

# Emanuele Lettieri - *Curriculum Vitae et Studiorum*

## 1. PRESENT POSITION

- *Since July 2018.*  
Full Professor at Politecnico di Milano, Department of Management, Economics & Industrial Engineering

## 2. OTHER ACADEMIC APPOINTMENTS

- *February 2018*  
Chair of the organizing committee for the Viva-Defence on behalf of the PhD program in Management, Economics and Industrial Engineering at Politecnico di Milano and appointed internal Faculty Member within the Commission of only foreign Opponents
- *Since February 2017*  
Member of the JASMINE task force for the innovation of teaching at the Department of Management, Economics and Industrial Engineering, with respect to bachelor, master of science, PhD and post-graduate programs
- *Since January 2017*  
Formal Research Fellow at Chalmers University of Technology, Centre for Healthcare Improvement (CHI) (Goteborg, Sweden) with particular focus to Health Technology Assessment for ICT-based innovations in health and social care
- *Since January 2016*  
Scientific Director of the Permanent Observatory for Digital Innovation in the Sport Industry – Politecnico di Milano
- *Since January 2015*  
Member of the Managing Board of the “Engineering for Sport” (E4S) Laboratory at Politecnico di Milano on behalf of the Department of Management, Economics and Industrial Engineering (*this Lab has been created to integrate all Departments and research groups at Politecnico di Milano which are researching in the Sport Industry*)
- *Since January 2015*  
Scientific Director of the Permanent Observatory for Digital Innovation in Health Care – Politecnico di Milano
- *Since December 2014.*  
Associate Professor at Politecnico di Milano, Department of Management, Economics and Industrial Engineering
- *Since January 2013*  
Director of the International Part-Time MBA program at MIP – School of Management, Politecnico di Milano
- *January 2012 – December 2012*  
Vice-Director of the International Full-Time MBA program at MIP - School of Management, Politecnico di Milano
- *Since January 2013*  
Appointed Member of the PhD Board of the PhD program in Management, Economics and Industrial Engineering at Politecnico di Milano
- *September 2013*  
Chair of the organizing committee for the Viva-Defence on behalf of the PhD program in Management, Economics and Industrial Engineering at Politecnico di Milano and appointed internal Faculty Member within the Commission of only foreign Opponents

- *Since January 2010*  
Coordinator of the activities and relations within the “Healthcare Cluster” at Politecnico di Milano on behalf of the Department of Management, Economics and Industrial Engineering (*this Cluster groups all Departments and research groups at Politecnico di Milano which are researching in healthcare*)
- *May 2006 – December 2014*  
Assistant Professor at Politecnico di Milano, Department of Management, Economics and Industrial Engineering
- *January 2005 – December 2009*  
Chair of the Commission for the evaluation of the applicants to the Master of Science in Management Engineering at Politecnico di Milano (*Commissione Ammissione alla Laurea Specialistica/Magistrale in Ingegneria Gestionale*)
- *January 2005 – December 2009*  
Chair of the Commission for the approval of students’ careers in the Master of Science in Management Engineering at Politecnico di Milano (*Commissione Piani di Studio per Laurea Specialistica/Magistrale in Ingegneria Gestionale*)
- *May 2005 – April 2006*  
Fixed-term Assistant Professor (*Ricercatore a tempo determinato*) at Politecnico di Milano, Department of Management, Economics and Industrial Engineering
- *May 2004 – April 2005*  
Post-Doc position at Politecnico di Milano, Department of Management, Economics and Industrial Engineering. Title of the grant: “Innovation in Healthcare”

### **3. OTHER RELEVANT APPOINTMENTS RELATED TO MY RESEARCH ACTIVITIES**

- *Since January 2018*  
Appointed Member of the Monzino Cardiovascular Hospital’s Research inter-disciplinary Task Force on “Digital Technologies for pro-active Healthcare”
- *Since January 2017*  
Appointed Member of the Scientific Committee of the Research Centre (“*Centro Studi*”) launched within the Italian Association of Clinical Engineers (AIIC)
- *Since January 2017*  
Appointed Member of the Scientific Committee of ANSDIPP (Association of Nursing Homes’ Managers)
- *Since January 2016*  
Chair of the Working Group “New Business Models in the Social and Health Care” within the Lombardy Region Cluster “Technologies for the living environments” (*Tecnologie per gli Ambienti di Vita, TAV*)
- *Since October 2013*  
Appointed Member of the EVIDEM International Task-Force for Multi-Criteria Decision Analysis Implementation in Healthcare Decision Making
- *Since January 2012*  
Appointed Member of the Scientific Committee Chair of the Lombardy Region Cluster “Technologies for the living environments” (*Tecnologie per gli Ambienti di Vita, TAV*)
- *January 2009 – December 2015*  
Appointed member of the Lombardy Region Institutional Board for the appraisal of emerging healthcare technologies and the delisting of not value-for-money healthcare technologies (TTRAM Task Force)
- *September 2008 – December 2008*  
Selected expert for the design and launch of the COTE (Centre for Horizon Scanning) project promoted by AGENAS (National Agency of the Regional Agencies for Healthcare)

### **4. QUALIFICATIONS**

- *December 2017*  
Italian National Scientific Qualification for the Full Professorship, 09/B3, “Ingegneria Economico-Gestionale” (ASN, Abilitazione Scientifica Nazionale, record 57915, submitted on August 2017)

- *January 2014*  
Italian National Scientific Qualification for the Associate Professorship, 09/B3, “Ingegneria Economico-Gestionale” (ASN, Abilitazione Scientifica Nazionale, record 64130, submitted on November 2012)
- *May 2004*  
PhD in Management, Economics and Industrial Engineering – Politecnico di Milano. Thesis Title: “Technology Strategy in Healthcare Organizations”. Supervisor: Prof. Masella C
- *October 2000*  
Degree (*Laurea VO - Vecchio Ordinamento*) in Management Engineering, Politecnico di Milano (5 year course). Thesis Title “Innovating technology assessment in healthcare”, with grade 100/100 cum laude (honourable mention). Supervisor: Prof. Azzone G

## 5. VISITING PERIODS/APPOINTMENTS AT INTERNATIONAL INSTITUTIONS

- *February 2014 (short period, one week)*  
Visiting Scholar at “Centre for Healthcare Improvement (CHI)”, Chalmers University of Technology, Goteborg (Sweden), invited by Dr. Hellstrom A (Director of the Centre)
- *January 2014 (short period, one week)*  
Visiting Scholar at “Department of Economics, Financial and Management Accounting”, EMLYON Business School, Lyon (France), invited by Prof. Bertoni F
- *December 2012 (short period, one week)*  
Visiting Scholar at “Centre for Healthcare Improvement (CHI)”, Chalmers University of Technology, Goteborg (Sweden), invited by Dr. Hellstrom A (Director of the Centre)
- *October 2009 (short period, one week)*  
Visiting Scholar at “Centre for Healthcare Improvement (CHI)”, Chalmers University of Technology, Goteborg (Sweden), invited by Dr. Hellstrom A (Director of the Centre)
- *January 2003 – June 2003 (long period, six months)*  
Visiting Scholar at “Centre for Business Performances (CBP)”, Cranfield University, Cranfield (UK), invited by Prof. Neely A

From 2009 till nowadays, I have consolidated my research collaboration with the Centre for Healthcare Improvement (CHI) at Chalmers University of Technology, Goteborg (Sweden), directed by Dr. Hellstrom A. and Dr. Lifvergren S. Within this consolidated research collaboration, Dr. Hellstrom A. visited me at Politecnico two months from April 2013 to May 2013. From January 2017, I have been formally appointed as Research Fellow at Chalmers University of Technology.

## 6. AWARDS

- *August 2017*  
“*Medaglia del Presidente della Repubblica Sergio Mattarella quale suo Premio di Rappresentanza*” for the international conference “EGPA 2017” (European Group of Public Administration) that will be held at Politecnico di Milano from 8/30/2017 till 9/1/2017; I am part of the Organizing Committee
- *September 2013*  
Selected contender for the prestigious Howard R. Thranhardt Award (4 contributions over more than 200 admitted ones have been selected in the short-list of final contenders) at the 2013 O&P World Congress, Orlando, Florida, (US), September 18-21. Reference: Cutti AG, **Lettieri E**, Radaelli G, “Stratified Cost-Utility Analysis of C-Leg vs. Mechanical Knee Prostheses: Findings from a Retrospective Study on 127 Transfemoral Amputees”.
- *July 2012*  
Chris Voss Highly Commended Award at 4<sup>th</sup> World P&OM Conference/19<sup>th</sup> International Annual EurOMA Conference, Netherlands, July 1-5. Reference: **Lettieri E**, Radaelli G, Spiller N, Mura M, “Innovating Healthcare Operations: lessons from a micro-level investigation”
- *October 2011*  
Pagliarani Best Paper Award at XII Annual AiIG Conference (Italian Association of Management Engineering), Genoa (Italy), October 13-14. Reference: **Lettieri E**, Mura M, Spiller N, Radaelli G,

“Behavioural Operations in Healthcare Organizations: promoting innovative behaviours through knowledge sharing”

- *September 2003*

Best Paper Award at 3rd HCTM International Conference on Management of Healthcare and Medical Technology, Warwick (UK), September 8-9. Reference: **Lettieri E**, Masella C, “A decision-making tool to support technology strategy in healthcare organizations”.

