



C U R R I C U L U M V I T A E
D R . L E A N D R O P E C C H I A

1 Personal Details

Title	Dr.
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2 Education and Training

2.1 PH.D.

Qualification:	Ph.D.
Institution:	University Federico II of Naples
Start Date:	1.11.2005
End Date:	21.01.2009
Country:	Italy
Subject:	Economy and Management of Healthcare Services and Organizations.
Grade:	-
Description:	<p>The focus of the Ph.D. was on Healthcare Economy and Management. The main research activities focused on:</p> <ol style="list-style-type: none"> 1) Datamining; 2) Health Technologies Assessment of new healthcare services; 3) Economical Evaluations of health care services and technologies; 4) Mathematical models and scientific methods for HTA, Healthcare management and Economical Evaluations. <p>Particularly, my Ph.D. thesis focused on HTA of advanced services of Home Monitoring for the Continuity of Care. Please, see section on my publications for further details.</p> <p>During the three years of Ph.D. I supervised 41 works of thesis for B.Sc. and M.Sc. in several field of Biomedical Engineering, Signal Processing, data-mining, Health Technology Assessment and Telemedicine.</p>

2.2 Laurea Degree

Qualification:	Engineer
Institution:	University Federico II of Naples, Faculty of Engineering.
Start Date:	01.03.1998
End Date:	24.05.2005
Country:	Italy
Subject:	Laurea degree (5years-degree) in Electronic Engineering, specialization in Biomedical Engendering
Grade:	108/110.
Description:	<p>Laurea Degree was, in the old Italian (south European) Academic system, the equivalent of a BSc and an MSc.</p> <p>The first three years covered mathematics, physics, and basic topics characterizing Information Engineering, which include electronic, telecommunication and computer engineering. The forth year focused mainly on specific topics of electronic engineering. The last year focused on biomedical engineering topics.</p> <p>The thesis work focused on biomedical signal processing applied to Telemedicine application for the pervasive monitoring of chronic patients via <i>web services</i>. Particularly, I designed and developed a prototypic telemedicine platform, which support services for the management of patients suffering from chronic cardiovascular disease. The platform integrated web services designed ad hoc for the acquisition of ECG and extraction and processing of HRV, implementing algorithms for clinical risk assessment. The developed system was web based, offering a user-friendly interface to patients and supporting advanced remote parallel processing server-side.</p>

2.3 Professional Certifications and Qualifications

Qualification:	Risk Manager and Chief of Prevention and Protection Services. (RSPP, D.LG. 81/08)
Institution:	ISPESL Istituto Superiore Prevenzione e Sicurezza sul Lavoro (Italian Agency for Prevention and Safety at Work)
Start Date:	01.10.2006
End Date:	31.06.2007
Country:	Italy
Subject:	Risk and Safety Management
Grade:	-
Description:	The course aims to qualify the attendants as “Risk Manager” and “Chief of Prevention and Protection Services”, according to Italian low D.Lg. 81/08, which transpose European Directive on Risk and Safety in working environments.

3 Scientific Publications

Actually I am first author (main investigator) or last author (responsible of the research project) of 28 articles published to International Journal or Conferences with peer review. Moreover, I have been reviewer for many International Conferences (e.g.: ITAB, MEDICON, ISAFP) and for the following Journals: IEEE Transaction on Information Technology in Medicine, Neural Computing & Applications, International Journal of Analytic Hierarchy Process.

