

Full professor in Information Technologies and Learning Processes (since 2003)
Faculty of Psychology and Education, University of Geneva, Switzerland

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Born: April 23rd 1968, in Marseille, France
Citizenship: French
Marital status: married, three children

Current research topics

Multimedia learning : effect of design features on the learners' cognitive processes and learning outcomes, specifically regarding interactivity and visualization format.

Technology-enhanced learning: design and assessment of information technology in education (including special education and vocational education) ; field studies investigating the use of ICT in the classroom.

Computer-supported collaborative writing and learning: design and evaluation of collaborative writing tools for vocational education; emotion-awareness tool in computer-mediated communication.

Professional experience

- 2003- present Professor in Information Technologies and Learning Processes, School of Psychology and education, University of Geneva. Head of TECFA research unit (Technologies de Formation et d'Apprentissage).
- 2006-2010: Associate dean of the faculty
- 2000-2003 : Senior lecturer, Faculty of Psychology and education, University of Geneva.
- 1997-2000: Postdoctoral fellowship, French institute in Computer science and Automation (INRIA), Grenoble
- 1996-1997: Postdoctoral fellowship, Stanford University, U.S.A
- 1992-1996: PhD student, French institute in Computer science and Automation (INRIA), Grenoble

Training

- 1998 : Qualification to apply to a reserch position in Psychology (décernée par le Comité National Universitaire Français, Section 16).
- 1996 : PhD in Cognitive Science, National Polytechnics School of Grenoble.
- 1992 : D.E.A. in Cognitive Sciences Cognitives, National Polytechnics School of Grenoble, France.
- 1991 : D.E.S.S. of Social and Organizational Psychology, University of Aix-en-Provence, France.
- 1990 : Master (Maîtrise) in Psychology, University of Aix-en-Provence, France.

Main research grants (last 5 years)

SNF grants and fundings

- 2015 – 2018 *Fine-grained Evaluation of the Interactive Narrative Experience*, FNS Project # 205121_159605, co-requerant (Main requerant: Nicolas Szilas, UNIGE).
- 2010 – 2016 *Emotion Awareness tool for Mediated Interaction*, Project associated to the NCCR Affective Science, project leader with T. Pun (Faculty of Science, Unige).

Grants from other Swiss funding institutions

- 2014 – 2016 G3 Moocs – Project for the research on moocs and educational podcasts, founded by the G3 consortium (University of Geneva, University of Montreal and ULB in Brussels).
- 2006 - 2014 Project leader in the Leading House “Technologies for Vocational Training” founded by OPET (Federal office for Professional Education and Technology) in collaboration with P. Dillenbourg (EPFL), J-L Gurtner (Université de Fribourg) and A. Cattaneo (IFFP, Lugano).
- 2008-2011 Research and development project « Computer supported aural rehabilitation for deaf children using cochlear implants”, Hans Wilsdorf Foundation, in collaboration with Prof. M. Pelizzone, HUG.

Conference organisation and scientific committees (last 5 years)

Scientific association management and editorial boards

- 2012 – present Member of the editorial board of the Journal *Learning and Instruction*
- Since 2015 Coordinator of the Special Interest group in “Comprehension of Text and Graphics” of the European Association for Learning and Instruction (EARLI) – Member since 2002.

Conference organisation

- 2011 Co-President of the conference EIAH (Environnements Informatique pour l'apprentissage humain), Mons (Belgium), 24-27 May 2011, 150 participants.
- 2014 President of the conference “e-learning 3.0 : quel avenir pour la formation supérieure ?”, Geneva (CH), 17-18 October 2014, 120 participants.
- 2016 Chair of the EARLI SIG 2 Meeting on “Comprehension of Text and Graphics”, Geneva (CH), 11-13 July, 100 participants expected.

Conference scientific committees

- Int. in English EARLI SIG2 conference (Comprehension of Text and Graphics) since 2002; EARLI biennial conference since 2003; CEM 2015 (Cognition, Emotion, & Motivation); ACII 2013 (Affective computing); Society for Text and Discourse 2011.
- Int. in French EPIQUE (Ergonomic Psychology) since 2003 ; EIAH (Educational Technology) since 2007; EARLI SIG 6/7 (Learning with computer & Instructional Design) since 2012; e-Formation 2015; IHM 2013 (Human Computer Interaction).

Administrative and service activities in Geneva University (selection)

- 2000-present Member of the program committee of the Master MALTT (Master of Science in Learning and Teaching Technologies), FPSE. Head since September 2014
- 2005-present President of the ICT committee of the Faculty
- 2007-2013 Member ex-officio for the e-learning for the education committee of the University
- 2009-present Mentor for the promotion of Women Academic career, University of Geneva.
- 2008-2014 Head of the committee for equal chance of the Faculty

Publications (last 5 years)