## **7. EDITORIAL ACTIVITIES**

- *Year 2018*

Guest Editor of the Special Issue of Management Decision about “Evidence-Based Management for Performance Improvement in Health Care”, coedited with Aloini D, Cannavacciuolo L, Gitto S, Malighetti P, Visintin F

- *Spring 2018 (ongoing)*

- Development Board of a Health Technology Assessment report on the use of fluorescence in Surgery, on behalf of three Scientific Associations in Surgery: SICE, ACOI, SIC

- From January 2016

Member of the Editorial Board of “Studi Organizzativi”

- *Fall 2016*

Development Board of a Health Technology Assessment report on 3D vs 2D laparoscopy in Surgery, on behalf of three Scientific Associations in Surgery: SICE, ACOI, SIC

- *From Year 2014*

Member of the Editorial Board of Journal of Medical Internet Research (JMIR) – Serious Games

- *Year 2013*

Guest Editor of the Special Issue of Business Process Management Journal “Reinventing Managerial Processes: How to effectively leverage the tensions underlying management innovation”, coedited with Corso M, Martini A, Gastaldi L, Ghezzi A.

- *Year 2013*

Guest Editor of the Special Issue of International Journal of Information Management “Unleashing the Disrupting Power of Social Media: Reprise and Way Forward”, coedited with Corso M, Martini A, Gastaldi L, Ghezzi A.

- *Fall 2012*

Development Board for the appraisal of Clinical Competence in Surgery in Italy

- *Fall 2011*

Consensus Development Board for the Italian Guidelines in terms of laparoscopic approach to acute abdomen (golden standard for this practice in Italy)

## **8. REFEREE FOR JOURNALS**

I am regular referee for both healthcare-focused and general management Journals. They are: Social Science & Medicine, Journal of Business Ethics, Journal of Service Research, European Management Journal, Health Policy, Value in Health, Health Care Management Science, International Journal of Technology Assessment in Healthcare, International Journal of Healthcare Technology and Management, Journal of Medical Internet Research, International Journal of Information Management, Business Process Management Journal, Journal of Knowledge Management, Knowledge Management Research & Practice, International Journal of Learning and Intellectual Capital, Journal of Innovation and Entrepreneurship in Health.

## **9. ORGANIZATION OF CONFERENCES AND OF TRACKS IN INTERNATIONAL AND NATIONAL CONFERENCES**

- *June 2018*

Co-organizer of the Track “Sport Innovation and Digitalization” for EURAM 2018 Conference, Reykjavik (Iceland). Co-organizer: Prof. Gerke A

- *June 2018*  
Main organizer of the Track “Innovation in public utility services: opening the “black boxes”” for the R&D Management 2018 Conference, Milan (Italy). Co-organizers: Masella C, Pammolli F, Agasisti T, Currie G, Radaelli G, Hellstrom A, Zejnilovic L, Turchetti G, Barlow J
- *March 2018*  
Co-organizer of the Workshop “Digital Transformation in the Sport Industry: Insights from the Start-Ups Landscape” with CONI–Scuola dello Sport, Politecnico di Milano, Milano (Italy). Co-organizer: Dr. Rorato C
- *October 2017*  
Co-organizer of the Track “Leveraging innovation to improve health care performance” within the 28<sup>th</sup> AiIG Annual Conference, October, Bari (Italy). Co-organizers: Prof. Messeni Petruzzelli A., Prof. Frattini F., Prof. Aloini D., Dr. Radaelli
- *August/September 2017*  
Co-organizer of the EGPA 2017 Conference (European Group of Public Administration) with 500+ delegates, Politecnico di Milano, Milano (Italy). Co-organizers: Prof. Agasisti T., Prof. Azzone G., Prof. Masella C., Prof. Arnaboldi M., Dr. Agostino D., Dr. Vecchi G.
- *August 2017*  
Co-organizer of the EGPA (European Group of Public Administration) PHD Symposium for PhD Students and Young Researchers (30+ delegates), Politecnico di Milano, Milano, Italy. Co-organizers: Prof. Schröter E, Prof. Reichard C
- *June 2017*  
Co-organizer of the Workshop “Digital Transformation in the Sport Industry” with CONI–Scuola dello Sport, Politecnico di Milano, Milano (Italy). Co-organizer: Dr. Rorato C
- *June 2017*  
Organizer of the Workshop “Real World Evidence: tra timori (legali) e opportunità (cliniche e Manageriali)”, presso il Politecnico di Milano, Milano (Italy)
- *May 2017*  
Co-organizer of the Conference “Sanità digitale: non più miraggio, non ancora realtà” with 400+ delegates, within the activities of the Permanent Observatory of Digital Innovation in Healthcare, Politecnico di Milano, (Milano). Co-organizers: Prof. Corso M., Prof. Masella C., Mr. Locatelli P., Mrs. Sgarbossa C
- *October 2016*  
Co-organizer of the Track “EvidenceBased Practice of Management in Healthcare” within the 27<sup>th</sup> AiIG Annual Conference, October, Bergamo (Italy). Co-organizers: Prof. Malighetti P., Prof. Aloini D., Dr. Visintin F., Dr. Cannavacciuolo L., Dr. Gitto S
- *September 2016*  
Co-organizer of the thematic Track “Chirurgia laparoscopica in 3D, valutazione HTA” within the Congresso Congiunto delle Società Scientifiche Italiane di Chirurgia, Roma (Italia). Co-organizer: Dr. Vettoretto N
- *May 2016*  
Co-organizer of the Conference “Sanità digitale: non più miraggio, non ancora realtà” with 400+ delegates, within the activities of the Permanent Observatory of Digital Innovation in Healthcare, Politecnico di Milano, (Milano). Co-organizers: Prof. Corso M., Prof. Masella C., Mr. Locatelli P., Mrs. Sgarbossa C
- *October 2015*  
Co-organizer of the Track “Innovare il sistema sanitario: tecnologia, organizzazione e gestione” within the 26<sup>th</sup> AiIG Annual Conference, October, Vicenza, (Italy). Co-organizers: Prof. Verbano C., Prof. Di Mauro C., Bigliardi B., Dr. Cannavacciuolo L
- *Fall 2015*  
Co-organizer of the International Workshop on “Organizing for Sustainable Innovation in the food supply chain”, Milan (Italy). Co-organizers: Prof. Cagliano R, Prof. Verganti R, Prof. Shani AB, Dr. Mohrman S, Dr Worley C, Prof. Caniato F, Dr. Arena M, Dr. Luzzini D, Dr. Landoni P, Dr. Longoni A
- *June 2015*  
Co-organizer of the Conference “Empowering Patients through eHealth: the European Evidence”, Brussels (Belgium) to present the results of the PALANTE (PATients Leading and mANaging their healThcare through Ehealth) project. Co-organizers: the PALANTE research team
- *May 2015*

Co-organizer of the Conference “Sanità digitale: non più miraggio, non ancora realtà” with 400+ delegates, within the activities of the Permanent Observatory of Digital Innovation in Healthcare, Politecnico di Milano, (Milano). Co-organizers: Prof. Corso M., Prof. Masella C., Mr. Locatelli P., Mrs. Sgarbossa C

- *June 2014*  
Co-organizer of the International Workshop on “Doing Research in Healthcare with Administrative Databases” at Politecnico di Milano, June 30<sup>th</sup>. Co-organizers: Prof. Masella C, Prof. Paganoni AM
- *June 2014*  
Co-organizer of the “1<sup>st</sup> EDIM Annual PhD Conference”, on behalf of the DRIG Doctorate Program (<http://www.dig.polimi.it/index.php?id=29>) and the EDIM Doctoral Program (<http://www.edim-phd.eu/>), June 11-12, 2014, Milan, Italy. Co-organizers: Prof. Corso M, Prof. Trucco P, Dr. Rossi Lamastra, Dr. Micheli G, Dr Murtinu S, Prof. Engwall M
- *June 2014*  
Co-organizer of the Track “Social Media and Knowledge Management: A Fruitful Marriage for Firms?” within the 9<sup>th</sup> IFKAD International Conference, June, Matera (Italy). Co-organizers: Prof. Corso M, Prof. Martini A, Dr. Gastaldi L, Dr. Ghezzi A
- *June 2014*  
Co-organizer of the 5<sup>th</sup> International Workshop on Sustainable Hospitals promoted by the Healthcare Cluster at Politecnico di Milano on “Smart Hospitals”, Milan (Italy). Co-organizers: Prof. Capolongo S, Buffoli M
- *October 2013*  
Co-organizer of the Track “Healthcare Management: Lessons from Management Engineering” within the 24<sup>th</sup> AiIG Annual Conference, October, Milan (Italy). Co-organizers: Dr. Mura M, Dr. Carlucci D
- *June 2013*  
Co-organizer of the Track “Reinventing Management: Smart Organizations through Social Innovation?” within the 8<sup>th</sup> IFKAD International Conference, June, Zagreb (Croatia). Co-organizers: Prof. Corso M, Prof. Martini A, Dr. Gastaldi L
- *June 2013*  
Co-organizer of the 4<sup>th</sup> International Workshop on Sustainable Hospitals promoted by the Healthcare Cluster at Politecnico di Milano on “Sustainability in Healthcare: Hospital Design”, Milan (Italy). Co-organizers: Prof. Capolongo S, Buffoli M
- *June 2012*  
Co-organizer of the 3<sup>rd</sup> International Workshop on Sustainable Hospitals promoted by the Healthcare Cluster at Politecnico di Milano on “Innovative Design for Healthcare”, Milan (Italy). Co-organizers: Prof. Capolongo S, Buffoli M
- *May 2012*  
Co-organizer of the International Workshop on “Reconfiguration of the Eco-System for Sustainable Healthcare: An International Exploration”, Como (Italy). Co-organizers: Prof. Shani AB, Dr. Mohrman S, Dr. Hellstrom A, Dr. Lifvergren S, Prof. Cagliano R
- *June 2011*  
Co-organizer of the 2<sup>nd</sup> International Workshop on Sustainable Hospitals promoted by the Healthcare Cluster at Politecnico di Milano on “Sustainability in Healthcare: Hospital Design”, Milan (Italy). Co-organizers: Prof. Capolongo S, Buffoli M
- *February 2010*  
Co-organizer of the 1<sup>st</sup> International Workshop on Sustainable Hospitals promoted by the Healthcare Cluster at Politecnico di Milano on “Flexible Hospitals”, Milan (Italy). Co-organizers: Prof. Capolongo S, Buffoli M
- *May 2006*  
Co-organizer of the 6<sup>th</sup> HCTM International Conference on “The Management of Healthcare & Medical Technology”, Pisa, (Italy). Co-organizers: Prof. Turchetti G, Prof. Del Vecchio M, Prof. Masella C

## 10. MEMBERSHIP TO SCIENTIFIC ASSOCIATIONS AND RESEARCH NETWORKS

I am member of the Italian Association of Management Engineering (AiIG).

