

Elisa L. A. Baniassad

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Education/Academic Experience

Assistant Professor, 12.2004-Present:

Department of Computer Science and Engineering, the Chinese University of Hong Kong

NSERC Post Doctoral Fellowship, 01.2003-12.2004:

Trinity College, Dublin, Ireland. (Computer Science, Distributed Systems Group)
Host: Dr. Siobhan Clarke

Ph.D. (Computer Science) 2003

University of British Columbia, Vancouver, Canada
Advisor: Dr. Gail Murphy
Thesis: Design Pattern Rationale Graphs: Linking Design to Source

M.Sc. (Computer Science) 1998

University of British Columbia, Vancouver, Canada
Advisor: Dr. Gail Murphy
Thesis: Conceptual Modules: Expressing Desired Structure for Software Reengineering

B.Sc. (Computer Science) 1995

Technical University of Nova Scotia, Halifax, Canada

Research

Books:

2005: *Aspect-Oriented Analysis and Design: The Theme Approach*, by Siobhan Clarke and [Elisa Baniassad](#). Book published April 2005 by Addison-Wesley as part of their Object Technology Series (Booch, Jacobson, Rumbaugh)

Chapter: "An Initial Assessment of Aspect-oriented Programming" by Robert J. Walker, [Elisa L.A. Baniassad](#), and Gail C. Murphy in *Aspect Oriented Software Development*, Robert Filman, Tzilla Ellrad, Siobhan Clarke, Mehmet Aksit Eds. 2004 Addison-Wesley.

Journal Articles:

2005: Joao Araujo, [Elisa Baniassad](#), Paul Clements, Ana Moreira, Awais Rashid, Bedir Tekirdonen. *"Early Aspects: Bringing the Power of Aspects to Early Development Phases"*. In re-submission to IEEE Software, 2005.

2005: [Elisa Baniassad](#) and Ryan van Roode. *"AORA Graphs: Scalable Views for Aspect-Oriented Requirements Analysis"*. In submission to Transactions on AOSD, 2005.

Gail Murphy, Robert Walker, [Elisa Baniassad](#), Martin Robillard, Albert Lai and Mik Kersten. *"Does Aspect-oriented Programming Work?"* Communications of the ACM, 44(10):75-77. October 2001 [~30 Citations]

Gail C. Murphy, Robert J. Walker, and [Elisa L.A. Baniassad](#). *"Evaluating Emerging Software Development Technologies: Lessons Learned from Evaluating Aspect-oriented Programming"*. In IEEE Transactions on Software Engineering 25, 4, 1999, p. 435-455 [~30 Citations]

Journal Quality Conference Publications:

[Elisa Baniassad](#), Siobhan Clarke. *"Theme: An Approach for Aspect-Oriented Analysis and Design"* In Proceedings of the International Conference on Software Engineering (ICSE) #26, 2004, p. 158-167. [13% Acceptance] [~10 Citations]

Shiu Lun Tsang, Siobhan Clarke, Elisa Baniassad. “*An Evaluation of Aspect-Oriented Programming for Java Based Real-Time Systems Development*” In Proceedings of The 7th IEEE International Symposium on Object-oriented Real-time distributed Computing (ISORC) 2004.

Elisa Baniassad, Gail Murphy, Christa Schwanninger. “*Design Pattern Rationale Graphs: Linking Design to Source*” In Proceedings of the International Conference on Software Engineering (ICSE) #25, 2003 [13% Acceptance] [~10 Citations]

Elisa Baniassad, Gail Murphy, Christa Schwanninger, and Michael Kircher. “*Managing Crosscutting Concerns During Software Evolution Tasks: An Inquisitive Study*” In Proceedings of the First International Conference on Aspect-oriented Software Development (AOSD) 2002. [20% Acceptance] [~20 Citations]

Robert J. Walker, Elisa L.A. Baniassad, and Gail C. Murphy. “*An Initial Assessment of Aspect-oriented Programming*” In Proceedings of the International Conference on Software Engineering (ICSE) #21, 1999 [18% Acceptance] [~70 Citations]

