

# Dr Leandro Pecchia

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**Reader of Biomedical Engineering**, School of engineering, University of Warwick, [link](#)

**Director Applied Biomedical Signal Processing and Intelligent eHealth (ABSPIE)**, [link](#)

**President Elect European Alliance of Medical and Biological Engineering and Science (EAMBES)**, [link](#)

**Secretary General International Union for Physical and Engineering Sciences in Medicine (IUPESM)**, [link](#)

## Qualification Details

- 2016, Postgraduate Certificate in Academic and Professional Practice, University of Warwick, UK
- 2009, PhD in Organization and Management of Healthcare Systems, Univ. Federico II of Naples, Italy (UNINA)
- 2005, Laurea Degree (5 years degree, ante-bologna declaration system) (108/110), in Electronic Engineering UNINA

## Current positions

- **School of Engineering, University of Warwick**, Library Road, Coventry CV4 7AL, United Kingdom
  - **Reader** in Biomedical Engineering (Associate Professor 2018- 2020, Assistant Professor 2013-2018).
  - Director of Studies, Master in BME, School of Engineering, University of Warwick
- **World Health Organization (WHO) International**, Avenue Appia 20, 1202 Genève, Switzerland
  - **Innovation Manager**, COVID-19 PPE R&D, Blueprint program

## Previous Academic experience

- Oct 11-Aug 13, **Research Fellow**, MATCH project, University of Nottingham, Nottingham, UK
- Nov 09-Oct 11, **Research Fellow**, Biomedical Engineering, University Federico II of Naples, Italy
- Jun 08-Dec 08, **Visiting Research Student**, University of Sheffield, UK

## Keynotes speeches

- “Biomedical signal processing, Internet of Things & AI for wellbeing and healthcare: form non-invasive detection of hypoglycaemia to the optimization of cancer therapy”, III World Laureate Forum, 30<sup>th</sup>-October-1<sup>st</sup> November 2020, **Shanghai**
- “BME, AI & internet of things for healthy ageing”, European Council Presidency Conf BFHA2020, 3-5 June 2020, **Zagreb**
- “Deep Learning for Hypoglycemia Detection via ECG”, Int. Conf. on Intelligent Computing, 2-5 Oct 2020, **Bari**, Italy
- “The future of biomedical engineering teaching”, III ICEHTMC, Rome, 21 October 2019, **Rome**, Italy
- “European Parliament Interest Group on BME:next steps”, European Parliament, 11<sup>st</sup> Oct 2018, **Brussel**, Belgium.
- “The developmenbt of Clinical Engineering in Europe”, BEA12018, 5<sup>th</sup> Oct 2018, **Galway**, IRL
- “HTA and clinical engineering: trends, gaps and opportunities”, 20<sup>th</sup> Sept 2018, IPEM MBEC2018, **York**, UK
- “Early HTA: methods and tools to inform cost-effective design of medical devices”, World Congress on Medical Physics and Biomedical Engineering, June 3-8, 2018, **Prague**, Czech Republic.
- “Minimally invasive technologies for (physiological based) behavioural monitoring: a case study on assessment of sleep quality and pattern”, Annual Congress of the Italian Society of Paediatric Neuropsychiatry, 6<sup>th</sup> of October 2017, **Napoli**
- “Medical devices in LMICs”, Africa Health 2017, 7-9 June 2017, **Johannesburg**, South Africa
- “HTA of Medical Devices” III WHO Global Forum on Medical Devices, 10-12 May 2017, **Geneva**, Switzerland
- “Early stage HTA”, 16th Int. Conf. on BME (ICBME2016), 7-10 December 2016, **Singapore**
- “Biomedical Engineering and European policies”, European Parliament, 31<sup>st</sup> May 2016, **Brussel**, Belgium.
- “Physiological monitoring and biomedical signal processing for fall prediction in elderly”, World Congress on Medical Physics and Biomedical Engineering, June 7-12, 2015, **Toronto**, Canada.
- “Prediction of falls in the elderly using wearables ECG monitoring and AI”, CMBEBiH 2015, **Sarajevo**, 2015

## Research Grant

I have been writing (or contributing to) 20+ research projects (total value €37m, of which €4m for my lab in the last 12months):

