# Curriculum Vitae — Kim Mens

# February 3, 2009

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# 2 Personal data

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## 3 Education

# A <u>Higher education</u>

University: Vrije Universiteit Brussel Pleinlaan 2, 1050 Brussel Belgium

	Year	Date	Grade	Institute
1988-1992	Licentiate mathematics (option computer science)		VUB	
1992-1994	Licentiate computer science			VUB
1994-2000	Doctor in Sciences	23/10/2000	GSD	VUB
1994-2000	Doctorate training course in sciences	23/10/2000	/	VUB

# B <u>Dissertations and theses</u>

## Thesis Licentiate Mathematics

A fractal theory as a foundation for compression of monochrome bitmaps. Advisor: Theo D'Hondt, Vrije Universiteit Brussel, June 1992, Greatest Distinction (17/20)

## Thesis Licentiate Computer Science

A comparison of formal models for object-orientation. Advisor: Theo D'Hondt, Vrije Universiteit Brussel, June 1994, Greatest Distinction (19/20)

## Ph.D. in Sciences

<u>Dissertation</u>: Automating architectural conformance checking by means of logic meta programming. (Google Scholar: 61 citations.)

<u>Apposition</u>: Legislation and large evolving complex software systems suffer from similar problems, and can benefit from similar software techniques and tools to deal with these problems.

Advisor: Theo D'Hondt, Vrije Universiteit Brussel, October 23, 2000, Greatest Distinction

<sup>&</sup>lt;sup>7</sup> VUB = Vrije Universiteit Brussel, Pleinlaan 2, B-1050 Brussel, Belgium

4 Employment (Scientific carreer)				
Employer	Start-date	End-date	Job description	Full-time / part-time
VUB <sup>7</sup>	1/10/1992	31/01/1993	Teaching assistant mathematics	Part-time 20%
VUB	1/02/1993	30/09/1994	Teaching assistant mathematics	Part-time 40%
VUB	1/10/1994	31/01/1999	Teaching assistant computer science	Full-time
VUB	1/02/1999	31/01/2001	Researcher computer science	Full-time
VUB	1/02/2001	28/02/2001	Teaching assistant comp. science	Full-time
VUB	1/03/2001	31/08/2001	Doctor-assistant comp. science	Full-time
UCL <sup>8</sup>	1/09/2001	current (tenure)	Professor (chargé de cours) computer science	Full-time
VUB	04/2006	current	Voluntary Scientific Employee	10%

# 4 Employment (Scientific carreer)

5 Research achievements<sup>9</sup>

# A <u>Bibliography</u>

## Editing

1. K. MENS, M. VAN DEN BRAND (Guest editors). Special issue on Experimental Software and Toolkits of Science of Computer Programming, Elsevier, To be published in 2009.

## Book chapters

 K. MENS & T. TOURWE. Evolution Issues in Aspect-Oriented Programming. Chapter in book "Software Evolution" edited by T. Mens & S. Demeyer, pp. 197–224. Springer, 2008. ISBN 978-3-540-76439-7. DOI 10.1007/978-3-540-76440-3.

## Journal articles

- H. M. KIENLE, A. KUHN, K. MENS, M. VAN DEN BRAND, R. WUYTS. Tool Building on the Shoulders of Others. In Tools of the Trade column (Ed. Diomidis Spinellis) of IEEE Software, January/February 2009, pp. 22–23. IEEE Computer Society, 2009.
- 2. S. GONZALEZ, K. MENS, A. CADIZ. Context-Oriented Programming with the Ambient Object System. Journal of Universal Computer Science. Accepted manuscript, to be published in 2009.
- 3. J. BRICHAU, A. KELLENS, K. GYBELS, K. MENS, R. HIRSCHFELD, T. D'HONDT. Application-Specific Models and Pointcuts using a Logic Meta Language. Elsevier Journal on Computer Languages, Systems & Structures. 34(2-3): 66–82, July-October 2008. (Appears in Elsevier's list of Top 25 Hottest Articles on Computer Languages, Systems & Structures.)
- 4. A. KELLENS, K. MENS & P. TONELLA. A Survey of Automated Code-Level Aspect Mining Techniques. Transactions on Aspect-Oriented Software Development (TAOSD), Volume IV (Special Issue on Software Evolution), pp. 143–162. Springer-Verlag, LNCS 4640, 2007. (*Google Scholar: 19 citations.*)
- 5. M. CECCATO, M. MARIN, K. MENS, L. MOONEN, P. TONELLA & T. TOURWE. Applying and Combining Three Different Aspect Mining Techniques. Software Quality

<sup>&</sup>lt;sup>8</sup> UCL = Université catholique de Louvain, B-1348 Louvain-la-Neuve, Belgium

<sup>&</sup>lt;sup>9</sup> This section contains my complete bibliography. The most relevant publications appear in a frame.

Journal, Volume 14, Number 3, pp. 209–231. Springer Netherlands, September, 2006. ISSN 0963-9314. (*Google Scholar: 19 citations.*)

- K. MENS, A. KELLENS, F. PLUQUET & R. WUYTS. Co-evolving Code and Design with Intensional Views — A Case Study. Elsevier Journal on Computer Languages, Systems & Structures, 32(2-3): 140-156. Special Issue: Smalltalk. Elsevier, July-October 2006. (Google Scholar: 35 citations.)
- K. MENS, T. TOURWE. Delving source code with formal concept analysis. Elsevier Journal on Computer Languages, Systems & Structures, 31(3-4): 183–197, October-December 2005. (Google Scholar: 14 citations; appears in Elsevier's list of Top 25 Hottest Articles on Computer Languages, Systems & Structures.)
- 8. T. MENS, K. MENS, T. TOURWE. Aspect-Oriented Software Evolution. In ERCIM News No. 58, July 2004, Special Theme: Automated Software Engineering, pages 36-37.
- 9. K. MENS, I. MICHIELS, R. WUYTS. Supporting Software Development through Declaratively Codified Programming Patterns. Elsevier Journal on Expert Systems with Applications, 23(4) : 405–431. Elsevier, November 2002. (*ISI citation index : 0.3210; CiteSeerX : 51 citations; Google Scholar: 74 citations.*)