I have also been member of the following international and Italian Scientific Associations during the last years:

- European Institute for Advanced Studies in Management (EIASM)
- European Operations Management Association (EurOMA)
- Health Technology Assessment International (HTAi)
- HealthCare Technology and Management Association (HCTM)
- Italian Association of Health Technology Assessment (SIHTA)
- Italian Association of Health Economics (AIES)

I am also member of the following international research networks.

Since 2013 I take part in the EVIDEM International Collaborative Research Network that aims at improving the current approaches to the assessment of healthcare technologies that rely mainly on the measure of the Incremental Cost-Effectiveness Ratio (ICER). Despite these approaches are endorsed by leading Healthcare Agencies (e.g., by the National Institute for Clinical Excellence (NICE) in UK), there is a growing consensus among scholars of health economics, health policy and innovation management that decision-makers in healthcare need to base their appraisals on a more comprehensive informative basis, i.e. respect to multiple criteria. In this regard, I take part of the International Task Force for the adoption of Multi-Criteria-Decision-Analysis (MCDA) approaches by health policy-makers and decision-makers.

Since 2014 I am member of the European Network PHRIMA, led by INSERM Paris (Prof. Burgun A) whose aim is to advance theory and practice of healthcare management through the integration of “real world data” evidence sources that progressively available in healthcare. The network involves as referents, beyond Emanuele Lettieri, the Prof. Burgun A (INSERM, Center for Recherche des Cordeliers, Paris Descartes University, Paris, France); Prof. Bernal-Delgado E (Institute for Health Sciences, Aragón, Spain); the professor. Kuchinke W (University of Dusseldorf, Dusseldorf, Germany); and Prof. van Staa T and Prof. Cunnigam J (Health eResearch Center, Farr Institute, University of Manchester, Manchester, UK). The network has developed a proposal (under evaluation by the European Community) for running a feasibility study for the constitution of a European Infrastructure Research Center (ERIC) to provide access to all European researchers to the “real-world data” that are available in the Member States, in compliance with existing regulations. The network has also written a chapter, accepted for publication, entitled “Health Data for Public Health: Towards New Ways of Combining Data Sources to Support Research Efforts in Europe”, that has been Published in the IMIA Yearbook of Medical Informatics 2017.

Since 2016, I am contributing to the research activities of the international network that was formed around the initiative “*Patient Innovation*” promoted by Prof. von Hippel E (MIT, Boston, US) in the field of research on “Free Innovation” in healthcare. Within the network, we are collaborating with the research group chaired by prof. Zejnilovic L (Nova School of Business and Economics, Lisbon, Portugal) and Prof. Pedro Oliveria (Católica-Lisbon School of Business and Economics) with respect to the construction and validation of the construct “patient innovative behaviour”, the understanding of the most effective incentives to stimulate patient innovation and how to measure the impact on society. As part of the collaboration, prof. Zejnilovic was identified as co-supervisor of Mrs. Santu C, PhD student admitted to the XXXIII PhD cycle in Management Engineering at Politecnico di Milano (I am the main supervisor).

Finally, from 2009 till 2015, I have been one of the leading members of an International Collaborative Research Network that aimed at understanding how health and social care delivery should be (re)organized for sustainable effectiveness. Leading Institutions: University of Southern California (US) (Dr. Morhman S and Dr. Worley C), CalPoly University (US) (Prof. Shani AB), and Chalmers University of Technology (SE) (Dr. Hellstrom A). This network promoted collaborative researches between scholars from a broad range of

disciplines (organization design, management accounting, innovation management, medicine, health policy, organizational behaviour etc.) and leading practitioners.

## 11. SUPERVISION OF PhD STUDENTS

I am supervising or I have supervised the following PhD Students within the PhD program in Management, Economics and Industrial Engineering held by Politecnico di Milano.

- *From 2018 to 2020*  
Mrs. Camilla Santu, admitted to the XXXIII Cycle of the PhD program with a thesis proposal about “Free innovation and patient innovation in healthcare”. Formal co-supervisor: prof. Zejnilovic L. (Nova School of Business and Economics, Lisbon, Portugal)
- *From 2016 to 2018*  
Mrs. Afsaneh Roshanghalb, XXXI Cycle of the PhD program with a thesis proposal about “Hospital Performance Assessment through Real World Data: Determinants and Stability over Time”
- *From 2015 to 2018*  
Mrs. Anna De Benedictis, (Senior Nurse) XXX Cycle of the PhD program (Executive Program) with a thesis proposal about “Exploring and Managing Digital Innovations in Teaching Hospitals”
- *From 2012 to 2014*  
Mrs. Marta Pinzone. She defended *with meritum* her thesis “Embedding environmental sustainability in healthcare organisations: the role of human resources”. The opponent was Prof. Muller-Camen M (Wirtschaftsuniversität, Austria)
- *From 2011 to 2013*  
Mr. Giovanni Radaelli. He defended *with meritum* his thesis “The Diffusion of Integrated Care Pathway Initiatives in Hospitals, the Leverage of 'Institutional Work' on Multidisciplinary Team Innovation”. The opponent was Prof. McGivern G (Warwick Business School, UK)

I am also formal co-supervisor of the following PhD student enrolled at Chalmers University of Technology (Goteborg, Sweden):

- *From 2017 to 2020*  
Mrs. Monika Jurkeviciute, admitted to the PhD program at Chalmers University of Technology (Goteborg, Sweden) with a thesis proposal about “Assessment of Digital Innovation in Health Care”. Formal co-supervisor: prof. Hellstrom A. (Chalmers University of Technology, Centre for Healthcare Improvement)

I contributed to the supervision of the following PhD Students who have already successfully defended their thesis and got their Ph.D in Management, Economics and Industrial Engineering by Politecnico di Milano.

- *From 2008 to 2010*  
Mr. Paolo Zanaboni. He defended *with meritum* his thesis “Assessment models for telemedicine services in national health systems”. His main supervisor was Prof. Masella C
- *From 2005 to 2007*  
Mrs. Nadia Piraino. She defended *with meritum* her thesis “Governance modes in healthcare organizations” (the original title of the thesis is in Italian: “I modelli di governance delle aziende sanitarie”). Her main supervisor was Prof. Masella C

I supported the following PhD Students as internal Faculty discussant who has already successfully defended their thesis and got her/his Ph.D in Management, Economics and Industrial Engineering by Politecnico di Milano.

- *From 2011 to 2014*  
Mr Boris Petrenj. He defended *with meritum* his thesis “Improving information sharing and collaborative processes for critical infrastructure resilience”. His main supervisor was Prof. Trucco P
- *From 2013 to 2016*



Mrs. Rossella Onofrio. She defended her thesis: “Assessing the Influence of Personal & Organisational Factors on Surgical Errors: a Human Reliability Analysis (HRA) Approach”. Her main supervisor was Prof. Trucco P

Finally, I have been the opponent to this PhD Candidate from the PhD Program in Integrate Management at LIUC University, Castellanza, Varese (Italy)

- *June 2017*

Mrs. Roberta Pagani. She defended the thesis “Valutazione delle potenzialità del team working applicato all’HTA aziendale e dei relativi predittori: proposta di un modello organizzativo”. Her supervisor was Prof. Croce D

- *March 2014*

Mrs. Marzia Bonfanti. She defended the thesis “Assessment of Healthcare Technologies: Two Hospital-Based Tools for monitoring and assessing technological innovation” (the original title of the thesis is in Italian: “Il processo di valutazione delle tecnologie sanitarie: proposta di due strumenti hospital-based per il monitoraggio e la valutazione dell’innovazione tecnologica”). Her supervisor was Prof. Manzini R

## 12. TEACHING AT THE UNDERGRADUATE AND GRADUATE LEVEL

My teaching experience at the undergraduate and graduate level mainly refers to **Management Accounting**. Since 2001 I have lectured topics related to Management Accounting within the course of “Economics and Business Administration” (10 ECTF) at Politecnico di Milano. Because I have taught these topics in a variety of Degree Programs at Politecnico di Milano, I learned how to customize these topics to the never-the-same expectations coming from different cohorts of students. In details, my course covers these topics: Financial Accounting (2 ECTF), Cost Accounting (2 ECTF), Capital Budgeting (2 ECTF), Budgeting and Reporting (2 ECTF) and Strategy (2 ECTF).

Additionally, I matured relevant experience on teaching **Innovation and Change Management** by holding the course of “Business Process Engineering” (10 ECTF) at Politecnico di Milano and by holding the course of “Healthcare Management” (5 ECTF) at Politecnico di Milano.

In the followings, my teaching experience is detailed.

