

# **CURRICULUM VITAE**

## **Associate Professor Emilia Mendes**

BSc. (PUC, Brazil), PhD (Southampton, UK), MASMA, MNZSMA

Address Computer Science Department,  
The University of Auckland  
Private Bag 92019  
Auckland, New Zealand

phone: +64 9 3737599 ext. 86137  
fax: +64 9 3737453  
email: emilia\_mendes@yahoo.com  
www:<http://www.cs.auckland.ac.nz/~emilia>



**NATIONALITY:** New Zealand

## **BRIEF BIOGRAPHY**

Emilia is Associate Professor in Computer Science at the University of Auckland. She has active research interests in the areas of Web engineering, Empirical Software Engineering, Hypermedia and Computer Science education. In particular she focuses on Web measurement and metrics (quality, size metrics, effort estimation, productivity, usability, testing), Evidence-based Research, Object-oriented metrics and measurement, Software and Web engineering education and Case-based reasoning, in which areas she has published widely. To date she has received 350+ citations to her work, and she is the director of the WETA (Web Engineering, Technology and Applications) Research Group.

She has an excellent teaching record, including undergraduate teaching and course development and co-ordination in Computer Science and Software Engineering and postgraduate teaching, development and co-ordination in Web engineering. She has consulting experience in the areas of object-oriented development and usability, as well as running industry workshops in Web cost estimation and productivity benchmarking, and three tutorials on Web cost estimation. She has been on numerous conference program committees, including international Web and Empirical Software Engineering conferences, and is on the editorial boards of Journal of Web engineering, International Journal of Web Engineering and Technology, the Journal of Software Measurement, the International Journal of Software Engineering and Its Applications, Empirical Software Engineering Journal, and the Advances in Software Engineering Journal.

## **AWARDS**

- 2007 Invited Speaker at the Fourth International Summer School on Software Engineering, University of Salerno, Italy (all expenses paid)
- 2007 Invited to be a member of the editorial board of the Empirical Software Engineering Journal.
- 2007 Visiting fellowship from the Spanish government awarded to prestigious Overseas Academics.
- 2006 Keynote Speaker at the First International Conference on Web engineering and Applications, India (all expenses paid).
- 2006 Visiting fellowship from the Spanish government awarded to prestigious Overseas Academics.
- 2006 One of the two best paper awards (there was a tie) at the ACM/IEEE International Symposium on Empirical Software Engineering, the premiere conference for those who conduct research in Empirical Software Engineering.
- 2005 Representative to ISO on Systems and software.
- 2004 One of the best papers at the International conference on Computer Science, Software Engineering, Information Technology, e-Business, and Applications, selected for a special journal issue.
- 2002 One of the best papers at the IEEE Software Metrics Symposium, selected for a special journal issue.
- 2002 One of the best papers at the IEE Empirical Assessment and Evaluation in Software Engineering conference, selected for a special journal issue.
- 2001 The University of Auckland Early Career Research Excellence Awards
- 1998 One of the best papers at the IEE Empirical Assessment and Evaluation in Software Engineering conference, selected for a special journal issue.

## EDUCATION AND EMPLOYMENT

### *Education / Academic Record*

1984-1986 Bachelor of Science in Computer Science (Catholic University of Rio de Janeiro, Brazil)  
1990-1992 Master of Science in Computer Science (Federal University of Rio de Janeiro, Brazil)  
1995-1999 Doctor of Philosophy in Computer Science (University of Southampton, UK)

### *Employment History*

Feb. 08 - present	Computer Science Department, The University of Auckland, NZ.	Associate Professor
Feb. 02-Jan. 08	Computer Science Department, The University of Auckland, NZ.	Senior Lecturer (tenured)
May 99-Dec. 01	Computer Science Department, The University of Auckland, NZ.	Lecturer
Oct. 97-Apr. 99	Electronics and Computer Science Department, The University of Southampton, UK.	Part-time Lecturer
Mar. 87-Jul. 95	Department of Computer Science, Catholic University of Rio de Janeiro (PUC), Rio de Janeiro, Brazil	Part-time Tutor
Feb. 90-Aug.95	National Service of Business Apprenticeship (SENAC), Rio de Janeiro, Brazil	Research Scientist at the SENAC Headquarters
Dec. 86-Dec.88	ELEBRA Computers, Rio de Janeiro, Brazil	Business Analyst
Jan. 86-Nov.86	ENGEVIX, Rio de Janeiro, Brazil	Software Programmer

