

CURRICULUM VITAE

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PART I: General Information

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Email: Alberto.Riva@childrens.harvard.edu

Place of Birth: Milano, Italy

Education:

1992 Laurea (Electrical Engineering), Cum laude, University of Pavia
1995 PH.D. (Bioengineering), University of Pavia

Postdoctoral Training:

1995-1998 Postdoctoral researcher, Medical Informatics, University of Pavia

Academic Appointments:

2000- Instructor in Pediatrics, Harvard Medical School, Boston, MA
2005- Member of the Affiliated Faculty of the Harvard-MIT Division of Health Sciences and Technology, Massachusetts Institute of Technology, Cambridge, MA

Hospital or Affiliated Institution Appointments:

1999-2000 Research Fellow in Pediatrics, Children's Hospital, Boston, MA
2000- Research Associate, Informatics Program, Children's Hospital, Boston, MA

Other Professional Positions and Major Visiting Appointments:

1999-2000 Research Fellow, Boston University Medical Center, Boston, MA
2002 Visiting Researcher, DIBIT, San Raffaele Hospital, Milan, Italy

Professional Societies:

2002- Association of Lisp Users, Member

Editorial Boards:

2001- Ad-Hoc Reviewer, Artificial Intelligence in Medicine Journal
2001- Ad-Hoc Reviewer, Journal of Biomedical Informatics
2002- Ad-Hoc Reviewer, Bioinformatics
2003- Ad-Hoc Reviewer, Nucleic Acids Research
2003- Ad-Hoc Reviewer, IEEE Transactions on Information Technology in Biomedicine

Awards and Honors:

1992 Laude, University of Pavia, Italy

Part II: Research, Teaching, and Clinical Contributions

C. Report of Other (Non-Funded) Activities

Investigator Bioinformatics tools for SNP analysis
Investigator Microarray data management
Investigator Computational analysis of genomic regulatory elements

D. Report of Teaching

1. Local contributions

a. Medical School Courses

2003-2004	<u>HST 586</u>			<i>contact time</i>	<i>prep time</i>
	Guest lecturer	15 Medical Students		2 hours/year for 1 year(s)	none reported
2004	<u>HST 950</u>			<i>contact time</i>	<i>prep time</i>
		15 Graduate Students 15 Other Students		2 hours/year for 1 year(s)	none reported

d. Continuing Medical Education Courses

2002 The Genetics and Genomics of Innate Immunity in Lung Disease
Lecturer: 50 participants, 2 hours contact time per year, no prep time reported

2. Regional, national, or international contributions

a. Invited Presentations

Invited Lecture

International

1998 A Knowledge-Based Web Server as a Development Environment for Web-Based Knowledge Servers, IEE Colloquium on Web-Based Knowledge Servers, London, UK

2001 SNP Identification and Analysis using SNPper, 4th International Meeting on Single Nucleotide Polymorphism and Complex Genome Analysis, Stockholm

National

2002 Implementation and usage of the CL-DNA library, International Lisp Conference 2002, San Francisco, CA

b. Professional Leadership Roles related to Teaching

2001 International Bayesian Models in Medicine Workshop, AIME '01
Program Committee

2003 National 2003 International Lisp Conference
Program Committee

2004 International Institute for Advanced Studies at University of Pavia
8-hour course on Bioinformatics and Computational Biology, part of an
International M.Sc. degree in "Complexity and its Interdisciplinary Applications"