3.1 Internationals journals with peer reviewing

- [1] L. **Pecchia**, P. Melillo, M. Bracale “Remote Health Monitoring of heart failure with data mining via CART method on HRV features” IEEE Transaction on Biomedical Engineering, 2011, Vol. 58, Issue 3, pp: 800-804
- [2] P. Melillo, R. Fusco, M. Sansone, M. Bracale, L. **Pecchia**. “Discrimination power of long-term heart rate variability measures for CHF assessment”, Medical & Biological Engineering & Computing, 2011, Vol. 49, Issue 1, pp: 67-74.
- [3] L. **Pecchia**, P. Melillo, M. Sansone, M. Bracale “Discrimination power of short-term heart rate variability measures for CHF assessment”, IEEE Transaction on Information Technology in Biomedicine, 2011, Vol. 15, Issue 1, pp: 40-46.
- [4] L. **Pecchia**, PA Bath, N. Pendleton, M. Bracale “Use of the analytic hierarchic process (AHP) for examining healthcare professionals’ assessments of the relative importance of risk factors for falls in community-dwelling older people.” Methods of Information in Medicine [accepted: 25.10.2010, status: preprint on line¹, DOI: 10.3414/ME10-01-0028].
- [5] U. Bracale, M. Rovani, M. Bracale, G. Pignata, F. Corcione, L. **Pecchia**, “Totally laparoscopic gastrectomy for gastric cancer: meta-analysis of short-term outcomes”, Minimally Invasive Therapy & Allied Technologies [Taylor & Francis (Oslo, Norway), submitted 09.12.2010, *Accepted with minor revisions 6th April 2011*].
- [6] L. **Pecchia**, P. A. Bath, N. Pendleton, M. Bracale. “Web-based system for assessing risk factors for falls in community-dwelling elderly people using the analytic hierarchy process”. International Journal of the Analytic Hierarchy Process, 2010, Volume 2, Issue 2.
- [7] L. **Pecchia**, F. Schiraldi, S. Verde, E. Mirante, P.A. Bath, M. Bracale. Evaluation of Short-term effectiveness of the disease management program “Di.Pro.Di.” in continuity of care of patients suffering from congestive heart failure, Journal of the American Geriatrics, 2010, Vol. 58, Issue 8, pp: 1603-1604.
- [8] Stavroula G Mouggiakakou, Efthymoulos Kyriacou, Kostas Perakis, Homer Papadopoulos, Aggelos Androulidakis, Georgios Konnis, Riccardo Tranfaglia, L. **Pecchia**, Umberto Bracale, Constantinos Pattichis and Dimitrios Koutsouris, “A Feasibility Study for the Provision of Electronic Healthcare Tools and Services in Areas of Greece, Cyprus and Italy”, *BioMedical Engineering OnLine* [BioMedical Engineering OnLine (London, England), Accepted 23th of May 2011];

3.2 International congress with peer reviewing

- [9] L. **Pecchia**, C. Brancaleone; A. Pepino, A Mobile PC Workstation for Bedside Nursing Activities, International Conference on Internet Technology and Applications, 2010, Wuhan (China), 20-22 Aug. 2010. IEEE Electronic Proceedings: 1-4.
- [10] L. **Pecchia**, L. Mirarchi, P. A. Bath, R. Doniacovo, M. Bracale, Health Technology Assessment via Analytic Hierarchy Process. A case study: choosing the maintenance contract for a CT. Mediterranean Conference on Medical and Biological Engineering (MEDICON) 2010, Chalkidiki (Greece), 27-30 May 2010. IFMBE Proceedings: 1-4.
- [11] L. **Pecchia**, P. Melillo, M. Sansone, M. Bracale. Heart Rate Variability in healthy people compared with patients with Congestive Heart Failure. International Conference on Information Technology in Biomedicine (ITAB 2009), November 5-7, 2009, Larnaca, Cyprus. Electronic proceedings: 1-4.
- [12] L. **Pecchia**, G. Carpino, L. Mirarchi, M. Bracale, The preservation of the CE mark for a medical device further to a maintenance process. International Conference on Information Technology in Biomedicine (ITAB 2009), November 5-7, 2009, Larnaca, Cyprus. IEEE Electronic proceedings: 1-4.
- [13] L. **Pecchia**, U. Bracale, M. Bracale. Health Technology Assessment of Home Monitoring for the Continuity of Care of patient suffering from congestive heart failure. Medical Physics and Biomedical Engineering World Congress 2009 (WC2009), September 7-12, Munch: 1-4.
- [14] L. **Pecchia**, L. Mirarchi, R. Doniacovo, M. Bracale. Health Technology Assessment for a Service Contract: a