## RESEARCH, SCHOLARSHIP AND ADVANCEMENT OF KNOWLEDGE

### *Highlights*

- I have **112** refereed publications; **350+** citations, some of which from leading researchers in Systems & SW and Web engineering.
- Consistently publishing in high quality publication avenues, including 4 of the 5 journals considered the top in Systems and SW engineering<sup>1</sup>
- One of the two best paper awards at the 2006 ACM/IEEE ISESE conference; 5 conference papers selected for journal special issues based on their outstanding quality (1998, 2002 (2 papers), 2004, 2006).
- Keynote Speaker at the 1<sup>st</sup> International Conference on Web engineering and Applications, and at the CALIPSO Workshop (both in 2006 and with all expenses paid); Invited Speaker at the 2007 International Summer School on Software Engineering (all expenses paid);
- First female in New Zealand to obtain a Marsden Fast-start grant in CS as sole investigator; AI and Goal leader on a large FRST grant, AI on a second FRST grant. Visiting fellowships from the Spanish government awarded to prestigious Overseas Academics (2006 & 2007).
- Editorial board member of the two Web engineering journals (IJWET: 2002, JWE: 2005), the Journal of Software Measurement: 2006: International Journal of Software Engineering and Its Applications and Empirical Software Engineering Journal: 2007, and the Advances in Software Engineering Journal: 2008.
- Served on the program committee of ~100 International conferences and workshops in the last 8 years, including the top conferences in the disciplines related to my research; Reviewer for all of the journals considered the top in Systems and SW engineering<sup>3</sup>.

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<sup>1</sup> R.L. Glass and T.Y. Chen An assessment of systems and software engineering scholars and institutions (1999–2003), Journal of Systems and Software, Volume 76, Issue 1, April 2005, Pages 91-97.

## **Primary Research Projects**

- Tukutuku Benchmarking project: This project was initiated in 2002 during my sabbatical leave. It has two main goals: to develop and compare Web cost estimation models based on early effort predictors; to benchmark productivity across and within Web Companies. Further details on Tukutuku are available at <http://www.cs.auckland.ac.nz/tukutuku>. The initial results provided by Tukutuku were presented at an industry workshop that I organised in 2004. This workshop had the participation of Professor B. Kitchenham, who presented a seminar as part of a UoA Foundation Visitor Award.
- Web cost estimation: This research investigates the proposal and comparison of cost models for Web cost estimation, where the Web applications can be either dynamic or static. These cost models have been generated using numerous techniques. I have employed both student-based and industrial data to generate our models. I have collaborated with one practitioner (Dr. N. Mosley from MetriQ (NZ) Limited), and academics from the UoA (Professor C. Triggs, Dr. R. Fewster, and A/Prof. I. Watson) and from overseas (Dr. S. Counsell from Brunel University). This work is currently being extended in collaboration with Dr. Sergio Di Martino (Napoli University) and Associate Professor Filomena Ferrucci (Salerno University), and also in collaboration with Dr. Nora Koch (Ludwig-Maximilians University).
- Bayesian Modelling for Web Resource Estimation: The goal of this research is to construct and validate a large-scale Bayesian Network (BN) that incorporates all the fundamental factors related to resource estimation of Web projects, their relationships and associated uncertainties. A Bayesian Network is a model that embodies existing knowledge of a complex domain in a way that supports reasoning under uncertainty. Large-scale Bayesian Networks combine the advantages of an intuitive representation with a sound mathematical basis in Bayesian probability.
- Bayesian Modelling for Product and process improvement: The goal of this research is to construct and validate a large-scale Bayesian Network (BN) that incorporates all of the fundamental factors related to product and process improvement within the context of Web projects, their relationships and associated uncertainties. In addition to building the large-scale BN model, this research also proposes the development of tools that will be used as plug-ins to other existing software tools, thus allowing Web companies not only to use our large BN, but also to adapt the BN according to their own needs.
- Cross-company cost models versus within-company cost models: This research investigates to what extent a cross-company cost model (model built using project data from several organisations) can be successfully employed to estimate effort for projects that belong to a single company, where no projects from this company were used to build the cross-company model. I have collaborated with the following researchers and practitioners: Professor B. Kitchenham from Keele University and National ICT Australia; Professor Chris Triggs from UoA (Statistics department); Dr. Chris Lokan from the University of New South Wales @ ADFA; Dr. S. Counsell from Brunel University; Dr. N. Mosley from MetriQ NZ; Associate Professor Filomena Ferrucci from the University of Salerno; Dr. Sergio Di Martino from the University of Napoli; Dr. Lefteris Angelis & Ioannis Stamelos from the University of Thessaloniki.
- Evidence-based Web/software engineering: This research looks into providing and validating guidelines that can be used by researchers and practitioners to help obtain and compile results that together will give evidence on the use of methods, technologies and processes. One of the main components in the research is the use of a systematic literature review process that leads to unbiased results and interpretation. This work has been carried out in collaboration with Professor B. Kitchenham, from Keele University and National ICT Australia, and Professor G. Travassos from the Federal University of Rio de Janeiro.
- Assessing the effectiveness of pair-programming for learning software programming and design: This research investigated the use of pair-programming as an effective technique to help students learn software programming and design.