## Peer-reviewed articles in conference proceedings

- A. CADIZ, B. MEJIAS, J. VALLEJOS, K. MENS, P. VAN ROY, W. DE MEUTER. PALTA: Peer-to-peer Adaptable Topology for Ambient intelligence. In Proceedings of the XXVII International Conference of the Chilean Computer Science Society (SCCC 2008), pp. 100– 109. IEEE Computer Society, 2008. (Acceptance rate: 41%.)
- K. MENS, A. KELLENS, J. KRINKE. Pitfalls in Aspect Mining. In Proceedings of the 15<sup>th</sup> Working Conference on Reverse Engineering (WCRE), pp. 113–122. IEEE Computer Society, 2008. (Acceptance rate: 29%)
- 3. J. BRICHAU, K. MENS, A. KELLENS. Enforcing Structural Regularities in Source Code using IntensiVE. In Proceedings of 23rd IEEE/ACM International Conference on Automated Software Engineering (ASE 2008), pp. 471–472. IEEE Computer Society Press, 2008. (ASE is a major conference in the field.)
- 4. D. ORDONEZ, K. MENS, APPAREIL: A Tool for Building Automated Program Translators Using Annotated Grammars. In Proceedings of 23rd IEEE/ACM International Conference on Automated Software Engineering (ASE 2008), pp. 489–490. IEEE Computer Society Press, 2008. (ASE is a major conference in the field.)
- 5. D. ORDONEZ, K. MENS, D. QUIGLEY & J. CATER. Issues and Problems in Test & Operations Language Translation. In Proceedings of SpaceOps 2008. American Institute of Aeronautics and Astronautics, 2008.
- 6. S. GONZALEZ, K. MENS & A. CADIZ. Context-Oriented Programming with the Ambient Object System. In Proceedings of the European Lisp Symposium (ELS08), pp. 17–31, 2008.
- S. GONZALEZ, K. MENS & P. HEYMANS. Highly Dynamic Behaviour Adaptability through Prototypes with Subjective Multimethods. In Proceedings of the 2007 symposium on Dynamic Languages – Companion of the 22nd Annual ACM SIGPLAN Conference on Object-Oriented Programming, System, Languages and Applications (OOPSLA 2007), pp. 77—88, 2007. (Acceptance rate: 30%.)
- J. BRICHAU, C. DE ROOVER & K. MENS. Open Unification for Program Query Languages. In Proceedings of the 16th International Conference of the Chilean Computer Science Society (SCCC 2007), Eds. Hernan Astudillo & Eric Tanter, pp. 92–101. IEEE Computer Society, 2007. (Acceptance rate 34%).
- 9. S. CASTRO, J. FABRY, K. MENS & T. D'HONDT. A Unified Mechanism for Improving Advanced Transaction Management in Web Services. In Proceedings of the 16th International Conference of the Chilean Computer Science Society (SCCC 2007), Eds.

Hernan Astudillo & Eric Tanter, pp. 30–39. IEEE Computer Society, 2007. (Acceptance rate 34%.).

- K. MENS, D. ORDONEZ. Using Annotated Grammars for the Automated Generation of Program Transformers. In Actes des 3<sup>es</sup> Journées sur l'Ingénierie Dirigée par les Modèles (IDM 2007). Eds. Antoine Beungard & Marc Pantel. ISBN: 978-2-7261-1292-7, pp. 7–24, 2007.
- 11. J. BRICHAU, A. KELLENS, K. GYBELS, K. MENS, R. HIRSCHFELD, T. D'HONDT. Application-Specific Models and Pointcuts using a Logic Meta Language. In Advances in Smalltalk (Proceedings of the 14th International Smalltalk Conference – ESUG 2006), Lecture Notes in Computer Science (LNCS 4406), Ed. Wolfgang De Meuter, Springer Verlag, pp. 1–22, 2007. (Acceptance rate: 12%.)
- A. KELLENS, K. MENS, J. BRICHAU & K. GYBELS. Managing the Evolution of Aspect-Oriented Software with Model-based Pointcuts. Proceedings of the European Conference on Object-Oriented Programming (ECOOP 2006), D. Thomas (Ed.), LNCS 4067, Springer-Verlag, pp. 501–525, 2006. (ECOOP is one of the top publication venues in computer science. Google Scholar: 32 citations; acceptance rate: 1/8.)
- 13. K. MENS & A. KELLENS. IntensiVE, a toolsuite for documenting and checking structural source-code regularities. In Proceedings of the 10th European Conference on Software Maintenance and Reengineering (CSMR 2006), pp. 239–248. IEEE Computer Society, 2006.
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- 15. K. MENS, A. KELLENS, F. PLUQUET & R. WUYTS. The Intensional View Environment. Industrial & Tool Proceedings of the International Conference on Software Maintenance (ICSM 2005), 2005, pp. 81–84. (*ICSM is a small but important conference in the field.*)
- K. MENS & A. KELLENS. Towards a Framework for Testing Structural Source-Code Regularities. Proceedings of the 21st International Conference on Software Maintenance (ICSM 2005). IEEE Computer Society, 2005. ISBN: 0-76952368-4, ISSN: 1063-6773, pp. 679–682. (ICSM is a small but important conference in the field.)
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- K. MENS, B. POLL, S. GONZALEZ. Using Intentional Source-Code Views to Aid Software Maintenance. In Proceedings of the International Conference on Software Maintenance (ICSM 2003). IEEE Computer Society Press, 2003, ISBN: 0-7695-1905-9, pp. 169–178. (ICSM is a small but important conference in the field. CiteSeerX: 12 citations; GoogleScholar: 24 citations.)
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- 20. K. MENS, T. MENS, M. WERMELINGER. Maintaining Software through Intentional Source-Code Views. In Proceedings of the 14th international conference on Software Engineering and Knowledge Engineering (SEKE 2002). ACM Press, 2002, ISBN: 1-58113-556-4, pp. 289–296. (*Google Scholar: 27 citations.*)
- K. MENS, I. MICHIELS, R. WUYTS. Supporting software development through declaratively codified programming patterns. In Proceedings of International Conference on Software Engineering and Knowledge Engineering (SEKE 2001), Buenos Aires, Argentina, Knowledge Systems Institute, pp. 236-243, 2001.

- 22. T. D'HONDT, K. DE VOLDER, K. MENS, R. WUYTS. Co-evolution of object-oriented software design and implementation. In Software Architectures and Component Technology (SACT 2000), Mehmet Aksit (Ed.), Twente, The Netherlands, Kluwer Academic Publishers, 207-224, 2000.
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- 26. T. MENS, K. MENS, P. STEYAERT. OPUS: a formal approach to object-orientation. In Proceedings of Formal Methods Europe (FME 1994), Springer-Verlag, Lecture Notes in Computer Science, 873, pp. 326-345, 1994.
- 27. T. MENS, K. MENS, P. STEYAERT. OPUS: a calculus for modeling object-oriented concepts. In Proceedings of Object-Oriented Information Systems (00IS 1994), Dilip Patel, Yuan Sun, Shushma Patel, Springer-Verlag, 152-165, 1994.

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- I. B. MEJIAS, A. CADIZ, P. VAN ROY, K. MENS. A Self-Adaptable Network Topology for Ambient Intelligence. In Proceedings of Selfman SASO Workshop, 2008. 6 pages.
- 2. G. DELANNAY, K. MENS, P. HEYMANS, P-Y SCHOBBENS, J-M ZEIPPEN. PloneGov as an Open Source Product Line. Proceedings of the Workshop on Open Source Software and Product Lines (OSSPL'07), collocated with SPLC 2007.
- 3. S. GONZALEZ, K. MENS, S. MOSTINCKX. Prototypes with Multimethods for Context-Awareness. Workshop on Object Technology for Ambient Intelligence and Pervasive computing (OT4Aml 2006), collocated with ECOOP 2006.
- 4. A. KELLENS, K. GYBELS, J. BRICHAU & K. MENS. A Model-driven Pointcut Language for More Robust Pointcuts. Workshop on Software Engineering Properties of Languages and Aspect Technologies (SPLAT! 2006) collocated with AOSD 2006, March 2006.
- 5. D. ORDONEZ CAMACHO, K. MENS, M. VAN DEN BRAND & J. VINJU. Automated Derivation of Translators From Annotated Grammars. Proceedings of the Sixth Workshop on Language Descriptions, Tools and Applications (LDTA 2006), Electronic Notes in Theoretical Computer Science (ENTCS 1370), Elsevier Science, 2006. 19 pages. (LDTA is a major workshop, which recently grew into a conference series.)
- 6. T. TOURWE, K. MENS. Mining Aspectual Views using Formal Concept Analysis. In Proceedings of the 4th International Workshop on Source Code Analysis and Manipulation (SCAM 2004). IEEE Computer Society, 2004. ISBN 0-7695-2144-4, pp. 97–106. (SCAM is a major workshop in the field; acceptance rate: 16/39; Google Scholar: 61 citations; CiteSeerX: 34 citations.)
- K. MENS, T. MENS & M. WERMELINGER. Supporting Software Evolution with Intentional Software Views. In Proceedings of the 5th International Workshop on Principles of Software Evolution (IWPSE 2002). ACM Press, May 2002. ISBN 1-58113-545-9, pp. 138– 142.
- K. MENS, T. MENS, R. WUYTS & B. WOUTERS. Managing unanticipated evolution of software architectures. In A.M.D. Moreira & S. Demeyer (Eds.), Object-Oriented Technology – ECOOP 1998 Workshop Reader. Lecture Notes in Computer Science,

Volume 1743. Springer-Verlag, 1999. ISBN 3-540-66954-X, pp. 75-76.