¹ <http://www.schattauer.de/de/magazine/uebersicht/zeitschriften-a-z/methods/contents/preprint-online/issue/special/manuscript/15343/show.html>

- new method for decisional tools. Medical Physics and Biomedical Engineering World Congress 2009 (WC2009), September 7-12, Munich: 1-4.
- [15] P. Melillo, **L. Pecchia**, M. Bracale. Interactive Voice Response System for home telemonitoring of heart failure patients. Medical Physics and Biomedical Engineering World Congress 2009 (WC2009), September 7-12, Munich: 1-4.
- [16] **L. Pecchia**, P. A. Bath, N. Pendleton, M. Bracale. AHP and risk management: a case study for assessing risk factors for falls in community-dwelling older patients. ISAHP 2009 Symposium, July 29–August 1, 2009, Pittsburgh, Pennsylvania, USA. Proceeding: 1-15.
- [17] **L. Pecchia**, U. Bracale, P. Melillo, M. Sansone, M. Bracale. AHP for Health Technology Assessment. A case study: prioritizing care approaches for patients suffering from chronic heart failure. 2009 Symposium, July 29–August 1, 2009, Pittsburgh, Pennsylvania, USA. Proceeding:1-8.
- [18] **L. Pecchia**, L. Bisaccia, M. Sansone, L. Argenziano, M. Bracale, Technology assessment for ex-ante evaluation of integration of ambulatory follow-up and home monitoring a case study on CHF, 6th ESBME, Chania, Crete, Ellas June 2008. Proceeding: 1-4.
- [19] **L. Pecchia**, F. Acampora, M. Bracale. “A Multi Scale Analytic Hierarchy Methodology for Technology Assessment. A case study on Spine Surgery”. 6th ESBME, Chania, Crete, Greece June 2008.
- [20] **L. Pecchia**, L. Mirarchi, R. Doniacovo, N. Paolino, M. Bracale. Dynamic preventive maintenance triggered by utilization data: a case study for MRI equipment, 6th ESBME, Chania, Crete, Greece June 2008.
- [21] **L. Pecchia**, L. Mirarchi, S. Torino, M. Bracale, Assessment of quality control in US: a web service for preventive maintenance, International Journal of CARS (2008) 3 (Suppl. 1): S9-S10.
- [22] **L. Pecchia**, F. Acampora and S. Acampora, M. Bracale, "A Multi Scale Methodology For Technology Assessment", Mediterranean Conference on Medical and Biological Engineering (MEDICON) 2007, Ljubljana (Slovenia), 26-30 June 2007. IFMBE Proceedings, 16(20), 762-765.
- [23] **L. Pecchia**, L. Bisaccia, P. Melillo, L. Argenziano, M. Bracale, "Technology Assessment For Evaluating Integration of Ambulatory Follow-Up And Home Monitoring". Mediterranean Conference on Medical and Biological Engineering (MEDICON) 2007, Ljubljana (Slovenia), 26-30 June 2007. IFMBE Proceedings, 16(20), 758-761.
- [24] R. Tranfaglia, M. Bracale, A. Pone, L. Argenziano, **L. Pecchia**. “A preliminary setup model and protocol for checking electromagnetic interference between pacemakers and RFID (Radio Frequency IDentification)”, Mediterranean Conference on Medical and Biological Engineering (MEDICON) 2007, Ljubljana (Slovenia), 26-30 June 2007. IFMBE Proceeding, 16(20), 1066-1069.
- [25] **L. Pecchia**, L. Argenziano, M. Bracale, "The need of the follow-up in patients: a useful approach using web services". International Conference on Information Technology in Biomedicine (ITAB 2006), 26th -28th October 2006, Ioannina (Gr). Electronic proceedings: 1-4.
- [26] **L. Pecchia**, M. Bracale, "A services via web for the use of HRV in the follow up of cardiopath patients". 5th European Symposium on Biomedical Engineering, 7th-9th July 2006, Patraso (Gr), Electronic proceedings: 1-4.