## Grants

2007-2012	\$3.4 million	<i>Foundation for Research, Science and Technology (FoRST) grant for Product and Process Improvement through Software Visualisation (Goal leader and Associate Investigator)</i>
2002-2007	\$1,000,000	<i>FoRST grant for Domain-Specific Software Tools (Associate Investigator)</i>
2007-2009	\$140,000	<i>Royal Society of NZ (RSNZ) Marsden grant for A probabilistic model for Web resource estimation (Principal Investigator (PI) and only researcher)</i>
2006	\$23,000	Visiting fellowship from the Spanish government awarded to prestigious Overseas Academics
2004-2005	\$4,000	<i>RSNZ grant for Data Enhancement and Adaptation for Software Cost Estimation (PI and only researcher)</i>
2000-2002	\$9,655	<i>University of Auckland Research (AURC) grant for Intelligent Tool for Measuring and Predicting Web Development Effort (PI and only researcher)</i>
2001-2003	\$30,000	<i>UARC grant for Computer Aided Web Engineering Environment (PI and only researcher)</i>
2003-2005	\$2,375	<i>UARC grant for Applying Analogy-based Adaptation Techniques to software/Web Project Cost Estimation (PI and only researcher)</i>
2004	\$2,500	<i>UA Visitor Award for visiting scholar Professor B. Kitchenham</i>
2004-2005	\$5,000	<i>UA ISORC grant for Investigating Early Size Measures for Web Cost Estimation Based on the W2000 Methodology (PI and only researcher)</i>
2005-2007	\$6,500	<i>UARC grant for Web resource estimation (PI and only researcher)</i>
2006-2008	\$3,750	<i>UARC grant for Web quality measurement (PI and only researcher)</i>
2007-2009	\$5,000	<i>UARC grant for Comparison of different Web sizing measures for Web effort estimation (PI and only researcher)</i>
2007-2009	\$5,404.73	<i>Faculty of Science Research Development Fund, for Investigating the effects of personality on team productivity and climate (PI)</i>