1. Peer-reviewed original articles

- Berney, S., Bétrancourt, M., Molinari, G., Hoyek, N. (2015). How spatial abilities and dynamic visualizations interplay when learning functional anatomy with 3D anatomical models. *Anatomical Sciences Education*. 8 (5), 452–462. DOI: 10.1002/ase.1524
- Ortoleva, G. & Bétrancourt, M. (2015). Collaborative writing and discussion in vocational education: Effects on learning and self-efficacy beliefs. *Journal of Writing Research*. 7(1), 95-122.
- Schwendimann, B. A., Cattaneo, A., Dehler Zufferey, J., Gurtner, J.-L., Bétrancourt, M. & Dillenbourg, P. (2015). The ‘Erfahrraum’: a pedagogical model for designing educational technologies in dual vocational systems. *Journal of Vocational education and training*. 67 (3), 367-396.
- Ortoleva, G. & Bétrancourt, M. (2015). Supporting productive collaboration in a computer-supported instructional activity: Peer-feedback on critical incidents in health education. To appear in *Journal of Vocational Education and Training*.
- Gagnière, L., Bétrancourt, M. & Détienne, F. (2012). When metacognitive prompts help information search in collaborative setting. *Revue Européenne de Psychologie Appliquée/European Review of Applied Psychology*, 62,(2), 73-81.
- Ortoleva, G., Bétrancourt, M. & Schneider, D. (2012). Entre personnalisation et contraintes collectives : Une démarche centrée utilisateur pour la mise en place d’un livret numérique de Suivi Pédagogique. *Sciences et Technologies de l’information et de la communication pour l’éducation et la formation, STICEF* (open access journal), vol 19. <http://sticef.univ-lemans.fr/classement/rech-annee.htm#v19>.
- Guichon, N., Bétrancourt, M. & Prié, Y. (2011). The provision of negative feedback in a synchronous online teaching situation: teaching strategies and affordances. *Computer Assisted language learning*, 25(2), 181-197.
- Chanel, G., Rebetez, C., Betrancourt, M., & Pun, T. (2011). Emotion Assessment from Physiological Signals for Adaptation of Games Difficulty, *IEEE Transactions On Systems, Man, And Cybernetics*, 41 (6), 1052-1063.
- Wipfli R., Bétrancourt M., Guardia A., & Lovis C. (2011). A qualitative analysis of prescription activity and alert usage in a computerized physician order entry system. *Studies in Health Technology and Informatics*. 169, 940-944.
- Gavota, M., Cattaneo, A., Arn, C., Boldrini, E. Motta, E. Schneider, D. et Bétrancourt, M. (2010). Computer-supported peer-commenting: A promising instructional method to promote skill development in vocational education. *Journal of Vocational Education & Training*, 62(4), 495-511.
- Rebetez, C. Sangin, M., Bétrancourt, M., & Dillenbourg, P. (2010). Learning from animation enabled by collaboration. *Instructional Science*, 38(5), 471-485.

2. Reviews

- Bétrancourt, M. & Berney, S. (2011). Animation and Learning. In Norbert Seel (ed.), *Encyclopedia of the Sciences of Learning*, (pp. 1428-1430). Berlin : Springer Science and Business Media.

3. Monographs / Book editor

- Ortoleva, G., Bétrancourt, M., & Billett, S. (in press, to appear in 2015). *Writing for Professional development*. Studies in Writing Series, London: Brill, 384 p.
- Betrancourt, M., Depover, C., Luengo, V., De Lievre, B. & Temperman, G. (eds., 2011). *A la recherche de convergence entre les acteurs des Environnements informatisés d’Apprentissage humains*, EIAH 2011. Mons : Editions de l’Université de Mons.

4. Book contributions

- Berney, S., Bétrancourt, M. & Molinari, G. (*in press*). Learning three-dimensional anatomical structures with animation. Effect of orientation references and learners' visuo-spatial abilities. In R. Lowe and R. Ploetzner (Eds.), *Learning from Dynamic Visualizations Innovations in Research and Practice*.
- Bétrancourt, M., Ortoleva, G., & Billett, S. (*in press*, to appear in 2015). Writing for Professional Development: An Introduction In G. Ortoleva, M. Bétrancourt, & S. Billett (eds.) *Writing for Professional development* (pp 1-11).) Studies in Writing Series, London: Brill.
- Bétrancourt, M., Ortoleva, G., & Billett, S. (*in press*, to appear in 2015). Computer-supported collaborative writing for professional development. In G. Ortoleva, M. Bétrancourt, & S. Billett (eds.) *Writing for Professional development* (pp 209-232).) Studies in Writing Series, London: Brill.
- Bétrancourt, M. (2014). L'évaluation des effets des dispositifs de formation médiatisée : la vision de l'ergonomie. In C. Peltier (Ed.) *La médiatisation de la formation et de l'apprentissage : quel est le rôle des médias pour quels effets de médiation ?* (pp 151-166). Bruxelles : De Boek.
- Bétrancourt, M., Peraya, D., & Szilas, N. (2014). Du didacticiel au jeu sérieux : Le e-learning dans tous ses états. In E. Bourgeois & S. Enlart (ed.), *Apprendre dans l'entreprise* (pp. 65-76). Paris: Presses universitaires de France.