- K. MENS. Annotating evolving software with explicit intentions. In Proceedings of the International Workshop on Principles of Software Evolution, IWPSE 1998, pages 140–145, 1998.
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- 11. K. MENS, T. MENS, P. STEYAERT, K. DE HONDT. Combining behavioural and structural software descriptions. In J. Bosch and S. Mitchell (Eds.), Object-Oriented Technology – ECOOP 1997 Workshop Reader, Lecture Notes in Computer Science, Volume 1357, Springer-Verlag 1997. ISBN 3-540-64039-8, pp. 274–275.
- K. MENS. Towards an explicit intentional semantics for evolving software. In Doctoral Symposium Proceedings of the 13th IEEE Automated Software Engineering Conference, October 1998.
- P. STEYAERT, C. LUCAS, K. MENS. Reuse contracts: Making systematic reuse a standard practice. In Proceedings of the Eighth Annual Workshop on Software Reuse (WISR8), 1997.
- K. MENS, P. STEYAERT, C. LUCAS. Reuse contracts: Managing evolution in adaptable systems. In Max Mühlhäuser, editor, Special Issues in Object-Oriented Programming, Workshop Reader of the 10th European Conference on Object-Oriented Programming (ECOOP 1996), pages 37–42. dpunkt.verlag, 1996.
- C. LUCAS, P. STEYAERT, K. MENS. Research topics in composability. In Max Mühlhäuser, editor, Special Issues in Object-Oriented Programming, Workshop Reader of the 10th European Conference on Object-Oriented Programming (ECOOP 1996). dpunkt.verlag, pp. 81–86, 1996.

## Published workshop reports

- 1. T. MENS, K. MENS, M. D'HONDT & E. VAN PAESSCHEN. Postproceedings of the Third International ERCIM Symposium on Software Evolution (EVOL 2007), co-located with ICSM 2007 in Paris. Special issue of Electronic Communications of the ECEASST, 2007.
- S. DEMEYER, Y.-G. GUEHENEUC, A. KELLER, C.F.J. LANGE, K. MENS, A. KUHN, M. KUHLEMANN. Workshop on Object-Oriented Reengineering. Object-Oriented Technology – ECOOP 2007 Workshop Reader, Lecture Notes in Computer Science, Volume 4906. Springer-Verlag, 2008. ISBN 978-3-540-78194-3.
- R. WUYTS, S. DEMEYER, Y.-G. GUEHENEUC, K. MENS, S. DUCASSE. 7th Workshop on Object-Oriented Reengineering. In Mario Südholt, Charles Consel (Eds.), Object-Oriented Technology – ECOOP 2006 Workshop Reader, Lecture Notes in Computer Science, Volume 4379, Springer-Verlag, 2007. ISBN 978-3-540-71772-0.
- R. WUYTS, S. DUCASSE, S. DEMEYER, K. MENS. Report of the Fifth International Workshop on Object-Oriented Reengineering. In J. MALENFANT, B. M. Østvold (Eds.), ECOOP 2004 Workshop Reader, Lecture Notes in Computer Science, vol. 3344, Springer-Verlag, 2005. ISBN: 3-540-32988-X, pp. 177–186.
- S. DEMEYER, S. DUCASSE, K. MENS, A. TRIFU, R. VASA & F. VAN RYSSELBERGHE. (Workshop on) Object-Oriented Reengineering. In F. BUSCHMANN, A. P. BUCHMANN, M. CILIA (Eds.), Object-Oriented Technology – ECOOP 2003 Workshop Reader, Lecture Notes in Computer Science, Volume 3013. Springer-Verlag, 2004. ISBN 3-540-22405-X, pp. 72–85.
- 6. T. MENS, R. WUYTS, K. DE VOLDER, K. MENS. Declarative meta programming to support software development: Workshop report. Software Engineering Notes ACM SIGSOFT, 28(2), 2003.
- 7. M. D'HONDT, K. MENS, E. VAN PAESSCHEN. Knowledge-based object-oriented

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- K. MENS, C. LOPES, B. TEKINERDOGAN, G. KICZALES. Aspect-Oriented Programming Workshop Report. In J. BOSCH et S. MITCHELL (Eds.), Workshop Reader of the 11th European Conference on Object-Oriented Programming 1997, Lecture Notes in Computer Science, vol. 1357, Springer-Verlag, 1998. ISBN: 3-540-64039-8, pp. 483–496. (ISI citation index : 0.3210; Google Scholar: 61 citations.)
- M. AKSIT, B. TEKINERDOGAN, L. BERGMANS, K. MENS, P. STEYAERT, C. LUCAS, K. LIEBERHERR. Adaptability in object-oriented software development. In Special Issues in Object-Oriented Programming, Workshop Reader of ECOOP 1996, pages 5–52. dpunkt.verlag, 1997.

## Technical reports

- I. A. KELLENS, K. MENS, E. GOSSIEAUX, P. HEYMANS & T. D'HONDT. MACAO, a Framework for Mining Aspects with Cluster Analysis.
- 2. K. MENS, A. KELLENS. Mining Source Code for Design Regularities. Position paper submitted to Working Session on Industrial Realities of Program Comprehension, ICPC 2008. Amsterdam. 4 pages.
- 3. S. CASTRO, K. MENS, J. BRICHAU. Towards a taxonomy of tools for documenting code design. Position paper submitted to Working Session on Query Technologies and Applications for Program Comprehension, ICPC 2008. Amsterdam. 4 pages.
- 4. K. MENS, A. KELLENS, J. KRINKE. Pitfalls in Aspect Mining. BENEVOL 2007, 6th Belgian-Netherlands software EVOLution workshop. December 2007. Namur. 5 pages.
- 5. T. MENS, X. BLANC, K. MENS. Model-driven Software Evolution: An Alternative Research Agenda. BENEVOL 2007, 6<sup>th</sup> Belgian-Netherlands software EVOLution workshop. December 2007. Namur. 7 pages.
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- 7. J. BRICHAU, C. DE ROOVER, A. KELLENS & K. MENS. Maintaining Design Regularities in Evolving Software Systems using Template Queries in IntensiVE. Demonstration at the Third International ERCIM Symposium on Software Evolution, 2007.
- 8. K. MENS, D. ORDONEZ. Automated Program Translation Between Operations Languages: A Case Study. INGI Technical Report.
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- 13. S. DEMEYER, K. MENS, R. WUYTS, Y.-G. GUEHENEUC, A. ZAIDMAN, N. WALKINSHAW, A. AGUIAR, S. DUCASSE. Report of the Sixth International Workshop on Object-Oriented Reengineering. 2006.