## Publications

Refer attached list

## TEACHING AND EDUCATIONAL DEVELOPMENT

### Highlights

- Taught courses in Computer Science in 5 different topics, 2 at Postgraduate (PG) level, and 3 at Undergraduate level (UG);
- Developed new course material, a UG book of course-material, and edited a book used as textbook for one of the PG courses I lecture.
- Made significant enhancements to all the courses taught. I am course coordinator for two PG courses, and one UG course.
- I have been involved in curriculum development at the department level.
- Previous to my appointment at the University of Auckland I taught Computer Science UG courses at the University of Southampton (1997 to 1999) and the Catholic University of Rio de Janeiro (1987 to 1995)
- My teaching evaluations for the past 6 years have an average of 75% indicating excellence in teaching<sup>2</sup>; I also added numerous innovations to my teaching practice;
- Supervised 12 Masters theses students to completion and one is ongoing. Four PhD students ongoing.
- Published four papers related to my teaching practices, three at ACM international conferences and one at an Australasian conference.
- Subjects taught: Data Structures; Advanced Object-oriented concepts; Introduction to Databases and Client-based programming using Java; Advanced Databases; Database

<sup>2</sup> University of Auckland's Centre for Professional Development guidelines

Modelling; SQL; Principles of Web engineering and Web measurement; Hypermedia design; Software measurement principles and application; Object-oriented programming; Human-Computer Interaction; Introduction to Computer Science; Software Engineering projects and Operating systems.

- Examination: Internal Examiner of 6 MSc theses at the University of Auckland; External examiner of 1 MSc thesis Waikato University and 2 PhD theses Otago University; 1 MSc thesis Massey University.
- The only NZ academic who participated in the ACM/IEEE SEEK<sup>3</sup> project as a volunteer.

### **RECENT TEACHING EXPERIENCE**

I have coordinated (shown \*) or taught the following courses over the last eight years:

<i>Thesis Students</i>	supervised 30 undergraduate and postgraduate project students between 1999 and 2007	
	supervised to completion 9 masters students between 1999 and 2007	
<i>Undergraduate</i>	Introduction to Computer Science Software Design and Construction (*) Operating Systems Informatics (*)	Principles of Computer Science Database systems (*) Database Modelling (*) Human-Computer Interaction
<i>Postgraduate</i>	Hypermedia and Multimedia Systems (*) Software Metrics and Measurement (*)	
<i>Industry courses</i>	Object-Oriented Analysis and Design Web cost estimation and productivity benchmarking	Database Systems & Modelling

## **CONTRIBUTIONS TO THE UNIVERSITY AND COMMUNITY**

### **Administrative**

- University of Auckland (UoA) Women in Leadership Programme (2001)
- Faculty committee to liaise collaborations between the UoA and leading Brazilian Universities
- Faculty of Science Research Advisory Committee (2008 - ongoing)
- Faculty Postgraduate Student-Staff Consultative Committee (2005 - ongoing)
- Faculty committee Incredible Science Poster Competition
- Faculty committee Girls into Science Open day
- Seminars at UoA's Bump into Science Open day
- Computer Science (CS) Enrollment Team membership
- Computer Science Graduate and Postgraduate Diploma Co-ordinator (2004-2005)
- CS Software Engineering accreditation committee Chair
- CS Teaching-formula sub-committee member
- CS Seminar coordinator (~2001 to June 2002)
- CS Research Committee membership
- CS External Research Development Committee membership
- CS Research Liaison Forum committee Chair
- 5<sup>th</sup> floor fire warden (since 2004).

### **Professional Affiliations and Contributions**

- Editorial board: Journal of Web engineering, International Journal of Web Engineering and Technology (premier journals in my field), the Journal of Software Measurement, the International Journal of Software Engineering and Its Applications, Empirical Software Engineering Journal, and the Advances in Software Engineering Journal.
- Special Issue editor: International Journal of Web Engineering and Technology, special issue on Empirical Web Engineering 2007

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<sup>3</sup> Software Engineering Education Knowledge, aimed to determine the knowledge to be included in any UG SW. Engineering program.