Part III: Bibliography

Original Articles

1. Ramoni M, Riva A, Stefanelli M, Patel V. An ignorant belief network to forecast glucose concentration from clinical databases. *Artif Intell Med.* 1995;7(6):541-59.
2. Riva A, Ramoni M. LispWeb: a specialized HTTP server for distributed AI applications. *Computer Networks and ISDN Systems.* 1996;28(711):953-961.
3. Riva A, Bellazzi R. Learning temporal probabilistic causal models from longitudinal data. *Artif Intell Med.* 1996;8(3):217-34.
4. Ramoni M, Riva A. Basic Science in Medical Reasoning: An Artificial Intelligence Approach. *Adv Health Sci Educ Theory Pract.* 1997;2(2):131-140.
5. Riva A, Bellazzi R, Stefanelli M. A Web-based system for the intelligent management of diabetic patients. *MD Comput.* 1997;14(5):360-4.
6. Bellazzi R, Riva A. Learning Bayesian Networks Conditional Probabilities from Longitudinal Data. *IEEE Transactions on Systems, Man and Cybernetics.* 1998;(28):629-636.
7. Bellazzi R, Riva A, Larizza C, Fiocchi S, Stefanelli M. A distributed system for diabetic patient management. *Comput Methods Programs Biomed.* 1998;56(2):93-107.
8. Riva A, Bellazzi R, Lanzola G, Stefanelli M. A development environment for knowledge-based medical applications on the World-Wide Web. *Artif Intell Med.* 1998;14(3):279-93.
9. Bellazzi R, Riva A, Montani S, Larizza C, Bestazza M, Fiocchi S, d'Annunzio G, Lorini R, Stefanelli M. Application report: preliminary evaluation of the T-IDDM project in Pavia. *Stud Health Technol Inform.* 1999;68:99-101.
10. Montani S, Bellazzi R, Larizza C, Riva A, d'Annunzio G, Fiocchi S, Lorini R, Stefanelli M. Protocol-based reasoning in diabetic patient management. *Int J Med Inf.* 1999;53(1):61-77.
11. Bellazzi R, Montani S, Riva A, Stefanelli M. Web based telemedicine systems for home-care: technical issues and experiences. *Comput Methods Programs Biomed.* 2001;64(3):175-87.
12. Riva A, Mandl KD, Oh DH, Nigrin DJ, Butte A, Szolovits P, Kohane IS. The personal internet networked notary and guardian. *Int J Med Inf.* 2001;62(1):27-40.
13. Bellazzi R, Larizza C, Montani S, Riva A, Stefanelli M, d'Annunzio G, Lorini R, Gomez EJ, Hernando E, Bruges E, Cermeno J, Corcoy R, de Leiva A, Cobelli C, Nucci G, Del Prato S, Maran A, Kilkki E, Tuominen J. A telemedicine support for diabetes management: the T-IDDM project. *Comput Methods Programs Biomed.* 2002;69(2):147-61.
14. Lazarus R, Vercelli D, Palmer LJ, Klimecki WJ, Silverman EK, Richter B, Riva A, Ramoni M, Martinez FD, Weiss ST, Kwiatkowski DJ. Single nucleotide polymorphisms in innate immunity genes: abundant variation and potential role in complex human disease. *Immunol Rev.* 2002;190:9-25.
15. Riva A, Kohane IS. SNPper: retrieval and analysis of human SNPs. *Bioinformatics.* 2002;18(12):1681-5.
16. Riva A, Kohane IS. A SNP-Centric Database for the Investigation of the Human Genome. *BMC Bioinformatics.* 2004;5(33).
17. Zhaohui Cai, Eric F. Tsung, Voichita D. Marinescu, Marco F. Ramoni, Alberto Riva, Isaac S. Kohane. Bayesian approach to discovering pathogenic SNPs in conserved protein domains. *Human Mutation.* 2004;24(2):178-184.
18. Santagata S, Demichelis F, Riva A, Varambally S, Hofer MD, Kutok JL, Kim R, Tang J, Montie JE, Chinnaiyan AM, Rubin MA, Aster JC. JAGGED1 expression is associated with prostate cancer metastasis and recurrence. *Cancer Research.* 2004;64(19):6854-7.
19. Marinescu VD, Kohane IS, Riva A. The MAPPER database: a multi-genome catalog of putative transcription factor binding sites. *Nucleic Acids Res.* 2005;33(Database issue):D91-7.

20. Marinescu VD, Kohane IS, Riva A. MAPPER: a search engine for the computational identification of putative transcription factor binding sites in multiple genomes. *BMC Bioinformatics*. 2005;6(79).
21. Agresti A, Scaffidi P, Riva A, Caiolfa VR, Bianchi ME. GR and HMGB1 interact only within chromatin and influence each other's residence time on functioning promoters. *Molecular Cell*. 2005;18:109-121.