### *Academic Year 2017/2018*

- Professor in charge for the course “Accounting, Finance & Control” (10 ECTF) for master of science students at Politecnico di Milano
- Professor in charge for the course “Healthcare Management” (5 ECTF) for master of science students at Politecnico di Milano

### *Academic Year 2016/2017*

- Professor in charge for the course “Accounting, Finance & Control” (10 ECTF) for master of science students at Politecnico di Milano
- Professor in charge for the course “Healthcare Management” (5 ECTF) for master of science students at Politecnico di Milano

### *Academic Year 2015/2016*

- Professor in charge for the course “Accounting, Finance & Control” (10 ECTF) for master of science students at Politecnico di Milano
- Professor in charge for the course “Healthcare Management” (5 ECTF) for master of science students at Politecnico di Milano

### *Academic Year 2014/2015*

- Professor in charge for the course “Accounting, Finance & Control” (10 ECTF) for master of science students at Politecnico di Milano

### *Academic Year 2013/2014*

- Professor in charge for the course “Economics and Business Administration” (10 ECTF) for bachelor students at Politecnico di Milano

*Academic Year 2012/2013*

- Professor in charge for the course “Economics and Business Administration” (10 ECTF) for bachelor students at Politecnico di Milano
- Professor in charge for the course “Healthcare Management” (5 ECTF) for master of science students at Politecnico di Milano

*Academic Year 2011/2012*

- Professor in charge for the course “Economics and Business Administration” (10 ECTF) for bachelor students at Politecnico di Milano

*Academic Year 2010/2011*

- Professor in charge for the course “Economics and Business Administration” (10 ECTF) for bachelor students at Politecnico di Milano

*Academic Year 2009/2010*

- Professor in charge for the course “Economics and Business Administration” (10 ECTF) for bachelor students at Politecnico di Milano

*Academic Year 2008/2009*

- Professor in charge for the course “Economics and Business Administration” (10 ECTF) for bachelor students at Politecnico di Milano
- Lecturer of “Technology Assessment in Healthcare” in the course “Healthcare Management” for master of science students at Politecnico di Milano, hold by prof. Masella C

*Academic Year 2007/2008*

- Professor in charge for the course “Economics and Business Administration” (10 ECTF) for bachelor students at Politecnico di Milano
- Lecturer of “Technology Assessment in Healthcare” in the course “Healthcare Management” for master of science students at Politecnico di Milano, hold by prof. Masella C

*Academic Year 2006/2007*

- Professor in charge for the course “Economics and Business Administration” (10 ECTF) for bachelor students at Politecnico di Milano
- Lecturer of Cost Accounting, Budgeting and Reporting in the course “Economics and Business Administration” for master of science students at Politecnico di Milano, hold by prof. Masella C.
- Lecturer of “Technology Assessment in Healthcare” in the course “Healthcare Management” for master of science students at Politecnico di Milano, hold by prof. Masella C

*Academic Year 2005/2006*

- Professor in charge for the course “Business Process Engineering” (10 ECTF) for bachelor students at Politecnico di Milano
- Lecturer of Cost Accounting, Budgeting and Reporting in the course “Economics and Business Administration” for master of science students at Politecnico di Milano, hold by prof. Masella C.

*Academic Year 2004/2005*

- Professor in charge for the course “Business Process Engineering” (10 ECTF) for bachelor students at Politecnico di Milano
- Lecturer of Cost Accounting, Budgeting and Reporting in the course “Economics and Business Administration” for master of science students at Politecnico di Milano, hold by prof. Masella C

#### *Academic Year 2003/2004*

- Lecturer of Cost Accounting, Budgeting and Reporting in the course “Economics and Business Administration” for master of science students at Politecnico di Milano, hold by prof. Masella C.
- Lecturer of Strategy, Organization Design, in the course “Business Management” for bachelor students at Politecnico di Milano, hold by prof. Cagliano R

#### *Academic Year 2002/2003*

- Lecturer of Cost Accounting, Budgeting and Reporting in the course “Economics and Business Administration” for master of science students at Politecnico di Milano, hold by prof. Masella C

#### *Academic Year 2001/2002*

- Lecturer of Cost Accounting, Budgeting and Reporting in the course “Economics and Business Administration” for master of science students at Politecnico di Milano, hold by prof. Masella C (*students in Management Engineering*)
- Lecturer of Cost Accounting, Budgeting and Reporting in the course “Economics and Business Administration” for master of science students at Politecnico di Milano, hold by prof. Masella C (*students in Biomedical Engineering*)

#### *Academic Year 2000/2001*

- Lecturer of Cost Accounting, Budgeting and Reporting in the course “Economics and Business Administration” for master of science students at Politecnico di Milano, hold by prof. Noci G (*students in Management Engineering in the Milano Campus*)
- Lecturer of Cost Accounting, Budgeting and Reporting in the course “Economics and Business Administration” for master of science students at Politecnico di Milano, hold by prof. Azzone G (*students in Management Engineering in the Como Campus*)

### **13. TEACHING AT THE POST-DEGREE LEVEL**

Since 2001 I have matured a significant experience in teaching in post-graduate and executive classes. My experience mainly refers to two topics: **Management Accounting** and **Innovation & Change Management (with an emphasis on Technology Assessment in Healthcare)**.

This experience has been developed mainly in classes held at the School of Management of Politecnico di Milano (MIP-Politecnico di Milano, Graduate School of Business, [www.mip.polimi.it](http://www.mip.polimi.it)). During the years I have matured experience with both Italian and international classes and with both junior and senior profiles. Additionally, I am very confident to teach through cases, and integrate my lectures with in-class assignments in small teams.

In the followings, the most significant experiences are detailed briefly.

#### *Management Accounting*

- *Since 2005 – still ongoing*  
Lecturer of Management Accounting within the Management Academy at MIP-Politecnico di Milano, (2 modules of 4 hours about Management Accounting and 2 modules of 4 hours about Cost Accounting for Italian experienced participants)
- *Since 2008 – still ongoing*  
Lecturer of Management Accounting in the Master in Strategic Project Management program at MIP-Politecnico di Milano (11 modules of 3 hours for cohorts of international students)
- *2009 – 2014*  
Lecturer of Management Accounting in the Medea Master at ENI Corporate University (10 modules of 4 hours for cohorts of international students)
- *2011 – 2015*  
Lecturer of Management Accounting in the Master in Project Management at F.Ili Pesenti School (3 modules of 3 hours for cohorts of international student)

- *2012 – 2016*  
Lecturer of Management Accounting in MBA programs at MIP-Politecnico di Milano (6 modules of 2 hours for Italian cohorts)
- *Year 2010*  
Lecturer of Management Accounting to three cohorts of nursing home senior professionals (nurses, physicians, technicians and controllers) (4 modules of 4 hours for each cohort)

Additionally, since 2001 I gave lectures on Management Accounting in a variety of ad-hoc short programs of executive education sponsored by private companies, e.g. BTicino, ABB, Alcatel, ATM, Intendis, Campus Biomedico Roma, ROSATOM etc.

### *Innovation & Change Management (Technology Assessment)*

Since 2001, my teaching experience on Innovation & Change Management dealt with professionals from the healthcare eco-system in a variety of post-graduate and executive courses. In this regard, I gave lectures to senior physicians, physicians, nurses, health assistants, technicians, hospital managers, administrative staff, and applied researchers. Additionally I gave lectures to sale managers and salesmen of biomedical and pharmaceutical companies, insurance and maintenance companies. Because of this very broad spectrum of students, I have learnt how to customize contents and approaches according to specific participants or mix of participants.

Additionally, I am very confident to teach through cases, and integrate my lectures with in-class assignments in small teams.

In the followings, the most significant experiences are detailed briefly.

- *Year 2013 – year 2015*  
Lecturer of Health Technology Assessment at EUPOLIS (Lombardy Regional Institute for Education of Healthcare Professionals) (4 modules of 4 hours for cohorts of Italian executive healthcare professionals who are enrolled in the Lombardy Region HTA Program)
- *Since 2012 – still on going*  
Lecturer of Health Technology Assessment of Telemedicine and eHealth in the COPHTA Master at the LIUC University (4 modules of 2 hours for cohorts of Italian executive healthcare professionals)
- *Since 2012 – still on going*  
Lecturer of Health Technology Assessment in the “Health Care Management” post-graduate Master at the PISA University (4 modules of 2 hours for cohorts of Italian executive healthcare professionals)
- *Year 2012*  
Lecturer of Health Technology Assessment for the Scientific Board of the Italian Association of Surgery (SIC) (4 modules of 2 hours for cohorts of Italian Professors in Surgery)  
Lecturer of Health Technology Assessment for the Scientific Board of the Italian Association of Hospital Surgeons (ACOI) (4 modules of 2 hours for cohorts of Italian Senior Surgeons)
- *Year 2010*  
Lecturer of Health Technology Assessment for the Italian Association of Hospital Surgeons (ACOI) (4 modules of 2 hours for cohorts of Italian Senior Surgeons)
- *Year 2010*  
Lecturer of Innovation Management in Healthcare for the Italian Association of Biomedical Companies (Assobiomedica) (4 modules of 2 hours for cohorts of Italian executive managers)
- *From 2005 to 2012*  
Lecturer of Innovation Management in Healthcare in the CINEAS Master in Hospital Risk Management at CINEAS-Politecnico di Milano (3 modules of 4 hours for cohorts of Italian executive healthcare professionals)
- *From 2001 to 2006*  
Lecturer of Health Technology Assessment in the IREF/SDS Master in Healthcare Management at MIP-Politecnico di Milano (2 modules of 4 hours for various cohorts of Italian senior healthcare professionals)

- *From 2001 to 2003*  
Lecturer of Innovation Management in the Master in Telemedicine at Cefriel-Politecnico di Milano (2 modules of 4 hours for cohorts of Italian junior healthcare professionals)

Additionally, since 2001 I gave lectures on Innovation & Change Management to managers and salesmen in a variety of ad-hoc short programs sponsored mainly by biomedical companies, e.g. BBraun, Olympus, 3M, Smith&Nephew, Becton Dickinson, Siemens, Oracle etc.