- Workshops Chair, 1<sup>st</sup> and 2<sup>nd</sup> Workshops on Web Measurement and Metrics, co-located with the International Conferences on Web Engineering 2005 and 2006. Industry workshops on Web cost estimation and Productivity Benchmarking, Auckland January 2004 and August 2007.
- Doctoral Symposium Chair: ICWE'08
- Workshops Chair: ICWE'07
- Posters and Demonstrations Chair: ICWE'05
- Programme Committee Co-chair (short papers): ISESE'06
- Program Committee member for ~100 conferences in last 9 years, which include: ACM hypertext (2003, 2004, 2005, 2007); IEE Empirical Assessment in Software Engineering (2002, 2003, 2004, 2005, 2006, 2007, 2008); IEEE Metrics Symposium (2003, 2005); World-Wide Web conference (2001, 2002, 2003, 2004, 2006, 2007, 2008); International Web Engineering Conference (2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008); AusWeb (2002, 2003, 2004, 2005, 2006, 2008), ACM/IEEE International Symposium on Empirical Software Engineering (2005, 2006), ACM/IEEE International Symposium on Empirical Software Engineering and Measurement (2007, 2008).
- NZ delegation to the International Organisation for Standardisation (ISO), as an expert in the area of Systems and Software
- Invited Speaker at the Fourth International Summer School on Software Engineering, University of Salerno, Italy (all expenses paid)
- Tutorials on Web cost estimation and Productivity benchmarking presented at the International Conferences on Web Engineering 2005, 2006, and 2008
- Invited Seminar on the Use of Bayesian Networks for Web cost estimation presented at the Universities of Salerno (Salerno, 2008) and Napoli (Napoli, 2008)
- Invited Seminar on Web cost estimation presented at the University of Rey Juan Carlos (Madrid, 2006)
- Invited Seminar on Cross- versus Single-company Web effort estimation presented at the Polytechnic University of Valencia, (Valencia, 2006)
- Invited Seminar on Web Productivity Measurement presented at the New Zealand Software Metrics Association 2005.
- Seminar on Systematic Reviews presented at Bournemouth University 2005 and Brunel University in 2006
- Only NZ academic participated in the ACM/IEEE SEEK<sup>4</sup> project as a volunteer.
- Frequently invited to review papers for high impact journals such as IEEE Transactions in Software Engineering, ACM Transactions on Software Engineering and Methodology, Journal of Systems and Software, Information and Software Technology and Empirical Software Engineering

## **Consulting**

I have undertaken numerous consultancies. Examples include:

- 2001-ongoing: Database modelling and SQL programming for MetriQ Limited
- 2004-2005: Web cost estimation model for Dataview and RSI
- 2005: Usability evaluation for Auckland Schools

## **PUBLICATION LIST**

### **BOOKS**

2007 MENDES, E. Cost Estimation Techniques for Web Projects, IGI Global Publishers, 424 pages.

### **EDITED BOOKS**

2007 BRAMBILLA, M, AND MENDES, E. Workshop Proceedings, 7<sup>th</sup> International Conference on Web Engineering, 392 pgs.

2005 MENDES, E., AND MOSLEY, N. Web Engineering, Springer-Verlag, Mendes, E. and Mosley, N. (Eds.)

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<sup>4</sup> Software Engineering Education Knowledge, aimed to determine the knowledge to be included in any UG SW. Engineering program.