Elisa L.A. Baniassad and Gail C. Murphy. “*Conceptual Module Querying for Software Reengineering*”. In Proceedings of the International Conference on Software Engineering (ICSE) #20, April 1998 [Selected for Best-Paper Award Equivalent] [18% Acceptance] [~30 Citations]¹

Refereed Workshop Publications:

Raphael K.D. Suen and Elisa Baniassad “*Isolating Concerns in Requirements Using Latent Semantic Analysis*” In submission to the Early Aspects Workshop held as part of OOPSLA 2005

Elisa L. A. Baniassad and Siobhan Clarke. “*Investigating the Use of Clues for Scaling Document Level Concerns*”, In the Early Aspects workshop held as part of the OOPSLA 2004 (*selected for presentation*)

Elisa L. A. Baniassad and Siobhan Clarke. “*Finding Aspects in Requirements with Theme/Doc*” Workshop on Early Aspects, held as part of the International Conference on Aspect-oriented Software Development (AOSD) 2004 (*selected for presentation*)

Elisa L. A. Baniassad, Gail Murphy, Christa Schwanninger. “*Understanding Design Patterns with Design Rationale Graphs*” Workshop on Beyond Design Patterns (mis)Used, held as part of OOPSLA 2001

Elisa L.A. Baniassad, Gail C. Murphy and Christa Schwanninger. “*Determining the “Why” of Concerns*”. Position Paper for the Workshop on Advanced Separation of Concerns, held as part of the International Conference on Software Engineering (ICSE), May 2001

Elisa L.A. Baniassad, Gail C. Murphy, Christa Schwanninger and Michael Kircher. “*Where are Programmers Faced with Concerns?*” held as part of OOPSLA 2000 Workshop on Advanced Separation of Concerns in Object-oriented Systems, October 2000 (*selected for presentation*)

Other Refereed Contributions and Workshops:

Early Aspects 2005: Aspect-Oriented Requirements Engineering and Architecture Design Workshop, to be held at AOSD 2005. Organized by Paul Clements, Ana Moreira, Awais Rashid, Elisa Baniassad, Bedir Tekinerdogan, and João Araújo.

Early Aspects 2004: Aspect-Oriented Requirements Engineering and Architecture Design Workshop and accompanying Poster: Organized by Ana Moreira, Awais Rashid, Elisa Baniassad, Bedir Tekinerdogan, Paul Clements, and João Araújo.

Beyond Design Patterns (mis)Used OOPSLA 2002 Workshop and accompanying Poster: Organized by Christa Schwanninger, Elisa Baniassad, Gail Murphy and Vera Seidel

Elisa Baniassad, Martin Robillard, Albert Lai and Gail Murphy. “*Tool Support for Managing Crosscutting Concerns in Existing Artifacts*” Object Oriented Programming, Systems, Languages and Applications (OOPSLA) 2002 Poster

¹ Citation results are obtained from Google Scholar.

Service

Research Community Involvement:

2007

- Program Committee Member AOSD 2007

2006

- Program Committee Member: GPCE 2006
- Organizing Committee Member: OOPSLA 2006
- Program Committee Member: AOSD 2006
- Publicity Chair: AOSD 2006
- Workshop Program Committee Member: Aspect-Oriented Modeling (AOM) for Models 2005.

2005

- Onward! Track General Chair: OOPSLA 2005
- Program Committee Member: OOPSLA 2005
- Program Committee Member: APSEC 2005
- Tutorials Co-Chair: ECOOP 2005
- Workshop Selection Committee Member: MODELS 2005
- Co-Founder: AOAsia
- Co-Organizer: AOAsia Workshop, APSEC 2005
- Co-Organizer: Early Aspects Workshop, OOPSLA 2005
- Co-Organizer: Early Aspects Workshop, AOSD 2005
- Reviewer: IEEE Software Special Issue on Aspect-Oriented Software Development.