#### **14. TEACHING AT THE DOCTORAL LEVEL**

- *From 2017 – still ongoing*  
Chair of the “Literature Review in Social Sciences and Engineering” course (5 ECTS) to PhD Students enrolled at Politecnico di Milano. Co-lecturers: Dr. Micheli G, Dr. Ghezzi A
- *February 2014*  
Lecture on “Technology Assessment in Healthcare” to PhD Students who were collaborating with the Centre for Healthcare Improvement (CHI) at Chalmers University of Technology, Goteborg (Sweden). Invited by Dr. Hellstrom A
- *2013 – 2015*  
Lecture on “Researching in Healthcare” to first-year PhD Students enrolled in the PhD Program in Management, Economics and Industrial Engineering at Politecnico di Milano

#### **15. DESIGN AND DIRECTION OF TEACHING PROGRAMS**

- Since January 2013, I am the Director of the International Part-Time MBA program at MIP - School of Management, Politecnico di Milano, and one of my responsibilities is the continuous improvement of the program with incremental/radical changes every intake
- I am currently designing a full-time Master for junior professionals about Digital Innovation in Health Care to be delivered by MIP-Graduate School of Business
- In the period 2013-2015, I have been the Scientific Chairman of the Lombardy Regional Education Program in Health Technology Assessment for the appointed members of the Regional Boards for the Appraisal of Healthcare Technologies at EUPOLIS (Lombardy Regional Institute for Education of Healthcare Professionals)
- From January 2012 to December 2012, I have been the Vice-Director of the International Full-Time MBA program at MIP - School of Management, Politecnico di Milano
- Since 2001, I have been involved in the design of ad-hoc executive education programs about Health Technology Assessment for the sale managers and the salesforce in a variety of ad-hoc programs sponsored by companies like as BBraun, Smith&Nephew, 3M, Olympus, Becton Dickinson, Oracle etc.

#### **16. SCIENTIFIC ACTIVITIES AND PUBLICATIONS**

My research interests deal mainly with innovation management and performance improvement in healthcare organizations. I am interested to investigate how current approaches to care delivery can be improved through the adoption of technological/organizational innovations.

In this regard, my research interests can be synthesized in three main research topics:

- (i) Evidence-based Policy-Making and Management in healthcare through the integration of “real world data” as sources of evidence;
- (ii) The assessment and the institutionalization of innovative healthcare technologies, within the *Health Technology Assessment* discipline; and
- (iii) The diffusion of innovation through the promotion of innovative work behaviours (as a peculiar type of organizational citizenship behaviour) among healthcare professionals.

My research has been mainly at the organizational level, but in the last years I have included also studies at the individual and at the macro-levels. The interest for the individual-level has been motivated by the micro-foundation of current organizational/managerial theories through the connection between organizational-level performance and significant changes in professionals' behaviour (e.g., innovative work behaviour, knowledge sharing, greening behaviours). The interest for the macro-level has been motivated by the evaluation of policies in healthcare through the availability of large repositories of real world data (mainly hospital discharge forms and mortality registers). This stream of research is the most recent and manuscripts are still under review.

My research has been mainly qualitative in the first years and both qualitative and quantitative in the last years. At present, I am confident with both qualitative and quantitative methods, as well as with systematic literature reviews.

Within these research areas, I have conducted multi-disciplinary research in collaboration with both Italian and foreign Universities, research centres, healthcare institutions and healthcare organizations.

My research has benefited from the continuous involvement in large-scale European projects (NESTORE, PALANTE, REMINE, COCOON and LENSIS) and the participation to international research networks.

Since 2013 I take part in the EVIDEM International Collaborative Research Network that aims at improving the current approaches to the assessment of healthcare technologies that rely mainly on the measure of the Incremental Cost-Effectiveness Ratio (ICER). Despite these approaches are endorsed by leading Healthcare Agencies (e.g., by the National Institute for Clinical Excellence (NICE) in UK), there is a growing consensus among scholars of health economics, health policy and innovation management that decision-makers in healthcare need to base their appraisals on a more comprehensive informative basis, i.e. respect to multiple criteria. In this regard, I take part of the International Task Force for the adoption of Multi-Criteria-Decision-Analysis (MCDA) approaches by health policy-makers and decision-makers.

Since 2014 I am member of the European Network PHRIMA, led by INSERM Paris (Prof. Burgun A) whose aim is to advance theory and practice of healthcare management through the integration of "real world data" evidence sources that progressively available in healthcare. The network involves as referents, beyond Emanuele Lettieri, the Prof. Burgun A (INSERM, Center for Recherche des Cordeliers, Paris Descartes University, Paris, France); Prof. Bernal-Delgado E (Institute for Health Sciences, Aragón, Spain); the professor. Kuchinke W (University of Dusseldorf, Dusseldorf, Germany); and Prof. van Staa T and Prof. Cunningham J (Health eResearch Center, Farr Institute, University of Manchester, Manchester, UK). The network has developed a proposal (under evaluation by the European Community) for running a feasibility study for the constitution of a European Infrastructure Research Center (ERIC) to provide access to all European researchers to the "real-world data" that are available in the Member States, in compliance with existing regulations. The network has also written a chapter, accepted for publication, entitled "Health Data for Public Health: Towards New Ways of Combining Data Sources to Support Research Efforts in Europe", that has been Published in the IMIA Yearbook of Medical Informatics 2017.

Since 2016, I am contributing to the research activities of the international network that was formed around the initiative "*Patient Innovation*" promoted by Prof. von Hippel E (MIT, Boston, US) in the field of research on "Free Innovation" in healthcare. Within the network, we are collaborating with the research group chaired by prof. Zejnilovic L (Nova School of Business and Economics, Lisbon, Portugal) and Prof. Pedro Oliveria (Católica-Lisbon School of Business and Economics) with respect to the construction and validation of the construct "patient innovative behaviour", the understanding of the most effective incentives to stimulate patient innovation and how to measure the impact on society. As part of the collaboration, prof. Zejnilovic was identified as co-supervisor of Mrs. Santu C, PhD student admitted to the XXXIII PhD cycle in Management Engineering at Politecnico di Milano (I am the main supervisor).

Finally, from 2009 till 2015, I have been one of the leading members of an International Collaborative Research Network that aimed at understanding how health and social care delivery should be (re)organized for sustainable effectiveness. Leading Institutions: University of Southern California (US) (Dr. Morhman S and Dr. Worley C), CalPoly University (US) (Prof. Shani AB), and Chalmers University of Technology (SE) (Dr. Hellstrom A). This network promoted collaborative researches between scholars from a broad range of

disciplines (organization design, management accounting, innovation management, medicine, health policy, organizational behaviour etc.) and leading practitioners.

## 17. PUBLICATIONS IN PEER REVIEWED JOURNALS (ISI, SCOPUS OR EQUIVALENT)

1. Vettoretto N., Foglia E., (...), **Lettieri, E.** (2018), “Why laparoscopists may opt for three-dimensional view: a summary of the full HTA report on 3D versus 2D laparoscopy”, *Surgical Endoscopy and Other Interventional Techniques*, IN PRESS
2. Radaelli G., **Lettieri E.**, Frattini F., Luzzini D., Boaretto A. (2017), “Users' search mechanisms and risks of inappropriateness in healthcare innovations: The role of literacy and trust in professional contexts”, *Technological Forecasting and Social Change*, 120:240-251
3. Radaelli G., Currie G., Frattini F., **Lettieri E.**, (2017), “The Role of Managers in Enacting Two-Step Institutional Work for Radical Innovation in Professional Organizations”, *The Journal of Product Innovation Management*, 34:450-470
4. Cutti A.G., **Lettieri E.**, Del Maestro M., Radaelli G., Luchetti M., Verni G., Masella C. (2017), “Stratified cost-utility analysis of C-Leg versus mechanical knees: Findings from an Italian sample of transfemoral amputees”, *Prosthetics and Orthotics International*, 41:227-236
5. Foglia E., **Lettieri E.**, Ferrario L., Porazzi E., Garagiola E., Pagani R., Bonfanti M., Lazzarotti V., Manzini R., Masella C., Croce D. (2017). “Technology assessment in hospitals: lessons learned from an empirical experiment”, *International Journal of Technology Assessment in Health Care*, forthcoming, doi: 10.1017/S0266462317000356
6. Pinzone M., Guerci M., **Lettieri E.**, Redman T. (2016), “Progressing in the change journey towards sustainability in healthcare: the role of ‘Green’ HRM”, *Journal of Cleaner Production*, 122:201-211
7. Mura M., **Lettieri E.**, Radaelli G., Spiller N. (2016), “Behavioural operations in healthcare: a knowledge sharing perspective”, *International Journal of Operations & Production Management*, 36:1222-1246
8. Ghezzi A., Gastaldi L., **Lettieri E.**, Martini A., Corso M. (2016), “A Role for Startups in Unleashing the Disrupting Power of Social Media”, *International Journal of Information Management*, 36:1152-1159
9. Fumagalli L.P., Radaelli G., **Lettieri E.**, Bertele' P., Masella C. (2015), “Patient Empowerment and its neighbours: Clarifying the boundaries and their mutual relationships”, *Health Policy*, 119:384-394
10. Radaelli G., **Lettieri E.**, Masella C. (2015), “Physicians’ Willingness to Share: a TPB-based analysis”, *Knowledge Management Research and Practice*, 13:91-104
11. **Lettieri E.**, Fumagalli LP, Radaelli G., Bertele' P., Vogt J., Hammerschmidt R., Lara JL., Carriazo A., Masella C. (2015), “Empowering patients through eHealth: A case report of a pan-European project”, *BMC Health Services Research*, 15:1-12
12. Pinzone M., **Lettieri E.**, Masella C. (2015), “Proactive Environmental Strategies in Healthcare Organizations: Drivers and Barriers in Italy”, *Journal of Business Ethics*, 131:183-197
13. Radaelli G., Dal Molin M., **Lettieri E.**, Masella, C. (2014), “Promoting a new practice in Hospitals: a Qualitative Comparative Analysis of alternative designs”, *International Journal of Public Administration*, 37:376-387
14. Radaelli G., **Lettieri E.**, Masella C., Merlino L., Strada A., Tringali M. (2014), “Implementation of EUnetHTA Core Model® in Lombardia: the VTS Framework”, *International Journal of Technology Assessment in Health Care*, 30(1):105-112
15. **Lettieri E.**, Bartoli L., Masella C. (2013), “Coordinating intra-sector services in healthcare: Requirements and elements that managers should take into account”, *European Management Journal*, 31(6):591-601
16. Mura M., **Lettieri E.**, Radaelli G., Spiller N. (2013), “Promoting professionals’ Innovative Behavior through Knowledge Sharing: the moderating role of Social Capital”, *Journal of Knowledge Management*, 17(4):527-544
17. Radaelli G., **Lettieri E.**, Masella, C. (2013), “Physicians’ Willingness to Share: a TPB-based analysis”. *Knowledge Management Research and Practice*, published online doi: 10.1057/kmrp.2013.33
18. Petrenj B., **Lettieri E.**, Trucco P. (2013), “Information sharing and collaboration for critical infrastructure resilience – a comprehensive review on barriers and emerging capabilities”, *International Journal of Critical Infrastructures*, 9(4):304-329
19. Petrenj B., **Lettieri E.**, Trucco P. (2012), “Towards enhanced collaboration and information sharing for critical infrastructure resilience: current barriers and emerging capabilities”, *International Journal Of Critical Infrastructures*, 8(2):107-120