3.3 Submitted to international journal with peer reviewing

- [27] **L. Pecchia**, P. Melillo, U. Bracale, M. Bracale, “Stress detection during university examination via short-term heart rate variability measures”, Physiological Measurement [submitted 06.04.2011].
- [28] P. Melillo, M. Bracale, **L. Pecchia** “Discrimination power of HRV long-term features to assess CHF severity according to NYHA classes” Computer in Biology and Medicine [submitted 18.12.2010].
- [29] **L. Pecchia**, L. Mirarchi, PA Bath, P. Melillo, M. Bracale “Analytic hierarchy process (AHP) for health technology assessment (HTA). A case study for the choosing of a maintenance service contract” IEEE Engineering in Medicine and Biology Magazine [submitted 30.06.2010].

3.4 Books' Chapters

- B1 Bracale M, Sansone M, **Pecchia L**, Tranfaglia R, "La Telemedicina come Strumento per la Continuità della Cura", In: Bonfiglio et al. "Sistemi Indossabili Intelligenti per la Salute e la Protezione dell'Uomo", Patron Editore, 2008, pp. 481-509

4 Research Experiences

4.1 Research Associate TEMPUS Project

Employer:	University Federico II of Naples, Department of Biomedical, Electronic and Telecommunication Engineering, Via Claudio, 21, 80125, Napoli, Italia.
Start Date:	01.04.2010
End Date:	31.04.2011
Country:	Italy
Job Title:	Curricula Reformation and Harmonization
Description:	<p>This position was founded by European Union with the research project TEMPUS Curricula Reformation and Harmonization in the field of Biomedical Engineering (CRH-BME). The main objective of this project was to update existing curricula in the field of Biomedical Engineering (BME) in order to meet recent and future developments in the area, address new emerging interdisciplinary domains that appear as a result of the R&D progress and respond to the BME job market demands.</p> <p>Key Responsibilities were:</p> <ul style="list-style-type: none"> • Contributing in designing a detailed map of BME courses in Italy. • Methods of assessment of existing BME courses. • Assessment of emerging fields of interest for BME courses. • Designing of new BME Curricula. • Designing of detailed syllabi of new Topics. • Financial management. <p>During this year of activity, I also started my researches in the field of quantitative evaluation of Stress work-related in Students undergoing University examinations. Moreover, I continued my activity of supervision of Ph.D. students, started in 2009.</p>

4.2 Research Associate RHM Project

Employer:	University Federico II of Naples, Department of Biomedical, Electronic and Telecommunication Engineering, Via Claudio, 21, 80125, Napoli, Italia.
Dates:	03.06.2008 – 3.02.2010 (Project Manager and Research Associate)
Country:	Italy
Job Title:	Remote control of patient suffering from chronic cardiovascular disease
Description:	<p>This contract was founded by the Regional Project titled “Remote Health Monitoring”. This program aims to develop an integrated telemedicine platform supporting telemedicine services for the management of patients suffering from chronic cardiovascular disease. My main Responsibilities were:</p> <ul style="list-style-type: none"> • Project management. • HTA of existing Telemedicine technologies/services. • Development of data-mining algorithms for the risk assessment of patients suffering from chronic disease. • Integration of developed algorithms into the platform to enhance Home Monitoring. <p>I participate, in November 2006, in developing the proposal of the project, which is strongly based on my degree work of thesis.</p> <p>After my Ph.D. I was asked to supervise three Ph.D. students, two at the last year of Ph.D. (Dr. Flavio Sensi, Dr. Claudia Brancalone), one just starting his Ph.D. the 1st</p>

| of November 2009 (Paolo Melillo).

4.3 Research Assistant INTERMED

Employer: University Federico II of Naples, Department of Biomedical, Electronic and Telecommunication Engineering, Via Claudio, 21, 80125, Napoli, Italia.
 Start Date: 01.12.2007
 End Date: 31.12.2008
 Country: Italy, with periodic meetings in Greece and Cyprus.
 Job Title: Research Assistant
 Description: This activity was financed from the project titled: “An INTEgrated broadband telecommunication pilot teleservices-platform for improving health care provision in the Region of MEDiterranean (INTERMED)”. INTERMED was a European project financed by the INTERREG IIIB ARCHIMED program.
 The aim of the project was design, development and management of a pilot trans-, East-Mediterranean broadband communication platform for the provision of medical services for both citizens and travellers in remote/isolated regions of Mediterranean Sea, and in board ships travelling across it. The project was carried in collaboration with three universities in Greece, one in Cyprus, and one hospital in Cyprus.
Personal main contribution was an HTA of telemedicine systems and services. Also I contribute in the designing of the platform.