Proceedings of Meetings

1. Ramoni M, Riva A. Belief Maintenance with Probabilistic Logic. In: *Proceedings of the AAAI Fall Symposium on Automated Deduction in Non Standard Logics*; ;1993. p. 142-148.
2. Ramoni M, Riva A, Patel VL. Probabilistic Reasoning Under Ignorance. In: *Proceedings of the Sixteenth Annual Conference of the Cognitive Science Society*; . ;1994. p. 733-738.
3. Ramoni M, Riva A. Belief Maintenance in Bayesian Networks. In: *Proceedings of the Tenth Conference on Uncertainty in Artificial Intelligence*; Seattle, WA. ;1994. p. 498-505.
4. Ramoni M, Riva A. Integrating causal and clinical knowledge in medical reasoning. In: *Selecta Gaussiana: Proceedings of the Gauss Symposia*; 1994; . Institutum Gaussianum;1994. p. .
5. Ramoni M, Riva A, Stefanelli M, Patel VL. Forecasting Glucose Concentration in Diabetic Patients using Ignorant Belief Networks. In: *Proceedings of the AAAI Spring Symposium on Artificial Intelligence in Medicine*; 1994; Stanford, CA. ;1994. p. .
6. Ramoni M, Riva A, Stefanelli M, Patel VL. Medical Decision Making using Ignorant Influence Diagrams. In: P. Barahona, M. Stefanelli, J. Wyatt. *Proceedings of the Fifth Conference on Artificial Intelligence in Medicine Europe*; 1994; Pavia, Italy. Springer;1995. p. .
7. Riva A, Bellazzi R. Intelligent analysis techniques for diabetes data time series. In: G. Lasker, X. Liu. *Advances in Intelligent Data Analysis*; 1995; . IIAS Press;1995. p. 144-148.
8. Riva A, Bellazzi R. High level control strategies for diabetes therapy. In: P. Barahona, M. Stefanelli, J. Wyatt. *Proceedings of the Fifth Conference on Artificial Intelligence in Medicine Europe (Lecture Notes in Computer Science)*; 1995; Pavia, Italy. Springer;1995. p. 185-196.
9. Bellazzi R, Riva A. Learning Conditional Probabilities with Longitudinal Data. In: *Workshop on "Building Probabilistic Networks", IJCAI-95*; 1995; Montreal, Quebec, Canada. ;1995. p. 7-15.
10. Riva A, Bellazzi R. Distributed AI technologies for patient management. In: *Proceedings of the AAAI Spring Symposium on Artificial Intelligence in Medicine*; 1995; Stanford, CA. AAAI;1996. p. 144-148.
11. Bellazzi R, Larizza C, Riva A. Cooperative intelligent data analysis: an application to diabetic patients management. In: *Proceedings of the IDAMAP '96 workshop (ECAI '96)*; 1995; Budapes, Hungary. ;1996. p. 1-6.
12. Bellazzi R, Riva A, Stefanelli M, Fiocchi S. Long term management of chronic patients: a distributed architecture. In: Brender J, Christensen JP, Scherrer JR, McNair P. *Proceedings of MIE '96*; 1995; Copenhagen, Denmark. IOS Press;1996. p. 88-92.
13. Larizza C, Bellazzi R, Riva A. Temporal abstractions for diabetic patients management. In: Keravnou E, Garbay C, Baud R, Wyatt J. *Proceedings of AIME 1997 (Lecture Notes in Artificial Intelligence)*; 1995; Grenoble, France. Springer;1996. p. 319-330.
14. Bellazzi R, Larizza C, Riva A, Mira A, Fiocchi S, Stefanelli M. Distributed intelligent data analysis in diabetic patient management. In: *Proc AMIA Annu Fall Symp*; 1995; Washington, DC. ;1996. p. 194-198.
15. Riva A. A Web-based architecture for the intelligent management of chronic patients. In: *Proc AMIA Annu Fall Symp*; 1995; Washington, DC. ;1996. p. 179-183.
16. Bellazzi R, Magni P, Larizza C, De Nicolao G, Riva A, Stefanelli M. Mining biomedical time series by combining structural analysis and temporal abstractions. In: *Proc AMIA Symp*; 1995;

Orlando, FL. ;1998. p. 160-164.