20. Gastaldi L., **Lettieri E.**, Corso M., Masella C. (2012), “Performance improvement in hospitals: leveraging on knowledge asset dynamics through the introduction of an electronic medical record”, *Measuring Business Excellence*, 16(4):14-30
21. Agresta F., Ansaloni L., (...), **Lettieri E.**, (...), (2012), “Laparoscopic approach to acute abdomen from the consensus development conference of the Società Italiana di Chirurgia Endoscopica e nuove tecnologie (SICE), Associazione Chirurghi Ospedalieri Italiani (ACOI), Società Italiana di Chirurgia (SIC), Società Italiana di Chirurgia d'Urgenza e del Trauma (SICUT), Società Italiana di Chirurgia nell'Ospedalità”, *Surgical Endoscopy*, 26(8):2134-2164
22. Mura M., **Lettieri E.**, Spiller N., Radaelli G. (2012), “Intellectual Capital and Innovative Work Behaviour: Opening the Black Box”, *International Journal Of Engineering Business Management*, 4:1-10
23. Pinzone M., **Lettieri E.**, Masella C. (2012), “Sustainability in Healthcare: Combining Organizational and Architectural Levers”, *International Journal Of Engineering Business Management*, 4:1-9
24. Zanaboni P., **Lettieri E.** (2011), “Institutionalizing Telemedicine Applications: The Challenge of Legitimizing Decision-Making”, *Journal of Medical Internet Research*, 13(3):e72
25. Lamberti L., **Lettieri E.** (2011), “Gaining legitimacy in converging industries: Evidence from the emerging market of functional food”, *European Management Journal*, 29(6):462-475
26. Radaelli G., Mura M., Spiller N., **Lettieri E.**, (2011), “Intellectual capital and knowledge sharing: the mediating role of organizational knowledge-sharing climate”, *Knowledge Management Research & Practice*, 9(4):340-350
27. Garavaglia G., **Lettieri E.**, Agasisti T., Lopez S. (2011), “Efficiency and quality of care in nursing homes: an Italian case study”, *Health Care Management Science*, 14(1):22-35
28. **Lettieri E.**, Radaelli G., Masella C. (2010), “Information Systems and Change Management in Healthcare: the (un)solved quest for changing physicians’ behaviour”, *International Journal of Information Systems and Change Management*, 4(3):226-245
29. **Lettieri E.** (2009), “Uncertainty inclusion in budgeting technology adoption at a hospital level: Evidence from a multiple case study”, *Health Policy* 93(2):128-136
30. **Lettieri E.**, Masella C. (2009), “Priority Setting for Technology Adoption at a Hospital Level: Relevant Issues from the Literature”, *Health Policy*, 90(1):81-88
31. **Lettieri E.**, Masella C., Radaelli G. (2009), “Disaster Management: findings from a systematic review”, *Disaster Prevention and Management*, 18(2):117-136
32. Lamberti L., **Lettieri E.** (2009), CSR practices and corporate strategy: evidence from a longitudinal case study, *Journal of Business Ethics*, 87(2):153-168
33. **Lettieri E.**, Masella C., Nocco U. (2008), “Budgeting And Health Technology Assessment: First Evidence Obtained From Proposal Forms Used To Submit The Adoption Of New Technology”, *International Journal of Technology Assessment in Health Care*, 24(4):502-510
34. **Lettieri E.**, Masella C., Zanaboni P. (2008), “A cognitive map to design a performance-oriented RIS-PACS”, *International Journal of Healthcare Technology and Management*, 9(1):45-59
35. **Lettieri E.**, Masella, C. (2006), “Measuring the value and sustainability of internet-based ICTs in healthcare organizations”, *International Journal of Healthcare Technology and Management*, 7(3/4):319-332
36. **Lettieri E.**, Borga F., Savoldelli A. (2004), “Knowledge Management in Non-Profit Organisations”, *Journal of Knowledge Management*, 8(6):16-30
37. Azzone, G., **Lettieri, E.**, Masella, C. (2002), “Does shareholder value make sense in healthcare organisations in order to assess investment proposals?”, *International Journal of Healthcare Technology and Management*, 4(3/4):220-238

## 18. CHAPTERS IN INTERNATIONAL BOOKS

1. Lettieri E., Masella C., “Fixing Healthcare Systems Through Innovation”. (2018), In: Adinolfi P., Borgonovi E., “The Myths of Health Care: Towards New Models of Leadership and Management in the Healthcare Sector. Springer.
2. Rebecchi A., Gola M., **Lettieri E.**, (...), Capolongo, S. (2018), “Healthcare for all: A new multidisciplinary approach for designing and managing hospital layouts in India”. In: *SpringerBriefs in Applied Sciences and Technology* (9783319723976), pp. 67-87



3. Burgun A., Bernal-Delgado E., (...), **Lettieri E.**, (...), (2017), "Health Data for Public Health: Towards New Ways of Combining Data Sources to Support Research Efforts in Europe". In: Yearbook of medical informatics 26(1), pp. 235-240
4. Radaelli G, **Lettieri E.**, Shani AB, Masella C, Tringali M, (2014) "Embedding Sustainable Effectiveness in Decision Making within an Eco-System: Lessons from the Health Technology Assessment Program at the Lombardy Region, In: SA Mohrman; AB Shani. Organizing for Sustainable Health Care. Emerald
5. **Lettieri E.**, AB. Shani, A. Longoni, R. Cagliano, C. Masella, F. Molteni (2012). Can Technology Enable Sustainable Effectiveness in Health Care Delivery? Some Lessons from a Rehabilitation Hospital. In: SA Mohrman; AB Shani. Organizing for Sustainable Health Care. pp. 113-146, Emerald
6. Bartoli L., **Lettieri E.**, Masella C., (2011), "Innovating healthcare delivery: making telemedicine-based services organizationally sustainable", in Grasczew G., Roelofs TA, (2011), "*Advances in Telemedicine: Technologies, Enabling Factors and Scenarios*", INTECH, Chapter 13
7. **Lettieri E.**, Borga, F., Masella, C., Savoldelli A., (2004), "Performance Measurement in Non-Profit Organizations: how to link theory and reality", in Epstein, M. and HTA, J., (2004), "*Performance Measurement and Management Control: Superior Organizational Performance*", Elsevier, pp. 355-374.

## 19. PUBLICATIONS IN ITALIAN JOURNALS

1. **Lettieri E.**, De Capitani C., Cancellieri T. (2008), "Sistemi RIS-PACS e performance: la sfida di "ingranare" tecnologia e organizzazione", *Management della Sanità*, Dossier RIS-PACS.
2. **Lettieri E.**, Masella C. (2007), "Spesa sanitaria e valutazione delle tecnologie sanitarie", *Giornale Italiano di Nefrologia*, 40:22-36.
3. Zanaboni P., Crivellini M., **Lettieri E.**, Masella C., (2006), "Benchmarking di performance e processo: il caso dei laboratori ospedalieri di analisi", *MECOSAN*, 59:89-105.
4. Zanaboni P., Crivellini M., **Lettieri E.**, Masella C., (2006), "Laboratori di analisi a confronto: un'analisi di benchmarking", *Management della Sanità*, 4:54-55.
5. **Lettieri E.**, Masella, (2005), "Un modello a supporto della valutazione e selezione delle tecnologie sanitarie nelle aziende sanitarie", *MECOSAN*, 52:27-40.
6. **Lettieri E.**, Masella, C., (2004), "Cost-Effectiveness Analysis of Innovative Medical Devices: The Case of Mammotome<sup>TM</sup> for Breast Biopsy", *MEDIC*, 12(2):24-31.
7. Landoni, P., **Lettieri E.**, Masella, C., (2003), "Progetti di Telemedicina: fattori di successo e linee guida per la valutazione", *TeleSanità 2003*, pp. 135-140.