4.4 Research Assistant INTRAMEDNET

Employer: University Federico II of Naples, Department of Biomedical, Electronic and Telecommunication Engineering, Via Claudio, 21, 80125, Napoli, Italia.
 Start Date: 01.06.2005
 End Date: 31.12.2007
 Country: Italy, with periodic meetings in Greece and Cyprus.
 Job Title: Research Assistant
 Description: This activity was financed from the project titled: “A Mediterranean Research and Higher Education Intranet in Medical and Biological Sciences”.
 INTRAMEDNET was an European project financed by the INTERREG IIIB ARCHIMED program. The aim of this project was the construction of a medical educational/research intranet between higher education & research institutions from Greece, Italy & Cyprus, to support the undergraduate educational program, graduate practice and residency and to promote research collaborations.
 Personal contribution was to prepare and to maintain a platform of eLearning and to support the preparation of scientific learning objects following international standard (SCORM/AICC).

4.5 Research Consultant QUIXIL

Employer: University Federico II of Naples, Department of Biomedical, Electronic and Telecommunication Engineering, Via Claudio, 21, 80125, Napoli, Italia.
 Start Date: 01.02.2007
 End Date: 31.07.2007
 Country: Italy
 Job Title: Research Consultant
 Description: This activity was a part of a national project, which include 15 surgery units, and one biomedical unit. The study was a multicentre RTC. Its aimed to assess if the QUIXIL (J&J) was an effective and efficient hemo-derivate glue for hernia surgery.
 My personal contributions were in designing of the study and the assessment of

| minimum number of patients to be involved (statistical power test).

5 Teaching experiences

5.1 Master in Health Economy, School of Medicine, University of Naples

Employer: Master in Health Economy, School of Medicine, University Federico II of Naples.
 Acad. Year 01.09.2005 - 31.03.2009
 Job Title: **Contract Professor**
 Description: I give four hours seminars, each Academic year. Seminars topics were: “medical decision making”, “Telemedicine for Continuity of Care”, “Health Technology Assessment of healthcare services”, “Health Economical Evaluations”.

5.2 Master in Clinical Risk Management, School of Medicine, University of Sannio

Employer: Second Level Master, School of Medicine, Università del Sannio.
 Acad. Year 2008/2009
 Job Title: **Contract Professor**
 Description: 21h of frontal lectures on: Safety on Working environments, Risk Assessment, Economical Evaluation in Risk Management.

5.3 Master in Healthcare Management Control

Employer: Regione Campania and Università Federico II, School of Medicine
 Acad. Year 2009/2010
 Job Title: **Contract Professor**
 Description: Health Technology Assessment (HTA) for the appropriateness of drugs prescription in dermatology. Methods and practical applications of HTA

5.4 Laurea Degree in Medicine, School of Medicine, University of Naples

Employer: University Federico II of Naples, School of Medicine
 Acad. Year 01.09.2005 - 31.03.2006
 Job Title: **Contract Professor**
 Description: Course of “Electronic Biomedical Devices” in the School of Medicine.

5.5 Graduate Teaching Assistants (Cultore della Materia)

Employer: University Federico II of Naples, Faculty of Engineering, School of biomedical Engineering, Napoli, Italia.
 Acad. Year 01.11.2005 -
 Job Title: **Graduate Teaching Assistants (Cultore della Materia)**
 Description: Teaching Assistance to the chair of “Organization and Automation of Healthcare Organizations” and its associates. Particularly I gave seminars and helped in examinations in the courses of: “Organization and Automation of Healthcare Systems”; “Organization and Automation of Healthcare Organizations”; “Telemedicine”; “Principles of Biomedical Engineering”. In addition, I have been co-supervisor for about 50 works of thesis.