17. Montani S, Bellazzi R, Riva A, Larizza C, Portinale L, Stefanelli M. Integrating different decision support tools in a distributed environment for diabetes management. In: "Hospital without Walls"; 1995; London, UK. ;1999. p. 89-90.
18. Montani S, Bellazzi R, Portinale L, Riva A, Stefanelli M. Multi-modal reasoning in diabetic patients management. In: Horn W, Shahar Y, Lindberg G, Adreassen S, Wyatt J. Proceedings of AIMDM '99 (Lecture Notes in Artificial Intelligence); 1995; Aalborg, Denmark. ;1999. p. 113-123.
19. Bellazzi R, Riva A, Montani S, Larizza C, Bestazza M, Gocchi S, D'Annunzio G, Lorini R, Stefanelli M. Application report: preliminary evaluation of the T-IDDM project in Pavia. In: P. Kokol, B. Zupan, J. Stare, M. Premik and R. Engelbrecht. Proceedings of MIE '99; 1995; Ljubljana, Slovenia. ;1999. p. .
20. Bellazzi R, Montani S, Portinale L, Riva A. Integrating rule-based and case-based decision making in diabetic patient management. In: Proceedings of ICCBR '99; 1995; Munich, Germany. ;1999. p. .
21. Mandl KD, Riva A, Kohane IS. A distributed, secure file system for personal medical records. In: Proc AMIA Symp; 1995; Los Angeles, CA. ;2000. p. 1075.
22. Oh DH, Riva A, Mandl KD, Kohane IS. Collating of a distributed XML-based medical record into a relational database. In: Proc AMIA Symp; 1995; Los Angeles, CA. ;2000. p. 1104.
23. Riva A, Smigelski C, Friedman R. WebDietAID: an interactive Web-based nutritional counselor. In: Proc AMIA Symp; 1995; Los Angeles, CA. ;2000. p. 709-713.
24. Riva A, Kohane IS. A web-based tool to retrieve human genome polymorphisms from public databases. In: Proc AMIA Symp; 1995; Washington, DC. ;2001. p. 558-562.
25. Riva A, Kohane IS. Accessing genomic data through XML-based remote procedure calls. In: Proc AMIA Symp; 1995; San Antonio, TX. ;2002. p. 662-666.
26. Riva A, Marinescu VD. Large-scale Detection and Analysis of Regulatory Modules in the Human Genome . In: Proceedings of the International Lisp Conference; 1995; New York, NY. ;2003. p. .

Reviews/Chapters/Editorials

1. Alberto Riva and Marco Ramoni. Accessing Artificial Intelligence Applications over the World-Wide Web. In: The Knowledge Web Marc Eisenstadt & Tom Vincent, eds. London, UK: Kogan Page;1998. p. 201-210.

Thesis

1. Riva A. A Distributed System for the Management of Chronic Patients (in Italian). Pavia, Italy: University of Pavia;1995.

NonPrint Materials

1. Riva A. SNPper, a widely used public tool for the analysis of Single Nucleotide Polymorphisms in the human genome. ;2001.<http://snpper.chip.org/> .

Abstracts

1. Bellazzi R, D'Annunzio G, De Nicolao G, Lorini R, Ramoni M, Riva A, Siviero C, Stefanelli M. The project of an adaptive intelligent control system for diabetic out-patients. Proceedings of the

- Symposium on Diabetes Care, Heinrich Heine University, Dusseldorf. 1994.
2. Riva A, Kohane IS. High throughput SNP analysis using SNPper. From Genome to Disease: A Symposium of High Throughput Biology. 2003.
 3. Marinescu VD, Riva A. Large-scale computational identification of SNPs affecting transcription factor binding sites. 6th International Meeting on Single Nucleotide Polymorphisms and Complex Genome Analysis. 2003.
 4. Marinescu VD, Kohane IS, Riva A. Large-scale computational identification of transcription factor binding sites in multiple genomes. "Systems Biology: Genomic Approaches to Transcriptional Regulation" meeting, Cold Spring Harbor Laboratory. 2004.
 5. Marinescu VD, Kohane IS, Riva A. The MAPPER platform for the computational identification of transcription factor binding sites. ISMB 2005. 2005.