## 20. BOOKS (Author)

1. Savoldelli, A., Borga, F., **Lettieri E.**, (2004), *La gestione della conoscenza nelle organizzazioni non-profit*, FrancoAngeli, Milano. (Title in English: Knowledge Management in Non-profit Organizations)

## 21. CHAPTERS IN ITALIAN BOOKS

1. **Lettieri E.**, Radaelli G., Masella C., (2014). Decision-Making in Sanità: l'esperienza di Regione Lombardia nell'implementare un progetto regionale di Health Technology Assessment. In: M. Triassi; R. Delfino. Implementazione della metodologia dell'Health Technology Assessment nelle Aziende Sanitarie della Regione Campania
2. **Lettieri E.**, G. Radaelli, N. Spiller, C. Masella (2011). Capacità del professionista sanitario di innovare la pratica clinica: l'importanza di condividere conoscenza e di gestire le varie dimensioni del capitale intellettuale. In: G. Schiuma; C. Masella; M. Longo. Valutazione e gestione degli intangibili nelle organizzazioni sanitarie. p. 117-142, Altrimedia Edizioni, ISBN: 9788896171523
3. **Lettieri E.**, G. Radaelli, N. Spiller, C. Masella, M. Mura (2011). Condivisione della conoscenza tra professionisti in sanità: il contributo di alcune variabili organizzative all'impiego del capitale intellettuale a disposizione dell'organizzazione sanitaria. In: G. Schiuma; C. Masella; M. Longo. Valutazione e gestione degli intangibili nelle organizzazioni sanitarie. p. 143-168, Altrimedia Edizioni, ISBN:9788896171523

## 22. PROCEEDINGS OF INTERNATIONAL CONFERENCES (up-dated till 2013)

1. Pinzone M., **Lettieri E.**, Masella C. (2013) Sustainable Healthcare in Italy: Strategies, Barriers and Outcomes, In: 4th CleanMed Europe conference, Oxford, 17/09/2013-19/09/2013
2. Pinzone M., **Lettieri E.**, Masella C., Di Giorgio A., Pelizzola, (2013) Planned change for sustainability: evidence from Italy, In: 4th CleanMed Europe conference, Oxford, 17/09/2013-19/09/2013
3. Fumagalli L., Radaelli G., **Lettieri E.**, Bertelè P., Masella C.. (2013). Empowering the Patient: antecedents and consequences from a systematic literature review. In: EHMA Annual Conference, Milan, 26/06/2013-28/06/2013
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5. Radaelli G., **Lettieri E.**, Masella C., Tringali M., Strada A. (2013). Legitimizing a new regional program to a network of professionals and stakeholders: the experience of the HTA program in Lombardy. In: EHMA Annual Conference, Milan, 26/06/2013-28/06/2013
6. Mura M., Radaelli G., **Lettieri E.**, Spiller N., Longo M. (2013). The effect of Social Capital on Exploration and Exploitation: Modelling the moderating effect of Environmental Dynamism. In: International Forum on Knowledge Assets Dynamics, Zagreb, 12/06/2013-14/06/2013
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43. **Lettieri E.**, Masella C., Nocco U. (2007) "Health Technology Assessment and Budgeting: the Quest for integration", 6th International Conference on the Management of Healthcare & Medical Technology, 3-5 October, Pisa (Italia).
44. Lamberti L., **Lettieri E.**, Pini F.M. (2007), "Marketing strategy and corporate social responsibility: towards a convergence in the healthy food market to boost market innovation and corporate value, 36th EMAC Conference, 22-25 May, Reykjavik (Iceland).
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### **23. PROCEEDINGS OF ITALIAN CONFERENCES (up-dated till 2013)**

1. G. Radaelli, **E. Lettieri**, C. Masella, (2013) "Diffusion of integrated care pathways in hospitals: the lever of managers' institutional work", Track tematica Healthcare Management, Riunione Scientifica Annuale AiIG, Milano, 17-18 Ottobre

2. M. Mura, G. Radaelli, **E. Lettieri**, N. Spiller, M. Longo, (2013) “Fostering Exploration and Exploitation among Hospital Wards”, Track tematica Healthcare Management, Riunione Scientifica Annuale AiIG, Milano, 17-18 Ottobre
3. G. Radaelli, **E. Lettieri**, I. Fortino, L. Merlino, M. Tringali, A. Strada, C. Masella (2012). Applicazione dei modelli EUnetHTA ed EVIDEM in Regione Lombardia: Il modello VTS. In: V ° Congresso Nazionale SIHTA Società Italiana di Health Technology Assessment "Le decisioni per la sostenibilità del sistema sanitario: HTA tra governo dell'innovazione e del disinvestimento". p. 1-2, Roma, 22/11/2012 -24/11/2012
4. Radaelli G., **Lettieri E.**, Masella C., (2009), “Telemedicina: esperienze regionali di HTA”, II Congresso Nazionale SIHTA, Giugno 5, Roma.
5. **Lettieri E.**, Masella C. (2008), “Budgeting of technology at the hospital level: the quest for accountability and responsibility”, XIX Riunione Scientifica annuale AiIG, Palermo.
6. **Lettieri E.**, Masella C., Nocco U., (2008), “Hospital Based Health Technology Assessment: Evidence of the Knowing-doing gap from a multiple case study”, I Congresso Nazionale SIHTA, Febbraio 8-9, Roma.
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8. **Lettieri E.**, Masella, C., (2004), “Un modello a supporto della valutazione e selezione delle tecnologie mediche innovative nelle organizzazioni sanitarie”, XV Riunione Scientifica annuale AiIG, Ottobre 14-15, Napoli.
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## **24. COORDINATION AND PARTICIPATION IN SCIENTIFIC RESEARCH PROJECTS AT NATIONAL AND INTERNATIONAL LEVEL**

My research interests deal mainly with innovation management and performance improvement in healthcare organizations. I am interested to investigate how current approaches to care delivery can be improved through the adoption of technological/organizational innovations.

In this regard, my research interests can be synthesized in three main research topics:

- (i) Evidence-based Policy-Making and Management in healthcare through the integration of “real world data” as sources of evidence;
- (ii) The assessment and the institutionalization of innovative healthcare technologies, within the *Health Technology Assessment* discipline; and
- (iii) The diffusion of innovation through the promotion of innovative work behaviours (as a peculiar type of organizational citizenship behaviour) among healthcare professionals.

Within these research areas, I have conducted multi-disciplinary research in collaboration with both Italian and foreign Universities, research centres, healthcare institutions and healthcare organizations.

In the following sections, I have collected the most significant projects to which I have contributed either as chair or as key participant with respect to the period 2007-today.

## **25. EUROPEAN PROJECTS**

- *From 2017 to 2020*  
Chair of the DIG-Politecnico di Milano research team within the NESTORE (Non-intrusive Empowering Solutions and Technologies for Older People to Retain Everyday Life Activity) pan-EU project funded by European Community (ID 769643) whose goal is to develop a virtual coach for the healthy aging of European citizens 60+. Emanuele Lettieri, in particular, has the responsibility of coordinating the DIG research team and the various European partners in defining the methodology for the quantitative assessment of the impact of the ICT solution developed and its application to the selected pilot cases. In addition, Emanuele Lettieri will have to evaluate the generalizability of the solution to other Member States taking into account their different socio-cultural systems, healthcare systems and insurance frameworks. The project will last 36 months.
- *From 2013 to 2015*  
Co-chair of the DIG-Politecnico di Milano research team within the PALANTE (PATient Leading and mANaging their healThcare through EHealth) pan-EU project (CIP-ICT-PSP-2011-5). I have been in

charge of Task 1.3 within Work Package 1 with the responsibility of designing a scientifically-robust and practically feasible methodology for testing the assumption that patients are positively empowered by the use of eHealth solutions, as well as the implementation of this methodology on a multi-centric study on 9 Countries. The project lasted 36 months.

- *From 2010 to 2012*

Key participant of the DIG-Politecnico di Milano research team within the REMINE (high performances prediction, detection and monitoring platform for patient safety risk management) project (FP7-ICT-2007-1). I had the responsibility to develop and implement a scientifically-robust and practically feasible methodology for testing the assumption that ICT-enabled risk management tools – such as warnings and business rules – positively contribute to increase patient safety and healthcare professionals' awareness about safety-related issues. The project lasted 36 months.

- *From 2004 to 2006*

Key participant of the DIG-Politecnico di Milano research team within the COCOON (building knowledge driven, dynamically adaptive networked communities within European healthcare systems) project (IST-2005-507126). I had the responsibility to define the state of the art of risk management with respect to General Practitioners (GPs). These professionals are less exposed to claim of negligence by their patients even if they are the actual trigger of all healthcare services in terms of timeliness and accuracy. My responsibility was to inform the design of Decision Support Systems able at providing alerts to GPs by analysing data collected in personal health records. The project lasted 36 months.

- *From 2001 to 2004*

Key participant of the DIG-Politecnico di Milano research team within the LENSIS (leveraging non-profit sector towards the information society) project (IST-2000-26039). I had the responsibility to define the peculiarities (from an ontological and epistemological perspective) of knowledge management in non-profit organizations, in order to inform the development of ICT-enabled managerial tools aimed at improving current performances. The project lasted 36 months.