6 Work Experience

6.1 Senior Consultant Mosaico

Employer: Oresto Riccardo Natale, Ph.D.
Mosaico Monitoraggio Integrato s.r.l., Via Luigi Pirandello SNC, 82100, Benevento, Italy
Start Date: 01.03.2008
End Date: -
Country: Italy
Job Title: Senior Consultant
Description: Designing of Health Information Systems for Management Control.

6.2 Senior Consultant CEDOCA

Employer: Maurizio Azzoglio, CEDOCA, Centro Elaborazione Dati Organizzazione Consulenza Aziendale s.r.l., Via Caravaglios 36, 80125, Napoli
Start Date: 10.10.2009
End Date: 01.02.2010
Job Title: Senior Consultant
Description: Designing and implementation of a web based software tool for the visualization of ECG, according to existing European Standard.

6.3 Senior Consultant Bilogic

Employer: Eng. Filippo Crispino.
Bilogic s.r.l., Via Pennini 24, 83100 Avellino, Italy
Start Date: 01.04.2006
End Date: 18.07.2008
Country: Italy
Job Title: Senior Consultant
Description: Designing of Software Applications for Public Administrations

6.4 Director of a "School Siesto"

Employer: Ms. Maria Rosaria Siesto
Scuola Siesto s.a.s, Via Antonino D'Antona 20, 80125, Napoli, Italia.
Start Date: 01.09.1995
End Date: 31.07.2009
Country: Italy
Job Title: Professor (1995-1999), Vice-Director (2000-2003), Director (2004-2009)
Description: The School Siesto, is a privet school whose core business is Career and Technical Education. Director's mansions cover didactic programming, relations with Regional Government, strategic management. Actually, I am one of the stockholders.

7 Memberships

I am member of the Professional Order of Engineers of the Province of Naples and is vice-president of the Provincial Commission of Biomedical Engineering. Furthermore I participate actively to the works of the National Commission on Biomedical Engineering and I am a member of the subcommittee on the definition of path training and professional recognition of the figure of the clinical Engineering.

Since 2004, I am member of the Italian Association of Medical and Biological Engineering (AIIMB) and International Federation of Medical and Biomedical Engineering (IFMBE). Since 2006 he has participated actively in all meetings of the secretaries of deliberate national associations as a delegate of the Italian association.

8 Personal skills and competences

MOTHER TONGUES	Italian
Other language	Inglese
Understand (C2)*	<i>Listening:</i> I have no difficulty in understanding any kind of spoken language, whether live or broadcast, even when delivered at fast native speed, provided I have some time to get familiar with the accent. <i>Reading:</i> I can read with ease virtually all forms of the written language, including abstract, structurally or linguistically complex texts such as manuals, specialised articles and literary works.
Speaking (C2)*	<i>Spoken interaction:</i> I can express myself fluently and spontaneously without much obvious searching for expressions. I can use language flexibly and effectively for social and professional purposes. I can formulate ideas and opinions with precision and relate my contribution skilfully to those of other speakers. <i>Spoken production:</i> I can present a clear, smoothly-flowing description or argument in a style appropriate to the context and with an effective logical structure which helps the recipient to notice and remember significant points.
Writing (C1)*	I can express myself in clear, well-structured text, expressing points of view at some length. I can write about complex subjects in a letter, an essay or a report, underlining what I consider to be the salient issues. I can select a style appropriate to the reader in mind.

*Common European Framework of Reference (CEF) level.

TECHNICAL COMPETENCES	For both research and professional experiences and employments, I used the following languages of programming: C++, VC, VB, Php, Sql. Moreover, I experienced use of web server Apache. I used SDK and compilers as Borland, .NET, Visual Studio, Microwave. I used scientific technical tool as Matlab and SPSS. Finally I use regularly office tools at Office, with advanced use of Word, Excel, Visio, Project and Access.
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Napoli,
8th Aprile 2011

Leandro Pecchia