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- 23. T. MENS & K. MENS. A Uniform Declarative Framework for Automated Software Merging. Technical Report vub-prog-tr-00-04, Programming Technology Lab, Vrije Universiteit Brussel, 2000.
- 24. K. MENS. Multiple Cross-Cutting Architectural Views. Presented at the Second Workshop on Multi-Dimensional Separations of Concerns in Software Engineering, collocated with ICSE2000. Technical Report vub-prog-tr-00-15, Programming Technology Lab, Vrije Universiteit Brussel, 2000.
- 25. K. MENS & T. MENS. Codifying High-Level Software Abstractions as Virtual Classifications. Presented at the ECOOP 2000 Workshop on Objects and Classification: a Natural Convergence. Technical Report vub-prog-tr-00-14, Programming Technology Lab, Vrije Universiteit Brussel, 2000.
- 26. C. LUCAS, K. MENS, P. STEYAERT, W. VERACHTERT. Applying Reuse Contracts in a Product Line Approach. Presented at the OOPSLA 1998 workshop on Object Technology and Product Lines. Technical Report vub-prog-tr-98-07, Programming Technology Lab, Vrije Universiteit Brussel, 1998.
- 27. K. MENS, C. LUCAS, P. STEYAERT, W. VERACHTERT. Reuse Contracts: Connecting Bottom-Up and Top-Down Reuse. Presented at the OOPSLA 1998 workshop on Object Technology, Architecture and Domain Analysis – Experiences in Making the Connection. Technical Report vub-prog-tr-98-12, Programming Technology Lab, Vrije Universiteit Brussel, 1998.
- 28. K. MENS, P. STEYAERT & C. LUCAS. Documenting Evolving Software Systems through Reuse Contracts. Presented at the OOPSLA 1996 workshop on Object-Oriented Software

Evolution and Re-engineering. Technical Report vub-prog-tr-96-12, Programming Technology Lab, Vrije Universiteit Brussel, 1996.

- 29. K. MENS, K. DE VOLDER, T. MENS. A Formalisation of Encapsulated Modification of Objects. Technical Report vub-prog-tr-96-06, Programming Technology Lab, Vrije Universiteit Brussel, 1996.
- K. MENS, K. DE VOLDER, T. MENS & P. STEYAERT. A Layered Calculus for Encapsulated Object Modification – Extended abstract. Technical Report vub-prog-tr-96-17, Programming Technology Lab, Vrije universiteit Brussel, 1996.
- 31. K. MENS, K. DE VOLDER, T. MENS & P. STEYAERT. A Layered Calculus for Encapsulated Object Modification Theoretical results. Technical Report vub-prog-tr-96-07, Programming Technology Lab, Vrije universiteit Brussel, 1996.
- 32. K. MENS, C. LUCAS & P. STEYAERT. Formalising Operations on ACIDs and Their Interactions. Technical Report vub-prog-tr-96-03, Programming Technology Lab, Vrije Universiteit Brussel, 1996.
- C. LUCAS, K. MENS & P. STEYAERT. Static Typing of Dynamic Inheritance. Poster presented at OOPSLA 1995. Technical Report vub-prog-tr-95-04, Programming Technology Lab, Vrije Universiteit Brussel, 1995.
- 34. C. LUCAS, K. MENS & P. STEYAERT. Typing Dynamic Inheritance: A Trade-Off Between Extensibility and Substitutability. Technical Report vub-prog-tr-95-03, Programming Technology Lab, Vrije Universiteit Brussel, 1995.

#### Vulgarizing articles

- 1. Software architectuur als middel tegen software erosie. Vulgarizing article. Interview in Dutch with Dr. K. MENS by SVM, appeared in AKADEMOS Informatieblad van de Vrije Universiteit Brussel, 4(1), 2001.
- 2. Algoritme controleert computerprogramma's. Press communication, Vrije Universiteit Brussel, March 2, 2001.

# B <u>Research projects</u>

#### Ongoing research projects

- Centre de Recherche en Adaptabilité Logicielle is a research collaboration between Pr. Tom Mens (UMH, spokesperson of the project), Pr. Patrick Heymans (FUNDP) and myself (UCL), funded by the Fonds de la Recherche Fondamentale Collective (FRFC-FNRS) in Belgium. No researchers are payed on this project, it aims mainly at increasing the collaboration between the involved universities. Total budget: 24.600€. Duration: from, January I, 2009 until December 31, 2012.
- 2. Towards a Spin-Off on the Co-Evolution of Software Design and Implementation: the IntensiVE Software Quality Management Platform is a 2-year "Spin-Off in Brussels" project funded by the Institut pour l'encouragement de la Recherche Scientifique et de l'Innovation de Bruxelles (IRSIB). Researcher: Johan Brichau. Total budget: 185.600€. Duration: from October 1, 2008 until September 30, 2010. Prolongation with two years is possible.
- 3. MoVES Fundamental issues in software engineering: Modelling, Verification and Evolution of Software is an IAP project (Interuniversity Attraction Pole) funded by the Belgian federal government and involves partners from each of the following Belgian universities: FUNDP, KUL, VUB, UA, UCL, ULB, ULg. The project runs from 2007 until 2011, with a budget for UCL of 400.000€.
- 4. VariBru: Variability in Software-Intensive Product Development is a 3-year ICT Impulse Program project funded by the Institut pour l'encouragement de la Recherche Scientifique et de l'Innovation de Bruxelles (IRSIB). Researchers: Alfredo Cadiz, Sebastian Gonzalez and Diego

Ordonez. Start date: September 2007. Total budget: 2.384.300€ of which 549.600€ for UCL. Prolongation with three years is possible.

#### Former research projects

- 5. APPAREIL Une approche paramétrique de réingénierie logicielle was a 4-year FIRST Europe Objective 3 research project funded by the Wallonian DGTRE and Europe with as industrial partner Rhea Systems (Louvain-la-Neuve, Belgium) and academic partner CWI (Amsterdam, The Netherlands). Researcher: Diego Ordonez. Total budget: 251.000€. Duration: from January 20, 2005 until January 19, 2009.
- 6. Centre de Recherche en Restructuration Logicielle was a research collaboration between myself (spokesperson of the project), Pr. Roel Wuyts (ULB, Belgium) and Pr. Tom Mens (UMH, Belgium), funded by the Fonds de la Recherche Fondamentale Collective (FRFC-FNRS) in Belgium. No researchers were payed on this project, it aimed mainly at increasing the collaboration between the involved universities. Total budget: 22.900€. Duration: from, January 1, 2005 until December 31, 2008. This project gave rise to the follow-up project entitled "Centre de Recherche en Adaptabilité Logicielle".
- 7. SYCOMORE SYnchronisation of source COde and MOdels in the context of software Renovation was a 2-year FIRST Post-Doc research project funded by the Wallonian DGTRE and the industrial partner IBA (Louvain-la-Neuve, Belgium). Researcher: Johan Brichau. Total budget: I 68.000€. Duration: from October I, 2006 until September 30, 2008.
- 8. FSR2002 Support pour la compréhension et l'évolution de logiciel au moyen de vues intentionnelles de logiciel. Internal research project funded by UCL University. Finances a grant and equipment for one Ph.D. Researcher: Sebastian Gonzalez. Total budget: 46.250€. Duration: from January I, 2002 until December 31, 2003.
- 9. ARRIBA Architectural Resources for the Restructuring and Integration of Business Applications. This 4 year research project (October 2002 – September 2006) was funded by the Flemish funding agency IWT. Academic partners in the project were: the Universiteit Gent (RUG), the Universiteit Antwerpen (UA), the Vrije Universiteit Brussel (VUB). Both the Université catholique de Louvain (UCL) and the University of Bern were involved as non-funded external collaborators.
- 10. Conformance checking in object-oriented systems. Joint research project between the Programming Technology Lab / VUB and Getronics Belgium (previously Wang Global) and funded by the Brussels Capital Region: "Conformance checking in object-oriented systems". My contribution: start up of the project and full-time participation as a researcher on the project from February 1, 1999 until January 31, 2001.