2004

- Program Committee Member: OOPSLA 2004,
- Reviewer: TAOSD 2004
- Session Chair: OOPSLA 2004
- Student Poster Referee: OOPSLA 2004
- Reviewer: Automated Software Engineering Journal 2004
- Reviewer: IEE Proceedings - Software Journal 2004
- Technical Manuscript Reviewer: Artech House Publishers 2004
- Organizer: Early Aspects Workshop, OOPSLA 2004
- Workshop Program Committee Member: ACP4IS, AOSD 2004

2003

- External Reviewer: ICSE#25, 2003, and OOPSLA 2003.
- Workshop Program Committee Member: ACP4IS: AOSD 2003

Acronyms

ACP4IS: Workshop on Aspects Components and Patterns for Infrastructure Software

AOAsia: Asian Network of Research into Aspect-Oriented Software Development

AOSD: Int'l Conf. on Aspect-Oriented Software Development

APSEC: Asia Pacific Software Engineering Conf.

ECOOP: European Conf. on Object Oriented Programming

GPCE: Int'l Conf. on Generative Programming and Component Engineering

ICSE: Int'l Conf. on Software Engineering

MODELS: Int'l Conf. on Modeling Languages

OOPSLA: Int'l Conf. on Object Oriented Systems, Programming, Languages, Applications.

TAOSD: Transactions on Aspect-Oriented Software Development Journal

University Service Involvement (Chinese University of Hong Kong):

2005 - 2006: Department Seminar Series Organizer.

2005 - Present: Outreach to Highschool Students at Saint Paul's Convent School.
I am working with a group of students from SPCS in their endeavor to provide technology to assist the visually impaired in navigating the transit system.

2005 - Present: Fostering Faculty Exchange with Henri-Pointcaré, Nancy, France.
I am acting as a liaison between Henri-Pointcaré faculty, and CU-Engineering faculty, to find points of possible contact and collaboration.

2005: Host of Wei Lun Visiting Professor, Dr. Richard Gabriel
I will act as the department host for the visit of the Wei Lun professor Dr. Gabriel, who will visit the CU-CSE department during the fall term of 2005.

Departmental Committee Involvement (University of British Columbia):

- 2001 - 2003: Focus on Women in Computer Science (FoWCS) committee (founding member).
Worked to set up the committee as a full department committee. Worked to establish the mandate for the committee, determining that it should function in three ways: to review current practices in the department, to advise on departmental practices, and to act as a resource for women in the department who wished to either volunteer their services in the broader community, or who were looking for mentoring relationships with other women.
- 1999 - 2003: University of British Columbia Institute for Computing, Information, and Cognitive Systems (ICICS) Student Advisory Committee (Founding Member).
Worked to establish a plan for more social and research connections among the faculties involved in the ICICS institute: Electrical Engineering, Mechanical Engineering, and Computer Science. Activities were devised that would spark and encourage discussion about research ideas in a relaxed setting.
- 2001: Graduate Representative to the Departmental Head Review Committee.
Collected and represented graduate students' views on the effectiveness of the department head for of graduate students' needs.
- 1999 - 2001: Graduate Admissions Committee.
Reviewed applications for students applying to the graduate program at the University of British Columbia, Department of Computer Science.
- 1998 - 1999: Alternative Routes to Computing (ARC) Steering Committee.
Represented students' needs to help establish a mandate and multi-disciplinary educational approach for the ARC program: a program designed to bring those with undergraduate degrees and superior "real world" experience into computer science.
- 1996-1997: Graduate Student Seminar Organizer.
Established the schedule and perspective for the graduate student seminar series, transforming it into a forum for airing worries, but also for finding good strategies for graduating on-time and with good research success.