## BOOK CHAPTERS

- 2008 MENDES, E. Using Bayesian Networks for Web Effort Estimation, Artificial Intelligence Applications for Improved Software Engineering Development: New Prospects, Meziane, F., and Vadera, S. (Eds), IGI Global (accepted for publication)
- 2008 MENDES, E. Web Cost Estimation and Productivity Benchmarking, LNCS Tutorial Series, Ferrucci, F., and De Lucia, A. (Eds) (accepted for publication)
- 2008 MENDES, E. Sizing Web Applications for Web Effort Estimation, Handbook on Research on Web Information Systems Quality, Idea Group Inc. Calero, C., Moraga, M.A., and Piattini, M. (Eds.), IGI Global Publishers, pp. 1-25.
- 2008 MENDES, E., AND ABRAHAO, S. Web Development Effort Estimation Approaches: An Empirical Analysis, Handbook on Research on Web Information Systems Quality, Idea Group Inc. Calero, C., Moraga, M.A., and Piattini, M. (Eds.) IGI Global Publishers, pp. 26-56.
- 2008 MENDES, E. Empirical Studies in Web Engineering, Rossi, G.; Pastor, O.; Schwabe, D.; Olsina, L. (Eds.) Web Engineering: Modelling and Implementing Web Applications, Springer, 464 pages, 2008, ISBN: 978-1-84628-922-4
- 2005 MENDES, E., MOSLEY, N., and COUNSELL, S. The Need for Web Engineering: an Introduction, Web Engineering, Springer-Verlag, Mendes, E. and Mosley, N. (Eds.), pp. 1-26.
- 2005 MENDES, E., MOSLEY, N., AND COUNSELL, S. Web Effort Estimation, Web Engineering, Springer-Verlag, Mendes, E. and Mosley, N. (Eds.), pp. 29-73.
- 2005 MENDES, E., KITCHENHAM, B. Web Productivity Measurement and Benchmarking, Web Engineering, Springer-Verlag, Mendes, E. and Mosley, N. (Eds.), pp. 75-105.
- 2005 MENDES, E., AND MOSLEY, N. Web Cost Estimation: principles and applications. Web Engineering – Principles and Techniques, Idea Group, Inc., Mehdi Khosrow-Pour and Jan Travers (Eds.), pp. 182-202
- 2001 MENDES, E., COUNSELL, S., AND MOSLEY, N. Measurement and Effort Prediction for Web Applications. Web Engineering - Managing Diversity and Complexity of Web Application Development, Lecture Notes in Computer Science, Springer Verlag, San Murugesan and Yogesh Deshpande (Eds.), pp. 295-310.

## PEER REVIEWED JOURNAL PAPERS:

- 2008 MENDES, E., AND MOSLEY, N., Bayesian Network Models for Web Effort Prediction: a Comparative Study, Transactions on Software Engineering, (Accepted for publication)
- 2008 CONTE, T., MASSOLAR, J., MENDES, E., and TRAVASSOS, G.H. Web Usability Inspection Technique Based on Design Perspectives, IET Software Journal, (accepted for publication)
- 2008 ABRAHAO, S., GOMEZ, J., INSFRAN, E., Mendes E. Object-Oriented Hypermedia Function Points: A Model-based Size Measure for Web Applications, Journal on Software & System Modeling (SoSyM), Special Issue with the best papers for MODELS 2007. ISSN: 1619-1366 (paper) 1619-1374 (online). Springer (to appear).
- 2008 MENDES, E., AND LOKAN, C., Replicating Studies on Cross- vs. Single-company Effort Models using the ISBSG Database, Empirical Software Engineering Journal, Vol. 13, Num. 1, February 2008, pages 3-37.
- 2008 MENDES, E., DI MARTINO, S., FERRUCCI, F., AND GRAVINO, C., Cross-company vs. Single-company Web effort models using the Tukutuku Database: an Extended Study, Journal of Systems and Software, 81(5), May, pp. 673-690, 2008.
- 2007 MENDES, E. Empirical Web Engineering, International Journal of Web Engineering and Technology, volume 3, issue 3, pp. 217-226.
- 2007 KITCHENHAM, B., MENDES, E., TRAVASSOS, G. Cross- vs. Within-Company Cost Estimation Studies: A Systematic Review, IEEE Transactions on Software Engineering, Vol. 33, Issue: 5, May, 2007, pp. 316-329.
- 2005 MENDES, E., MOSLEY, N. Investigating the Use of Case-based Reasoning Adaptation Rules for Web Project Cost Estimation, International Journal Web Engineering Technology, Vol. 2, No. 1, 2005, pp. 117-143.
- 2005 MENDES, E., AND MOSLEY, N. Does the Linear Size Adjustment to Estimated Effort Improve Web Applications Effort Estimation Accuracy?, Special Issue of the Journal of Computational Methods in Science and Engineering, 5(1), pp. 171-184.
- 2005 MENDES, E., MOSLEY, N., AND COUNSELL, S. Investigating Web Size Metrics for Early Web Cost Estimation, Journal of Systems and Software, Vol. 77, No. 2, August 2005, pp. 157-172.
- 2004 COUNSELL, S., NEWSON, P., AND MENDES, E., Design Level Hypothesis Testing through Reverse Engineering of Object-Oriented Software, Software Engineering and Knowledge Engineering Journal, Vol. 14, No. 2, pp. 207-220.