5. Published conference proceedings (with ISBN and peer-reviewed)

- Molinari, G., Bozelle, C. Cereghetti, C, Chanel, C., Bétrancourt, M., Pun, T. (2013). Feedback émotionnel et collaboration médiatisée par ordinateur : Quand la perception des interactions est liée aux traits émotionnels. In C. Choquet, P. Dessus, M. Lefevre, J. Broisin, O. Catteau, P. Vidal (eds.) *Environnements Informatiques pour l'apprentissage humain, Actes de la conférence EIAH 2013*. Toulouse : IRIT Press.
- Molinari, G., Chanel, C., Bétrancourt, M., Pun, T. Bozelle, C. (2013). Emotion Feedback during Computer-Mediated Collaboration: Effects on Self-Reported Emotions and Perceived Interaction. In N. Rummel, M. Kapur, M. Nathan, & S. Puntambekar (eds.). *To see the world and a grain of sand: Learning across levels of space, time and scale. CSCL 2013 Conference Proceedings Volume I* (336-343), New York: ISLS.
- Chanel, C., Molinari, G., Pun, T., Bétrancourt, M., Bozelle, C. (2013). Assessment of Computer-Supported Collaborative Processes using Interpersonal Physiological and Eye- Movement Coupling. Full paper (6 pages). *Proceedings of the fifth biannual Humaine Association Conference on Affective Computing and Intelligent Interaction (ACII 2013)*, September 5-7, Geneva (Switzerland).
- Ortoleva, G., Schneider, D., & Bétrancourt, M. (2013a). Utilisation d'un wiki pour l'écriture collaborative et le partage d'expérience en formation professionnelle initiale. In C. Choquet, P. Dessus, M. Lefevre, J. Broisin, O. Catteau, & P. Vidal (Eds.), *Environnements Informatiques pour l'Apprentissage Humain. Actes de la conférence EIAH 2013* (pp. 17-28). Toulouse: IRIT Press 2013.
- Wipfli, R., Bétrancourt, M. Lovis, C. (2013). Evaluation d'une interface centrée activité pour la gestion des alertes médicales dans un système de prescription informatisée. In C. van de Leemput, Chauvin, C. Heelemans, C. (eds.) *Activités humaines, Technologies et Bien-être* (pp. 449-455). Bruxelles : Arpege Science Publishing.
- Bétrancourt, M., Guichon, N., & Prié, Y (2011). Assessing the use of a Trace-Based Synchronous Tool for distant language tutoring. In H. Spada, G. Stahl, N. Miyake, N. Law (Eds.) *Connecting Computer-Supported Collaborative Learning to Policy and Practice: CSCL2011 Conference Proceedings*. Volume I — Long Papers (pp 478-485). International Society of the Learning Sciences
- Wipfli, R., Bétrancourt, M., & Lovis, Ch. (2011). L'impact des alertes médicales dans la prescription médicamenteuse : une analyse de l'activité. In C. Bastien, J. Cegarra, A. Chevalier et al. (eds).

Épique 2011, Sixième colloque de Psychologie ergonomique (pp. 41-52), Metz: Presse Universitaire de Nancy.

- Gavota, M. Bétrancourt, M. & Schneider, D. (2010) Writing and commenting on professional procedures. 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 683-689). International Society of the Learning Sciences: Chicago IL.

6. Publications for practitioners and research report

- Bétrancourt, M. & Sutter-Widmer, D. (2013). Intégrer les MITIC dans mon établissement : enjeux et défis. In *Actes du 84ème séminaire de la CROTCES - Conférence Romande et tessinoise des chefs d'établissement secondaire* (pp 10 – 15), Montana, 18-21 Septembre 2012.
- Bétrancourt, M. & Sutter-Widmer, D. (2013). Intégrer les MITIC dans mon établissement : synthèse et retour des ateliers. In *Actes du 84ème séminaire de la CROTCES - Conférence Romande et tessinoise des chefs d'établissement secondaire* (pp 19 – 24), Montana, 18-21 Septembre 2012
- Caro Dambreville, S. & Bétrancourt, M. (2013). Ergonomie des documents numériques. In *Traité Informatique*, H7 220v2, Paris : Techniques pour l'Ingénieur (TPI).
- Bétrancourt, M. (2012). Du bon usage des tablettes. *Flash informatique*, Revue de l'EPFL, été 2012, 49-51.
- Bétrancourt, M. et Bozelle, C. (2012). Les MITIC au service de la pédagogie spécialisée : mieux connaître leur spécificité pour développer des usages éducatifs pertinents. *Revue de Pédagogie spécialisée*, 4, 15-23.
- Caro Dambreville, S. & Bétrancourt, M. (2012). Ergonomie des documents numériques. In *Traité Informatique*, H7 220v2, Paris : Techniques pour l'Ingénieur (TPI).
- Bétrancourt, M. (2011). Réflexion sur les technologies dans l'éducation et la formation : quelles pistes pour la recherche ? In *Rapport de Prospective pour la Recherche : Éducation et Apprentissage à l'horizon 2030* (PREA 2K30), Paris : Agence Nationale de la Recherche en France.
- PIAAC Expert Group in Problem Solving in Technology- Rich Environments (2009), "PIAAC Problem Solving in Technology-Rich Environments: A Conceptual Framework", *OECD Education Working Papers*, No. 36, OECD Publishing.