## 26. NATIONAL PROJECTS

- *July 2017 – ongoing*

Co-chair of the DIG-Politecnico di Milano team within the project “*EMPATIA @ Lecco - Empowerment of the PAzIntE In cAsa*”, funded for 3.3 million € by the Lombardy Region and the Cariplo Foundation, with the objective of promoting the establishment in the territory of Lecco of a distributed Laboratory for Biomedical research with reference to neuro-motor rehabilitation. The project, that will last 3 years, will also support the development of 17 biomedical technologies, some of which at the end of the project will have a sufficient TRL to go to market. In particular, Emanuele Lettieri will coordinate the DIG research activities with reference to (a) the technology evaluation of the more promising technologies under development according to the European methodology EUnetHTA and (b) the development of a business model for the distributed Laboratory to guarantee its long-term sustainability. Co-chairs are: Prof. Masella C., Prof. Trucco P

- *December 2016 – ongoing*

Chair of the DIG-Politecnico di Milano team within the project “*Fast Breast Check*” funded by the Lombardy Region within the framework POR-FESR 2014-2020, whose goal is the evaluation of an innovative optical technology for the early diagnosis of breast cancer (up to 18 months before for women aged 35-50). Emanuele Lettieri, in particular, has the responsibility to coordinate the DIG research team and partners for the design and formalization of the multi-centre clinical trial protocol for the collection of the data needed for the evaluation of the optical technology according to the European framework EUnetHTA. Also Emanuele Lettieri has the responsibility to define new service and business models for the delivery, in case of positive evaluation, of this innovative diagnostic treatment that will limit public support (e.g. out of pocket, insurance model, etc.). The project will last 24 months

- *June 2016 – December 2016*

Chair of the applied research project “*EpiHelmet™*” aimed at supporting the validation of a new medical device developed to support the diagnosis of epilepsy through the execution of an electroencephalograph with a wireless helmet, by designing the service model, business model and business plan with reference to Italian and European B2B market (hospitals). Thanks to the project carried out, the supplier has defined

its own strategy and has applied for a second grant to implement a European multi-centric study. The activity was carried out within the HORIZON 2020 SME INSTRUMENT PHASE 1

- *June 2014 – May 2017*  
Co-chair of the research project “*Public Management Research: Health & Education System Assessment*” aimed at improving the current performances of the national healthcare and education systems by the analysis of administrative databases. Administrative Database Research is an emerging research stream that is gathering growing consensus by scholars of public management which research on New Public Management (NPM) and Evidence-Based Management (EBM). This project has been funded by Politecnico di Milano as one of the most promising research ideas; the selection process has involved an international blind peer-to-peer assessment. The project will last 36 months. Co-chair is Prof. Agasisti T
- *May 2016 – April 2017*  
Chair of the DIG-Politecnico di Milano team within the project “Definizione e sperimentazione di un modello dei flussi degli accessi a pronto soccorso, dei ricoveri ospedalieri, e costruzione di un sistema di georeferenziazione” funded by Eupolis - Lombardy Region (code RES15002), whose goal was to develop and validate software for a geo-referenced analysis of the patient flows in the Lombardy Region, and its subsequent release to Lombardia Informatica Spa for the integration with regional health information systems. Emanuele Lettieri coordinated, on the one hand, the DIG research team for the theoretical and methodological development of the functionalities that the software should be equipped of and, on the other hand, the coordination of a software company to code the software according to the specifications defined by DIG
- *April 2015 – December 2015*  
Chair of the applied research project “*Blue Moon*” aimed at supporting the validation of a new medical device developed to support the wireless monitoring of new-borns in their first hours of life, by designing the service model, business model and business plan with reference to Italian and European hospitals. Thanks to the project carried out, the supplier has defined its own strategy and has applied for a second grant to implement a European multi-centric study. The activity was carried out within the HORIZON 2020 SME INSTRUMENT PHASE 1
- *Year 2014 – 2015*  
Key participant of the DIG-Politecnico di Milano research team within the research project ABILITY-TelerehABILITation (Integrated Platform enabling the remote delivery and control of physical and cognitive rehabilitation, and self-management) funded with €1,632 million from the Lombardy Region under the program POR-FESR Competitiveness Lombardy Region 2007-2013, whose objective consisted in the Development of a Personal Smart Health Community to support rehabilitation Cognitive, motor and behavioral behavior for patients with dementia at different levels of severity through the collection of data from heterogeneous sources for the management, monitoring and delivery of physical-cognitive rehabilitation exercises of the elderly in your home. Emanuele Lettieri, in particular, was responsible for coordinating the DIG research team and the partners in defining the impact assessment methodology according to the ELSA (Ethical, Legal & Social Aspects) methodology for a possible adoption by public actors (primarily local and public health companies)
- *Year 2013 – Year 2014*  
Co-chair of the research project “Health4All” aimed at developing the blueprint of a primary care center that could be built and managed with very limited capital budgets. The project has the ambitious social goal to improve primary care in low-income, developing Countries. This project has been funded by Politecnico di Milano within its funding program for socially relevant research projects. This project will last 24 months. Co-chairs were: Prof. Capolongo S and Prof. Paoletti I
- *Year 2013*  
Chair of the applied research project “*Visionaire™*” aimed at understanding the readiness/resistance of hospital surgical units to adopt a technology that claims to minimize the adverse events caused by less trained surgeons. The project focused to the changes in the processes, the practices and the behaviours. This project has lasted one year and has been funded by a biomedical company (any conflict of interested has been managed accordingly to the consolidated international practice). I have been the only coordinator of this project
- *Year 2012*  
Chair of the applied research project “Health Technology Assessment: a new surgical tool?” aimed at understanding why HTA-oriented behavior fail to diffuse among surgeons. This project has been endorsed

and promoted by the Scientific Boards of the two most important Scientific Associations for Surgeons in Italy: SIC (Italian Association of Surgery) and ACOI (Italian Association of Hospital Surgeons). This project has lasted one year and has been funded by a biomedical company (any conflict of interested has been managed accordingly to the consolidated international practice)

- *From 2011 to 2015*  
Chair of the research project “Cost-Utility Analysis (CUA) of innovative knee prostheses for trans-femoral amputees” aimed at developing evidence-based guidelines for the selection of the more value-for-money knee prosthesis. This project has produced already significant results through two distinct studies. The former dealt with the assessment of current performances through the analysis of the administrative databases. The latter dealt with an observational study on 127 patients with collection of primary data (to my best knowledge this is the larger sample ever collect about these technologies). This project will last five years and has been funded by INAIL (i.e. the Italian Workers’ Compensation Authority). All potential conflicts of interest have been managed accordingly to the well consolidated international practice. I am the only coordinator of this project
- *From 2011 to 2012*  
Co-chair of the research project “NESSWELL - NuovE Soluzioni per la Security e la Safety per il settore del WELLness” (in English: New Solutions for Security and Safety in the Wellbeing Industry). of the We) aimed at identifying attractive entrepreneurial opportunities for Small & Medium Enterprises (SMEs) in the emerging wellbeing industry. In this project the progressive overlapping between care and wellbeing, thermals and spas, drugs and food has been investigated in depth. This project has last 18 months and has been funded by the Lombardy Region. Co-chair was Prof. Lamberti L
- *Year 2010*  
Chair of the collaborative research project “Hospital Based HTA” aimed at understanding why a HTA-based budgeting of new technologies fails to diffuse at the hospital level. In particular, the need of aligning the budgeting and the risk management processes to the HTA process has been investigated in order to define a roadmap for the diffusion of HBHTA. In particular I have coordinated a team of ten experts from different professions (health director, surgeon, nurse, clinical engineer, controller, risk manager, salesforce of biomedical technology) that delivered a white book on this topic. This project has lasted one year and has been funded by a biomedical company (any conflict of interested has been managed accordingly to the consolidated international practice)
- *From 2009 to 2010*  
Chair of the research project Q&E (Quality & Efficiency) aimed at improving the performances of the nursing homes in the Cremona County (southern Milan) in terms of effectiveness and efficiency. Nursing homes is one of the most important industries in Cremona in terms of employees and turnover. The project has been funded by the Department of Social Care of the Cremona County. The project lasted 18 months
- *From 2009 to 2010*  
Key participant to the project GPE (Gestione della Prima Emergenza) (in English: Management of first emergency) within the strategic project PROMETEO (PROtezione pubblica: MEtodologie e TEcnologie Operative) (in English: Civil Protection: Methods and Technologies) funded by Politecnico di Milano as one of the most promising research opportunities for inter-departmental collaborations. I have been in charge of defining the state of art about disaster management from both a theoretical and an empirical perspective. My collaboration to the project lasted 2 years
- *From 2008 to 2009*  
Key participant to the PRIN 2007 project titled “Intellectual capital management in healthcare” that has been developed through the in-depth collaboration among Politecnico di Milano, Università di Bologna, and Università della Basilicata. This research project was aimed at developing managerial tools that could support intellectual capital management in healthcare organizations. My contribution has been about identifying existing knowledge stocks according to the Intellectual Capital taxonomy; identifying the antecedents of knowledge sharing behaviours by healthcare professionals according to the Theory of Planned Behaviour; investigating the linkage between Intellectual Capital Management and Knowledge Sharing in order to support managers in the identification of possible interventions. This project has lasted two years.
- *From 2008 to 2010*  
Key participant to the “Health Technology Assessment (HTA) – Maugeri” project aimed at developing HTA-grounded tools that could support decision-makers in the assessment of large-scale telemedicine-



based solutions that could improve both efficacy and efficiency of the current approaches to delivery of care. In this regard, the other operating units were mainly pilots that were implementing telemedicine experimentations. I have been in charge – with Dr. Zanaboni P – to develop an Assessment Procedure which specifies: (a) evaluation phases and outcomes which Regional/National authorities could use for policy and decision making; (b) specific assessment dimensions and measures (included in a check-list) that could be used by adopting Healthcare units to evaluate telemedicine projects. The procedure was tested on two telemedicine experimentations (CHF and BPCO projects). The project lasted 30 months and was funded by the Italian Ministry of Health.

- *From 2007 to 2008*

Key participant to the “Cremona Nursing Homes” project aimed at monitoring financial performances – and their antecedents – of nursing homes in the Cremona County (southern Milan). Nursing homes is one of the most important industries in Cremona in terms of employees and turnover. The project has been funded by the Department of Social Care of the Cremona County with the aim of containing the growing losses in this industry and saves employment in the mid-long-term. My contribution has been the collection and the analysis of the financial reports of all nursing homes in this County over a period of 3 years, and the definition of an intervention roadmap. The success of this project paved the way to the next Q&E project. The project lasted 18 months

Milan, December 2<sup>nd</sup> 2019

A handwritten signature in blue ink, reading "Emanuele Lorenzi". The signature is fluid and cursive, with the first name "Emanuele" and the last name "Lorenzi" clearly distinguishable.