# C <u>Research visits</u>

- Annecy, 2007, February 7–9. Research visit to the research group of Pr. Stéphane Ducasse at the Université de Savoie, Annecy, France.
- Barbados, 2007, March 11-17. Participation in the Bellairs Workshop on Automated Techniques for Code Evolution. By invitation. Organizer: M. Robillard.
- Dagstuhl Seminar 06302 on Aspects for Legacy Applications, 2006, July 26-29, Dagstuhl, Germany. By invitation. Organizers: S. Clarke, L. Moonen, G. Ramalingam.
- *Lille, 2006,* June 6–8. Three-day research collaboration in the context of my joint research with VUB and LIFL on the evolution of aspect-oriented software with "model-based pointcuts". By invitation. Université des Sciences et Technologies de Lille, France.
- Dagstuhl Seminar 06181 on Latently-Typed Language, 2006, May 1-6, Dagstuhl, Germany. By invitation. Organizers: R. Johnson, Sh. Krishnamurthi, Th. Kühne, M. Sperber.
- Amsterdam, 2005, October 18-19. Two day research visit to Amsterdam: CWI research institute and the software company SOOPS.
- *Milton Keynes, 2005,* 16-17 June. Two-day research visit to Open University, Milton Keynes (UK). By invitation of Prof. M. Wermelinger.

- Dagstuhl Seminar 05161 on Transformation Techniques in Software, 2005, April 17-22, Dagstuhl, Germany. By invitation. Organizers: James Cordy, Ralf Lämmel, Andreas Winter.
- *Delft, 2004,* October 10-12. Three-day research collaboration to make an empirical assessment of three different aspect mining techniques. Delft University of Technology, The Netherlands.
- Bern, 2004, October 31 November 4. Intensive research visit to the Software Composition Group at the Institut fur Informatik at the University of Bern (Switzerland), to bridge Moose and Soul to provide the tool infrastructure necessary for applying declarative reasoning to software evolution.
- Bern, 2002, July 21 August 8. Intensive research visit to the Software Composition Group at the Institut fur Informatik at the University of Bern (Switzerland), to work on an advanced "Intensional View Browser".
- *Lisbon, 2001,* May 27 May 31. Invited research visit to the LabMAC research lab at the Universidade de Lisboa and the software company Oblog in Lisbon (Portugal), in the context of a research collaboration with Prof. Michel Wermelinger.
- Marktoberdorf Summer School on "Logic of Computation", 1995, July 25 August 6, Marktoberdorf, Germany.

# D Organisation of conferences and workshops

## Conferences

<u>2010</u>: Financial Chair of the ASE 2010 conference in Antwerp.

<u>October 15 – October 18, 2008</u>: Industrial Track Chair and Program Committee member of the WCRE 2008 conference in Antwerp.

March 31 – April 4, 2008: BoFs chair at the AOSD 2008 conference in Brussels.

July 20 – July 24, 1998: Student volunteer chair at the ECOOP 1998 conference in Brussels.

## Workshop organization

<u>December, 2009</u>: BENEVOL : Belgian-Netherlands software evolution workshop, Belgium. (To be organized.)

<u>August, 2009</u>: WASDeTT, International Workshop on Advanced Software Development Tools and Techniques, collocated with ESEC/FSE 2009, Amsterdam. (Acceptance pending.)

<u>August 24–25, 2009</u>: Joint ERCIM Workshop on Software Evolution and International Workshop on Principles of Software Evolution, collocated with ESEC/FSE 2009, Amsterdam, The Netherlands. (To be organized.)

<u>May 4–8, 2009</u>: SATToSE 2: Seminar on Advanced Tools & Techniques for Software Evolution, Baie de Somme, France. (To be organized.)

July 8, 2008: WASDeTT, 1<sup>st</sup> International Workshop on Advanced Software Development Tools and Techniques, collocated with ECOOP 2008, Cyprus.

<u>February 3–9, 2008</u>: SATToSE: Seminar on Advanced Tools & Techniques for Software Evolution, Waulsort, Belgium.

<u>October 5, 2007</u>: 3<sup>rd</sup> ERCIM Workshop on Software Evolution, collocated with ICSM 2007, Paris.

July 30, 2007: 8th international workshop on "Object-Oriented Reengineering", ECOOP 2007.

July 3, 2006: 7th international workshop on "Object-Oriented Reengineering", ECOOP 2006.

July 26, 2005: 6th international workshop on "Object-Oriented Reengineering", ECOOP 2005.

<u>December 13-14, 2005</u>: BENEVOL[4] Symposium. Fourth edition of the Belgian-Netherlands software evolution workshop. Theme: Software restructuring, software evolution and aspect-oriented software development.

June 14, 2004: 5<sup>th</sup> international workshop on "Object-Oriented Reengineering", ECOOP 2004.

July 21, 2003: 4th international workshop on "Object-Oriented Reengineering", ECOOP 2003.

<u>May 22, 2003</u>: FNRS Day of the contact group "Informatique fondamentale". Theme: "Software (re-)engineering". Location: campus UCL, Louvain-la-Neuve, Belgium. Invited speaker: Serge Demeyer.

<u>September 23, 2002</u>: Declarative Meta Programming to Support Software Development, ASE 2002.

June 10, 2002: "Knowledge-Based Object-Oriented Software Engineering", ECOOP 2002.

July 21, 1998: "Tools and Environments for Business Rules", ECOOP 1998.

June 10, 1997: "Workshop on Aspect-Oriented Programming", ECOOP 1997.

July 8, 1996: "Adaptability in Object-Oriented Software Development", ECOOP 1996.

## E <u>Reviewing and program committees</u>

## Conferences

<u>2009</u>	•	PC member of IDM 2009 (Journées sur l'Ingénierie Dirigée par les Modèles).			
	•	PC member of SLE 2009 (International Conference on Software Language Engineering).			
<u>2008</u>	•	PC member and Chair of the Industrial Track of WCRE 2008 (Working Conference on Reverse Engineering). PC member of IDM 2008 (Journées sur l'Ingénierie Dirigée par les Modèles). Secondary reviewer for POPL 2008 (Symposium on Principles of Programming Languages) and ASE 2008 (Automated Software Engineering).			
<u>2007</u>	•	PC member of IDM 2007 (Journées sur l'Ingénierie Dirigée par les Modèles).			
<u>2006</u>	•	PC member of NODe 2006 (Net Object Days).			
<u>2005</u>	•	PC member of research track of ESUG 2005 (European Smalltalk User Group).			
<u>2004</u>	•	Co-reviewer for FSE 2004 conference.			
	•	PC member of research track of ESUG 2004 (European Smalltalk User Group).			
<u>2002</u>	•	PC member of AOSD 2002 (Aspect-Oriented Software Development). Secondary reviewer for ICSE 2002 conference (International Conference on Software Engineering).			
<u>2001</u>	•	Secondary reviewer for ECOOP 1999, ECOOP 2000 en ECOOP 2001 conference (European Conference on Object-Oriented Programming).			
Journa	al reviev	VS			
•	<ul> <li>Wiley Journal on Software: Practice and Experience (SPE) : 2008</li> <li>Elsevier Journal of Systems and Software (JSS) : 2008.</li> </ul>				
•					
•	• ACM Transactions on Software Engineering and Methodology (TOSEM): 2006 & 2007.				

