., Beigbeder, M., Lund, K., Girardot, J.-J. (2009). Les Traces d'interactions humaines : un nouveau domaine d'application pour la RI. *CORIA 2009*, Toulon, France.

Lund, K., Dyke, G., Girardot, J.-J. (2009). Multimodal reformulation during shared synchronous note-taking and its potential pedagogical consequences for teachers and students. *EPAL 2009*, Grenoble, France.

Dyke, G., Lund, K. (2007). Implications d'un modèle de coopération pour la conception d'outils collaboratifs. *EPAL 2007*, 6-8 Juin, Grenoble, France.

Tutorials and workshop organisation

Dyke, G., Rosé, C. (2011) Leveraging tool support for the analysis of computer-mediated activities. *Tutorial at CSCL 2011*, Hong Kong.

Rosé, C., Lund, K., Suthers, D., Law, N., Teplovs, C., Dyke, G. (2011). Leveraging Researcher Multivocality for Insights on Collaborative. *Workshop at CSCL Alpine Rendez-Vous 2011*.

Posters, abstracts and workshop presentations

Dyke, G., Stamper, J., Rosé, C. (2011). PSLC DataShop and Tatiana: Joint experience on two tools for sharing data and analyses. In *Partager des données d'observation pour la recherche en EIAH : traces d'activité d'apprentissage*, *Workshop at EIAH 2011*, Mons, Belgium.

Dyke, G. (2011) Tatiana: A Generic Analysis Environment, *Tutorial at the fourth annual inter-Science of Learning Centers (iSLC) Conference*.

Dyke, G. (2011) Software Support for Productive Discussion Among Epistemologies for Collaborative Learning. *Poster at the fourth annual inter-Science of Learning Centers (iSLC) Conference*.

Dyke, G. (2010) Using the analysis tool Tatiana to visualize and exploit the combination of multiple data analyses. *Productive Multivocality in the Analysis of Collaborative Learning, Workshop at ICLS 2010*.

Dyke, G. (2010). Quels indicateurs pour l'utilisation en binôme d'un environnement de développement intégré ? *Poster at RJC EIAH 2010, Lyon, France*.

Dyke, G., Lund, K., Girardot, J.-J. (2009). La visualisation au service de l'analyse d'interactions. *Poster at EIAH 2009, Le Mans, France*.

Dyke, G., Lund, K., Girardot, J.-J. (2009). Un outil flexible pour l'analyse de traces - Gestion, synchronisation, visualisation, analyse et partage de corpus d'interactions médiatisées par ordinateur avec Tatiana. *Atelier ICT 2009, Caen, France*.

Dyke, G. (2009). Using the analysis tool Tatiana to visualize and calculate interaction indicators. *In Interaction Analysis and Visualization: Analysis Methods, Tools and Research Questions, Workshop at CSCL 2009*.

Dyke, G., Girardot, J.-J., Lund, K., Corbel, A (2007). Analysing Face to Face Computer-mediated Interactions. *EARLI '07, Budapest, Hungary*.

Invited talks

Dyke, G. (2012). Productive multivocality: socio-technological systems for synergistic research. Rutgers University, USA.

Dyke, G. (2010). Analytic representations: the design of tools to create and exploit them. STEF, ENS Cachan, France.

Awards

2009 Best Student Paper at CSCL 2009.

Teaching

Lectures:

2011 – 2012 : *Tools for analysis of interaction and learning*. 3h. (Rutgers)

2011 – 2012 : *Synergies between quantitative and qualitative research*. 2h. (CMU)

2009 – 2010 : *Middleware networking*. 16h. (EMSE)

2008 – 2010 : *Functional programming in XQuery*. 9h. (EMSE)

2006 – 2010 : *Introduction to programming in C*. 12h. (EMSE)

2006 – 2010 : *Object-oriented programming in Java and UML modelling*. 32h. (EMSE)

2006 – 2007 : *Groupware and technology-enhanced learning*. 4.5h. (Lyon II)

Summer 2007 : CNRS “École thématique” on technology enhanced learning. 4h. (Grenoble)

Laboratory sessions:

2006 – 2010 : *Introduction to programming in C*. 80h. (EMSE)

2006 – 2009 : *Operations research*. 36h. (EMSE)

2006 – 2010 : *Object-oriented programming in Java*. 48h. (EMSE)

Project supervision (EMSE) :

2009 – 2010 : Maths-Informatics-Physics project (2 months). Automated support for speech transcription.

2009 – 2010 : TER project (3 months). Improvement of usability in Tatiana.

2008 – 2009 : Maths-Informatics-Physics project (2 months). State of the art in speech recognition.

2007 – 2008 : TER project (3 months). Module for the graphical edition of workflows.

2006 – 2009 : 5 groups supervised on C programming projects (12 hours).

Other scientific activities

2010 :	Qualified to the functions of Maitre de Conférences in section 27 (informatique) of the French CNU.
2006 – 2009 :	Design and development of Tatiana (Trace Analysis Tool for Interaction Analysts), used by over 10 research teams in 5 countries. http://code.google.com/p/tatiana
2006 – 2008 :	LEAD: EU funded project (authorship of deliverables, participation in meetings, software design and development).
2006 – 2009 :	EIAH regional project (authorship of reports, participation in meetings, presentations in 5 dissemination seminars, software design and development).
2007 – 2009 :	Participation in the preparation of 5 EU project submissions.
2009 – 2011 :	Reviewer for CSCL 2009, ICLS 2010, CSCL 2011, ICLS 2012.

Professional experience

Autumn 2004 :	2 month internship, Institut Icare (Switzerland). Interactive cartography in SVG.
Summer 2004 :	Assistant at the LTHC at EPFL (Switzerland). Co-authorship, translation and type setting of the course material for <i>Introduction to Communication Systems</i> .
Winter 2003 and 2004 :	Ski instructor, École de ski de Villars.

Technological skills

Languages :	Java, C, Scala, Lisp, Javascript, Ruby, Python, PHP, Perl, XQuery, SQL.
Tools :	Eclipse, Ruby on Rails, JQuery, UML, LATEX, Office.
Web :	xml, xhtml, xslt, css, svg.
Operating Systems:	Gnu/Linux, Solaris, Windows, Mac OS X.

Languages

French and English:	Fluent (read, written and spoken)
German:	Very good level (spoken and written)