- 2004 KITCHENHAM, B.A., AND MENDES, E., Software Productivity Measurement Using Multiple Size Measures, IEEE Transactions on Software Engineering, Vol. 30, No. 12, Dec. 2004, pp. 1023-1035.
- 2003 MENDES, E., WATSON, I., TRIGGS, C., MOSLEY, N, AND COUNSELL, S. A Comparative Study of Cost Estimation Models for Web Hypermedia Applications, Empirical Software Engineering, Vol. 8. No. 2, 2003, pp. 163-196.
- 2002 MENDES, E., COUNSELL, S., AND MOSLEY, N. Web Hypermedia Cost Estimation: further assessment and comparison of cost estimation modelling techniques, The New Review of Hypermedia and Multimedia, 8, 2002, pp. 199-229.
- 2002 MENDES, E., MOSLEY, N., AND COUNSELL, S. Comparison of Web Size Measures for Predicting Web Design and Authoring effort, IEE Proc. Software, Vol. 149, No. 3 June 2002, pp. 86-92.
- 2001 MENDES, E., MOSLEY, N., AND COUNSELL, S. Web metrics - Metrics for estimating effort to design and author Web applications. IEEE MultiMedia, special issue on Web Engineering, January-March 2001, pp. 50-57.
- 1999 MENDES, E., AND HALL, W. Hyper-Authoring for Education: an Empirical Study. in: Computers & Education, 2, pp: 51-64. Elsevier Science Publishers
- 1999 MENDES, E., HALL, W., AND HARRISON, R. Applying measurement principles to improve hypermedia authoring, New Review of Hypermedia and Multimedia, Vol.5, pp 105-12, Taylor Graham Publishers.
- 1998 MENDES, E., HARRISON, R., AND HALL, W. Applying Metrics to the Evaluation of Educational Hypermedia Applications. JUCS – Journal of Universal Computer Science, April issue, [http://www.iicm.edu/jucs\\_4\\_4](http://www.iicm.edu/jucs_4_4).
- 1998 MENDES, E., HARRISON, R., AND HALL, W. Reusability and Maintainability in Hypermedia Applications for Education, in: Information and Software Technology, 4(14). Elsevier Science Publishers