- Journal of Object Technology (JOT) : 2007<sup>10</sup>.
- ACM Journal on Software Maintenance and Evolution (JSME): 200211, 2004 & 2007.

<sup>&</sup>lt;sup>10</sup> Special issue on "Aspect-Oriented Modeling"

<sup>&</sup>lt;sup>11</sup> Special issue on "Separation of concerns for software evolution"

- IET Software: 2007.
- LNCS Transactions on Aspect-Oriented Software Development (TAOSD): 2007.
- IEEE Transactions on Software Engineering (TSE): 2005, 2007.
- IEEE Software: 2003, 2005<sup>12</sup>.
- Journal of Automated Software Engineering (ASE) : 2003<sup>13</sup>.
- Communications of the ACM (CACM) : 200114.

#### Workshops

## <u>2009</u>

PC member of the 3<sup>rd</sup> international workshop on Variability Modelling of Software-Intensive Systems (VAMOS 2008)

## <u>2008</u>

PC member of the 2<sup>nd</sup> international workshop on Variability Modelling of Software-Intensive Systems (VAMOS 2008), of the 1<sup>st</sup> international workshop on Model Coevolution and Consistency (MoCoCo 2008) at MODELS 2008 and of the LDTA 2008 Workshop on Language Descriptions, Tools and Applications.

#### <u>2007</u>

PC member of the Aspect-Oriented Modelling Workshop at AOSD 2007 and at MoDELS 2007; 1<sup>st</sup> workshop on FAMIX and Moose in reengineering (FAMOOSr, collocated with TOOLS Europe 2007).

#### <u>2006</u>

PC member of the ERCIM workshop on Software Evolution 2006, the AOSD 2006 workshop on Linking Aspect Technology and Evolution (LATE 2006), the AOSD 2006 international workshop towards evaluation of aspect mining (TEAM 2006), the Astranet Aspect Analysis workshop (AAA 2006), the European Workshop on Aspects in Software (EWAS 2006) and the Aspect-Oriented Modelling Workshop (AOM@MoDELS 2006).

## <u>2005</u>

Panel member of the ECOOP 2005 Workshop on Views, Aspects and Roles (VAR 2005).

## <u>2004</u>

PC member of the ERCIM Workshop on Challenges in Software Evolution (ChaSE 2004), the 1st European Interactive Workshop on Aspects in Software (EIWAS 2004) and the AOSD 2004 workshop on Early Aspects.

#### <u>2003</u>

PC member of ICSM 2003 workshop on *Evolution of Large-scale Industrial Software Applications* (ELISA), the ECOOP 2003 workshop on *Correctness of Model-based Software Composition*, and the workshop on Aspect-oriented software development of the German Informatics Society (AOSD-GI 2003).

## <u>2002</u>

PC member of ECOOP 2002 workshop on Model-Based Software Reuse.

<sup>&</sup>lt;sup>12</sup> Special issue on "Aspect Oriented Programming"

<sup>&</sup>lt;sup>13</sup> Special issue on "Software Architecture Reconstruction and Modeling"; editors: Arie van Deursen, Rick Kazman & Rainer Koschke

<sup>&</sup>lt;sup>14</sup> Special issue on "Aspect-Oriented Programming"

# F <u>Research networks</u>

#### Current

- Active member of the ERCIM Working Group on Software Evolution.
- IEEE member
- ACM member

#### Former

Previous research networks in which I participated are:

- FWO Scientific Research Network on <u>Foundations of Software Evolution</u>, financed by FWO Flanders, 2001–2005.
- RELEASE (<u>Research Links to Explore and Advance Software Evolution</u>) was a research network on software evolution, funded by the ESF (European Science Foundation). In this network, I participated as external collaborator.

# G <u>Scientific presentations</u>

#### International

- 1. Pitfalls in Aspect Mining, WCRE 2008, Antwerp, Belgium, 16-10-2008.
- 2. *Mining Source Code for Design Regularities*, Working Session on Industrial Realities of Program Comprehension, ICPC 2008, Amsterdam, The Netherlands, 10-06-2008.
- 3. Pitfalls in Aspect Mining, BENEVOL 2007, Namur, Belgium, 13-12-2007.
- 4. Evolutionary Problems in Aspect-Oriented Software Development, ERCIM Symposium on Software Evolution, ICSM 2007, Paris, France, 5-10-2007.
- 5. *Model-based pointcuts*, BOATSe seminar, Barbados, 02-03-2007.
- 6. A Survey of Automated, Code-Level Aspect Mining Techniques, Dagstuhl Seminar 06302: Aspects for Legacy Applications, Dagstuhl, Germany, 26-07-2006.
- 7. IntensiVE, A Toolsuite for Documenting and Checking Structural Source-Code Regularities, CSMR 2006, Bari, Italy, 23-03-2006.
- 8. A Comparative Framework for Design Recovery Tools, CSMR 2006, Bari, Italy, 22-03-2006.
- 9. The Intensional View Environment, ICSM 2005, Budapest, Hungary, 26-09-2005.
- 10. Co-evolving Code and Design with Intensional Views A Case Study, ESUG 2005, Brussels, Belgium, 16-08-2005.
- 11. A qualitative comparison of three aspect mining techniques, Invited speech, Open University, Milton Keynes, UK, 16-05-2005
- 12. Co-evolving code and design with intensional views a case study, Invited speech, Open University, Milton Keynes, UK, 16-05-2005
- 13. A qualitative comparison of three aspect mining techniques, BENEVOL 2005, Eindhoven, The Netherlands, 26-05-2005
- 14. Conceptual code mining Mining Aspects with Formal Concept Analysis, IRST Workshop on Aspect Oriented Programming, Trento, Italy, 23-07-2004
- 15. Delving Smalltalk source-code with formal concept analysis, ESUG 2004, 06-09-2004
- 16. Using intentional source-code views to aid software maintenance, ICSM 2003, 25-09-2003
- 17. Maintaining software through intentional source-code views, SEKE 2002, 19-07-2002
- 18. Intentional software classifications, first meeting of international research network on "Foundations of Software Evolution", Brussels, Belgium, 18-01-2002
- 19. Supporting software development through declaratively declared codified programming patterns, SEKE 2001, 14-06-2001.
- 20. Some research topics of the Programming Technology Lab, invited speech at Universidade de Lisboa, Portugal, 30-05-2001
- 21. Codifying high-level software abstractions as virtual classifications, ECOOP 2000 workshop on "Objects and classification: a natural convergence", 12-06-2000

- 22. Declaratively codifying software architectures using virtual software classifications, TOOLS Europe 1999, 07-06-1999
- 23. Intentional annotations for evolving object-oriented software, doctoral symposium OOPSLA 1998, 19-10-1998
- 24. Documenting evolving software systems through reuse contracts, OOPSLA 1996 workshop on "Object-Oriented Software Evolution and Re-Engineering", 7-10-1996
- 25. OPUS: a calculus for modeling object-oriented concepts, OOIS 1994, 20-11-1994