Broader Community Involvement:

- 2003: Senior Women's Summit Raporteur: Grace Hopper Celebration of Women in Computing (4).
Together with Fran Berman of University of California, San Diego, distilled and presented the results of a discussion by senior women in computing on the subject of leadership survival skills.
- 2001: Web master for Conference on Women of Excellence in Science.
- 2000 - 2003: "Big Sister" as part of Big Sisters of the Lower Mainland program.
Acted as a mentor and friend to a young woman from a disadvantaged social situation.
- 1998 - 2003: Selection committee for the Premier's Award for Young Women in Science.
In addition to selecting award recipients, assisted in setting the selection criteria and service mandate for the recipients of awards, encouraging the recipients to conduct outreach activities for younger women in the broader community.

Supervision

MSc. Supervision

- 2004: Co-Supervisor Karl Quinn. Graduated MSc Trinity College
- 2004: Co-Supervisor Shiu Lun Tsang. Graduated MSc Trinity College

Undergraduate Supervision

- 2005: Three groups FYP Students
- 2004: Mary Shaw, Trinity College Summer Student.

Research Assistant Supervision

- 2005: Two short-term research assistants related to the Semantic AORA Project.

Industrial Research Experience

- May 2002: Visiting doctoral researcher, Siemens AG, Munich, Germany.
Conducted case studies to establish the effectiveness and usability of views of documentation for investigating design pattern implementations.
- March 2000: Visiting doctoral researcher, Siemens AG, Munich, Germany.
Conducted a field study to investigate how developers encounter aspects (crosscutting concerns) in their source code.
- June 5-17, 1997: Visiting researcher, XEROX PARC, Palo Alto, California, USA.
Performed an observational study of the initial application of Aspect-oriented Programming.
- May 1996 – September 1996, January 1998-May 1998: Usability Consultant, Family Maintenance Enforcement Program, Victoria, Canada.
Applied rapid lightweight prototyping and participatory design techniques to arrive at a user-interface design.
- January 1994-April 1994, September 1994-April 1995, Intern: Software Engineer, Bell Northern Research, Ottawa, Canada.
Designed, implemented and tested an on-phone debugging feature, and a low-level message monitoring technique.

Grants

Chinese University Funding:

- **2004-2005:** Semantic Analysis of Requirements Text for Aspect-Oriented Requirements Analysis (AORA). Direct Grant for Research: HKD \$150,000

External Competitive Funding:

- **2004-2005:** Collaborator: Canadian Foundation for Innovation (CFI) Grant (On-going New Opportunities Fund 2005) with matching funds from British Columbia KDF (BCKDF) and University of Victoria top-up to \$200,000 CAD (\$1,282,671.86 HKD) (PI: Yvonne Coady, Univ. Victoria)

Industrial Funding:

- 2001-2004: Co-Investigator, Siemens Industrial Funding Grant. €60,000 (\$567,213.49 HKD) (PI: Gail Murphy, University of British Columbia)

Scholarships & Fellowships:

- 2003-2005: National Science and Engineering Research Council of Canada (NSERC) Post Doctoral Research (PDF) Fellowship, held at Trinity College, Dublin \$80,000 CAD (\$510,163.20 HKD)
- 2001-2003: Li Tse Fong Fellowship (University of British Columbia distinguished award, Doctoral Research) \$40,000 CAD (\$255,101.63 HKD)
- 1998-2000: NSERC PGS-B award (*Doctoral research*) \$40,000 CAD (\$255,101.63 HKD)
- 1997-1998: University Graduate Fellowship (UGF) (Master's research) \$15,000 CAD (\$95,658.47 HKD)

Honors and Awards

- 2004: Best Technical Paper Presentation Award, International Conference on Software Engineering (ICSE) #26.
- 2002: Faculty of Science Award for Leadership, University of British Columbia, Canada. (Awarded for departmental and broader committee service and leadership) \$1000 CAD (\$6,376.09 HKD)
- 1998, 2000: Grace Hopper Celebration of Women in Computing (2, 3) Scholarship
- 1997: "Terrific Teaching Assistant" award (*For highest student evaluation scores*)