#### **PEER REVIEWED CONFERENCE PAPERS:**

- 2008 LOKAN, C., MENDES, E. Investigating the Use of Chronological Splitting to Compare Software Cross-company and Single-company Effort Predictions, Proceedings of the EASE conference, pp. 151-160.
- 2008 MENDES, E. The Use of Bayesian Networks for Web Effort Estimation: Further Investigation, Proceedings of ICWE'08, pp. 2-3-216.
- 2007 BIBI, M., MITTAS, N., ANGELIS, L., STAMELOS, I., MENDES, E. Comparing Cross- vs. Within-Company Effort Estimation Models Using Interval Estimates, Proceedings of International Conference on Software Process and Product Measurement, pp. 77-86.
- 2007 CARO, A., CALERO, C., MENDES, E., and PIATTINI, M., A Probabilistic Approach to Web Portal's Data Quality Evaluation, Proceedings of the IEEE 6th International Conference on the Quality of Information and Communications Technology, pp. 143-153.
- 2007 MENDES, E., Di MARTINO, S., FERRUCCI, F., GRAVINO, C., AND COUNSELL, S. Comparing Machine-learning Techniques for Web Cost Estimation, Proceedings of International Conference on Software Process and Product Measurement, pp. 57-66.
- 2007 MENDES, E., Di Martino, S., FERRUCCI, F., GRAVINO, C. A Replicated Study Comparing Web Effort Estimation Techniques, Proceedings of the 8th International Conference on Web Information Systems Engineering, pp. 423-435.
- 2007 ABRAHAO, S., MENDES, E., GOMEZ, J., AND INSFRAN, E. A Model-driven Measurement Procedure for Sizing Web Applications: Design, Automation and Validation, Proceedings of ACM/IEEE 10th International Conference on Model Driven Engineering Languages and Systems, pp. 467-481
- 2007 IDRI, A., AND MENDES, E. Web Cost Estimation Models using Radial Basis Function Neural Networks, Proceedings of International Conference on Software Process and Product Measurement, pp. 47-56.
- 2007 CONTE, T., MASSOLAR, J., MENDES, E., AND TRAVASSOS, G., Web Usability Inspection Technique Based on Design Perspectives, Proceedings of the Brazilian Symposium on Software Engineering, pp. 394-410
- 2007 MENDES, E., Di MARTINO, S., FERRUCCI, F., and GRAVINO, C. Effort Estimation: How Valuable is it for a Web company to Use a Cross-company Data Set, Compared to Using Its Own Single-company Data Set?, Proceedings of the World-Wide Web Conference, pp: 963-972, <http://www2007.org/papers/paper326.pdf>
- 2007 MENDES, E. A Comparison of Techniques for Web Effort Estimation, Proceedings of the ACM/IEEE International Symposium on Empirical Software Engineering, pp. 334 - 343
- 2007 CONTE, T., MASSOLAR, J., MENDES, E., TRAVASSOS, G., Usability Evaluation Based on Web Design Perspectives, Proceedings of the ACM/IEEE International Symposium on Empirical Software Engineering, pp. 146 - 155.

- 2007 Di MARTINO, S., FERRUCCI, F., and GRAVINO, C., MENDES, E. Comparing Size Measures for Predicting Web Application Development Effort: A Case Study, *Proceedings of the ACM/IEEE International Symposium on Empirical Software Engineering*, pp. 324-333 (alphabetical order)
- 2007 MENDES, E. The Use of a Bayesian Network for Web Effort Estimation, *Proceedings of International Conference on Web Engineering*, pp. 90-104, LNCS 4607.
- 2007 MENDES, E. Predicting Web Development Effort Using a Bayesian Network, *Proceedings of Evaluation and Assessment in Software Engineering 2007*, pp. 83-93.
- 2006 MENDES, E. Investigating the Use of a Cross-company Effort Model for Web Cost Estimation, *Proceedings of ICWA'06*, pp. 1-10.
- 2006 HAO, J., AND MENDES, E. Usage-Based Statistical Testing of web Applications, 2006, *Proceedings of ICWE*, pp. 17-24.
- 2006 LOKAN, C., AND MENDES, E. Cross-company and Single-company Effort Models using the ISBSG Database: a Further Replicated Study, 2006, *Proceedings of ACM/IEEE ISESE*, pp. 75-84. (best paper award)
- 2006 KITCHENHAM, B., MENDES, E., TRAVASSOS, G. A Systematic Review of Cross- and Within-company Cost Estimation Studies, 2006, *Empirical Assessment in Software Engineering*, pp. 89-98.
- 2006 COUNSELL, S., PHALP, K., MENDES, E. The concerns of prototypers and their mitigating practices: an industrial case-study, *Proceedings of the 7<sup>th</sup> International Conference on Product-focused Software Process Improvement*, 2006, pp. 166-176.
- 2006 MENDES, E., AL-FAKHRI, L., AND LUXTON-REILLY, A., A Replicated Experiment of Pair-Programming in a 2<sup>nd</sup>-year Software Development and Design Computer Science Course, 2006, *Proceedings of the ACM ITICSE*, pp. 108-112.
- 2005 CONTE, T., MENDES, E., TRAVASSOS, G. Web Applications Development Processes: a Systematic Review, 11th Brazilian Symposium on Web and Multimedia Systems, 2005.
- 2005 MENDES, E., AL-FAKHRI, L., AND LUXTON-REILLY, A., Investigating Pair-Programming in a 2<sup>nd</sup>-year Software Development and Design Computer Science Course, *Proceedings of ACM ITICSE*, 2005, pp. 296 – 300.
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