#### National

- 1. Software maintenance, scientific presentation to researchers and industrials, organized by the Infopole Information Systems network. Louvain-la-Neuve, 17-03-2006.
- 2. Aspect-oriented programming and aspect evolution, Guest Lecture GroepT, Leuven, Belgium, 15-03-2006.
- 3. Tool support for software maintenance and evolution, scientific presentation to industrials in the context of the INGI Industrial Contact Day. Louvain-la-Neuve, 25-01-2006.
- 4. A Survey of Automated, Code-Level Aspect Mining Techniques, BENEVOL[4] symposium, Brussels, Belgium, 14-12-2005.
- 5. IntensiVE : Co-evolving Code and Design with Intensional Views, IRM seminar, Louvain-la-Neuve, Belgium, 07-09-2005.
- 6. Aspect-oriented programming: a gentle introduction, IRM seminar, Louvain-la-Neuve, Belgium, 28-04-2005
- 7. Aspect-oriented programming and aspect-mining, Guest Lecture GroepT, Leuven, Belgium, 17-03-2005.
- 8. *Co-evolution research@INGI*, Research meeting Programming Technology Lab, Brussels, Belgium, 03-03-2005
- 9. Intensional source-code views and relations, presentation at KAVA company, Antwerp, Belgium, 15-11-2004
- 10. Intensional framework documentation, Programming Technology Lab, Belgium, 20-10-2004
- 11. Conceptual code mining, IRM seminar, Louvain-la-Neuve, Belgium, 13-05-2004
- 12. Conceptual code mining, Belgian Symposium and Contact Day on Software Evolution and Aspect Oriented Programming, Ghent, Belgium, 03-05-2004
- 13. Intentional software classifications, Meeting on Applications of Logic in Computer Science, Namur, Belgium, 22-05-2002
- 14. Declarative meta programming, CERTI seminar, Louvain-la-Neuve, Belgium, 08-02-2002
- 15. Architectural aspects, First Belgian workshop on Aspect-Oriented Programming, Brussels, Belgium, 08-11-2001
- 16. The QSOUL declarative framework: A Quick Overview, Programming Technology Lab, Brussels, Belgium, 05-10-2001
- 17. Automating architectural conformance checking by means of logic meta programming, Public Ph.D. defense, Brussels, Belgium, 23-10-2000
- 18. Reuse in practice & State of the Art, Getronics, Brussels, Belgium, 07-09-1999
- 19. A formal model for object-oriented software reuse, Meeting on Validation and Verification of Formal Descriptions, Namur, Belgium, 06-05-1997

# H <u>Demonstrations and tutorials</u>

## Tutorials

• One-day *tutorial* on the logic meta-programming language SOUL, to researchers of the Programming Technology Lab, VUB and the Département d'INGénierie Informatique, UCL. At VUB, Belgium, March 2002.

## Demonstrations

- Enforcing Structural Regularities in Source Code using IntensiVE, WCRE 2008, Antwerp, Belgium, October 2008.
- Enforcing Structural Regularities in Source Code using IntensiVE, ASE 2008, L'Aquila, Italy, September 2008.
- APPAREIL: A Tool for Building Automated Program Translators Using Annotated Grammars, demonstration at ASE 2008, L'Aquila, Italy, September 2008.
- Maintaining Design Regularities in Evolving Software Systems using Template Queries in IntensiVE, ERCIM Symposium on Software Evolution, ICSM 2007, Paris, France, October 2007.
- Conceptual Pointcuts in the Intensional View Environment, AOSD 2006, Bonn, Germany, March 2006.
- The Intensional View Environment, ICSM 2005, Budapest, Hungary, September 2005.
- The Intensional View Environment, ESUG 2005, Brussels, Belgium, August 2005. Hands-on demonstration in the context of the Innovation Awards. (Third price!)
- The Intensional View Environment, ECOOP 2005, Glasgow, UK, July 2005.
- Intensional Views and Bad Smell Detection, BENEVOL 2005, Eindhoven, The Netherlands, May 2005.
- SOUL: Supporting Object-Oriented Software Development with Logic Meta Programming, ECOOP 2002, June 2002.
- Logic meta-programming in SOUL, AOSD 2002, April 2002.

# I <u>Awards</u>

On Thursday August 25, 2005, the European Smalltalk User Group, in their competition for the Technology Innovation Awards 2005, have awarded the Third Prize to Andy Kellens, Frédéric Pluquet and Kim Mens for their development of IntensiVE (the Intensional Views Environment).

# J <u>Spin-off creation</u>

In the context of our research project « *Towards a Spin-Off on the Co-Evolution of Software Design and Implementation: the IntensiVE Software Quality Management Platform* » we are currently studying the feasibility of creating a service company centered around the IntensiVE software toolsuite, which was developed by our lab in collaboration with the Vrije Universiteit Brussel.

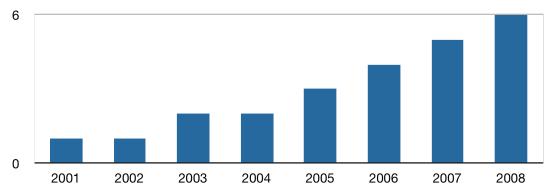
# K <u>RELEASeD research group</u>

Given my growing group of researchers in recent years, we organised ourselves in a research group that makes part of the Département d'Ingénierie Informatique (INGI). The group was named RELEASeD, the *REsearch Laboratory on software Evolution And Software Development*. It currently counts I professor, 3 PhD students and 2 post-doctoral researchers. The research activities conducted in this group are centred on three topics:

- Software Evolution Technology: we investigate advanced mechanisms, languages, formalisms, methodologies and tools to support software engineers during maintenance and evolution of a software system.
- Software Development Technology: we investigate and advance the state-of-the art in software development technology, mainly from a programming language-engineering angle.
- Aspect-Oriented Technology: as one of the most recent emerging software development paradigms, we are strongly interested in technology to support the evolution and

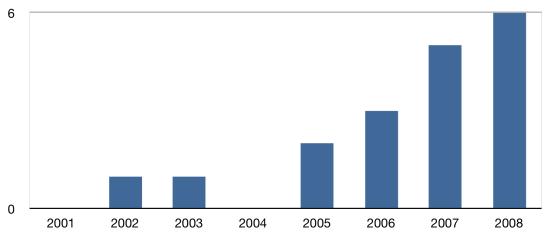
development of aspect-oriented software.

As can be seen from the figure below, the research group has seen a linear growth in the last few years.



## Number of researchers in RELEASeD

The number of research projects too has steadily increased over the years, as is illustrated in the next Figure. (See **Research projects** above for more information on ongoing and past research projects; FRIA or FNRS grants were excluded from this Figure.)



# Number of research projects at RELEASeD

## 6 Teaching duties

(For conciseness I only mentioned my teaching assignments at UCL here and omitted all those of my former employment at VUB.)

# A <u>Teaching assignments EPL/UCL</u>

#### Current classes taught

• SINFII5I: "Laboratoire : analyse et résolution de systèmes à l'aide d'outils logiciels".

[0-60-0] 7 credits, first cycle course.

From 2003 until 2009 I have been in charge of the supervision of this programming project for the 1<sup>st</sup> year bachelor in computer science (SINFIIBA) at UCL. In the academic 2008-2009 around 100 students participated in this course.

• INGI2252: "Software Engineering: Measures and Maintenance" (Génie Logiciel : mesures et maintenance)

[30-15-0] 5 credits, second cycle course.

I taught this course in the academic year 2003-04 and from 2005 onwards. Annually, around 25 students participate in the course. The course is given in English.

• SINF2335: "Programming Paradigms: Theory, Practice and Applications"

[30-15-0] 5 credits

From 2007 until 2009 I have been in charge of this course. In 2007-08 the theme of the course was "reflection, metaprogramming and aspect-orientation". In 2008-09 the theme chosen was "reflection and metaprogramming in the object-oriented paradigm". Annually, around 25 students participate in the course. The course is given in English.

#### Past classes taught

• INGI2592: "Structures de données" (Data structures), Ist licence civil engineer

2001-02 : Tutor

• INGI2595: "Séminaire de Conception de Logiciels" (Software Design Seminar), 1st and 2nd year civil engineer

2001-02 : Teacher; theme: software patterns

• FSAC1450: "Informatique T4" (2<sup>nd</sup> Introductory Computer Science Course), 2nd year civil engineer

2002-04 : Teacher and coordinator

• LINF2124: "Projet de programmation - Application Technologique" (Programming Project), 1st year licentiate in computer science

2002-03 : Coordinator and supervisor

- LINF2290: "Mémoire et stage" 2003-04 : responsible
- LINF2335: "Langages Informatiques: questions avancées"
   2006-07: Teacher; theme: aspect-oriented software development.

# Future (academic year 2009-2010 and later)

- I will continue teaching the classes SINFI151, INGI2252 and SINF2335 for which I am currently responsible.
- I will become co-teacher (50%) of the course

**INGI2359**: "Software Engineering Seminar"

[30-0-0] 5 credits

• I volunteered for giving a course at the Katholieke Universiteit Leuven in the context of an exchange programme with that university. This exchange program allows a teacher at one university to teach a course at the other university and have it accounted for as part of his total charge at his own university.

#### Other

#### • Integrated projects

On several occasions I participated as jury member for the integrated projects of the engineering students in first and second bachelor.

- Jury PI (first trimester project), 1st year civil engineer
- Jury P3 (third trimester project), 1st year civil engineer
- Jury P6 (third trimester project), 2nd year civil engineer

#### • Doctoral school

In the context of the GRASCOMP doctoral school in computer science, created in 2006–2007, I organised the following courses:

- 2006-2007 :
  - GRASCOMP013: "Advanced topics in software evolution", organised by Kim Mens, Tom Mens and Roel Wuyts ; 2 days ; 14-03-2007 (UMH) and 20-03-2007 (UCL).
  - GRASCOMP017: "Journée thématique software engineering", organised by Kim Mens, 21-05-2007 (UCL).
- 2008-2009 :
  - "Software Adaptability and Variability", organised by Kim Mens, Tom Mens and Patrick Heymans ; 2 days ; 19-05-2009 and 26-05-2009 (UCL).

## B <u>External courses</u>

#### European Masters in Object-Oriented Software Engineering (EMOOSE)

- EMOOSE Course "Advanced object-oriented software architecture" theory 2000-2001
- EMOOSE Course Declarative meta-programming 4 days (theory + practica) January 14-17, 2002
- EMOOSE Course Declarative meta-programming 4 days (theory + practica) December 2-6, 2002
- EMOOSE Specialization training "An advanced course scheduler" Jocelyn Simmonds & Fabiana Nogoseke
- EMOOSE Course Declarative meta-programming 4 days (theory + practica) December 8-12, 2003

#### **Guest Lectures**

• March 17, 2005 : guest lecture on aspect-oriented programming and aspect-mining for Groep T in Leuven, Belgium.

• March 15, 2006 : guest lecture on aspect-oriented programming for Groep T in Leuven, Belgium.

# C <u>Supervision of PhD dissertations</u>

#### Promoter

- Promoter of Sebastian Gonzalez, Département Ingénierie Informatique, UCL. PhD obtained on October 24, 2008. "Programming in Ambience: Gearing up for dynamic adaptation to context".
- Co-promoter of Andy Kellens (together with Prof. Theo D'Hondt, VUB), Computer science department, VUB. PhD obtained on June 27, 2007. "Maintaining causality between design regularities and source code"
- Co-promoter of Johan Brichau (together with Prof. Theo D'Hondt, VUB), Computer science department, VUB. PhD obtained on May 12, 2005. "Integrative Composition of Program Generators".

(Unfinished PhDs)

- Promoter of Diego Ordonez, Département Ingénierie Informatique, UCL. Start of doctoral studies: January 20, 2005. Expected grauation: 2009.
- Promoter of Alfredo Cadiz, Département Ingénierie Informatique, UCL. Start of doctoral studies: January 2008. Expected grauation: 2011.
- Promoter of Sergio Castro, Département Ingénierie Informatique, UCL. Start of doctoral studies: May 2007. Expected grauation: 2011.

#### Jury member

- Member of PhD Jury ("rapporteur") of Usman Bhatti (Université Paris I, France). PhD defence on February 16, 2009. "Object Identification and Aspect Mining in Procedural Object-Oriented Code"
- Member of PhD Jury of François Gobert (INGI / UCL). PhD obtained on December 11, 2007. "Towards putting abstract interpretation of Prolog into practice: design, implementation, and evaluation of a tool to verify and optimize Prolog programs"
- Member of PhD Jury of Gustavo Ospina (INGI / UCL). PhD obtained on February 22, 2007. "Un cadre conceptuel pour l'interopérabilité des langages de programmation"
- Member of PhD Jury ("rapporteur") of Christophe Deleray (Université de Marne-la-Vallée, France). PhD obtained on October 18, 2006. "Corosol: une machine virtuelle Java dynamiquement adaptative."
- Member of PhD Jury of Tung Do (IAG / UCL). PhD obtained on July 4, 2005. "Design Patterns for Multi-Agent Systems"

## Comité d'encadrement

- Member of the "Comité d'Encadrement" of Arnaud Hubaux (FUNDP). "Separation of Concerns in Variability Models".
- Member of the "Comité d'Encadrement" of Yves Jarardin (UCL). "Distributed component programming in a multiparadigm language".
- Member of PhD Thesis External Review Committee of the ICT Doctorate School of the University of Trento, Italy for the academic year 2004-2005.

# 7 Services to the university

- During the academic year 2002-2003 I was a member of the *Commission Permanente* d'Evaluation du Premier Cycle.
- During the academic years 2002-2007 I have been secretary of the exam jury of all 2<sup>nd</sup> cycle degrees of the *LINF* licentiate program in computer science at UCL (LINF22GS, LINF22GN, LINF22, LINF21GS, LINF21GN and LINF21).
- Since 2001 until today I have been in charge of organizing the INGI Research Meetings (IRM seminars) at UCL university, a weekly forum where researchers and visitors of the INGI research group can present their ongoing research. (See <a href="http://www.info.ucl.ac.be/~km/irm/irm.html">http://www.info.ucl.ac.be/~km/irm/irm.html</a>)
- From 2001 until 2004 I was in charge of organizing the *CERTI*<sup>15</sup> seminar series at UCL university.
- In January 2006 I organised an informal *INGI Industrial Contact Day* where IT companies in and around Louvain-la-Neuve were invited to learn what research is being done at the INGI research group at UCL.
- I represented the Computer Science Department of the Ecole Polytechnique de Louvain at the *Salon Orienta* in 2003 and at the *Salon Etudes et Professions* (SIEP) in 2004 until 2008 (in Brussels).
- I represented the Computer Science Department of the Ecole Polytechnique de Louvain at several soirées régionales d'information sur les etudes (organized by UCL's "Centre d'information et d'orientation") in 2007-2009.
- Since April 2006 I became a voluntarily scientific employee for 10% at the Programming Technology Lab of the Vrije Universiteit Brussel, Belgium (while still being employed as fulltime professor at UCL).

<sup>&</sup>lt;sup>15</sup> CERTI was a research center on information technology that grouped several departments of the faculty of applied sciences, interested in different aspects of information technology.