	Funder/Co-funder	Project title	k€*	Role
Jan21/Jul2024	Horizon2020	ODIN Robot & AI for the hospital f the future (€13mil total value)	650	PI UoW, WP leader
Oct19/Jul23	Horizon2020	GATEKEEPER (€24mil tot value)	2,170	PI UoW, WP leader
March21/Sep2021	Edwards Lifesciences	Health Technology Assessment of AI-based medical devices	90	PI
March21/Sep2021	British Telecom	Pilot study on 5G and IoT for wellbeing monitoring	35	PI
Aug20/July21	EPSRC IAA	Hypoglycaemia detection via ECG&AI in metabolic chamber	60	PI
Jul20/Jun21	Wellcome Trust	Nocturnal hypoglycaemia detection via ECG&AI in real life	60	PI
Jan19/Dec20	Fernandez Foundation	Fernandez Fellowship	12	PI
Oct18/July20	GCRF	Medical devices design for Sub-Saharan Africa	40	PI
May18/April19	EPSRC	Closed-loop control for optimising chemotherapy	90	PI
July15/June18	IFMBE	HTA Division	130	Chair
Aug16/July20	WIF/EPSRC IAA	HTA of medical device in low-resource settings	90	PI
Mar 16/Sept16	Nithilium l.t.d.	Characterization of passive implantable devices	10	PI
Mar15/Mar16	The Royal Society	Sleep quality & balance	20	PI
Jan14/Sep14	European Commission	MAFEIP tool	X	Consultant
Jan14/Sep14	UoW + IFMBE	Summer School on HTA	15	PI
Jan14/Sep14	UoW	Standing Hypotension	10	PI
Dic13/Nov17	COST Action	COST EMF-MED	-	Managing Committee
July 12/June 15	PON	SHARE	464	CI with Dr Melillo
Feb 11/Feb 12	Fellowship/It. Research C.	Stress Project	30	CI with Prof Bracale
Set 08/Set 09	Italian NHS/Mosaico‡	Telemedicine in remote areas	100	PM
Jun 08/ Mar 10	POR Campania	Remote Health Monitoring	550	PM

\* My lab budget in thousands of euro; ‡ National tender; PI: principal investigator; CI: Coinvestigator, PM: Project Manager, WP work package.

## Awards/recognitions

- **Fellow**, IUPESM (since 2020)
- **Fellow**, British Higher Education Academy (Since 2009)
- 2019, IFMBE Young Investigator Competition Award, *Best Paper*, ICBHI 2019, **Taipei**, Taiwan, 17-20 April 2019
- 2018, IFMBE Student Design Competition, *Bronze Award*, World Cong. on Med. Phy. & BME, 3-8 June 2018, **Prague**.
- 2018. Qualified as *Full Professor in Biomedical Engineering* according to the Italian Professional Qualification Scheme (i.e., *Abilitazioni Scientifiche Nazionale*, art. 16 law 240/2010), **Italy**<sup>1</sup>
- 2018, Clinical Engineering Best Paper Award, *Best Paper* (paper on Clinical Engineering published in 2017)
- 2018, Honorary Member of the Bosnia and Herzegovina BME Society, for “*Outstanding Contribution to the development of Biomedical Engineering in Bosnia and Herzegovina*”, March 2018, **Sarajevo**, Bosnia and Herzegovina
- 2017, Young Investigator Competition Award 2017, Merit Award, IFMBE EMBE'17, 11-15 June 2017, **Tampere**, Finland
- 2015, Young Investigator Competition Award 2015, Merit Award, World Cong. on Med. Phys. & BME, 7-12 June '15, **Toronto**.

## Main Roles in Scientific and Professional Societies

- 2019-2021 **President Elect**, European Alliance of Medical and Biological Engineering and Science (EAMBES)
- 2018-2022 **Secretary General** of the International Union for Physical and Engineering Sciences in Medicine (IUPESM)
- 2018-2022 **Treasurer** Clinical Engineering Division, *International Federation of Medical and Biomedical Engineering* (IFMBE)
- 2016-2019 **Secretariat** of the first *European Parliament Interest Group on Biomedical Engineering* at the European Parliament
- 2015-2018 **Chair** (2015-2018) and **Treasurer** (2012-2015), IFMBE *Health Technology Assessment Division* (HTAD)
- 2015-2018 **Chair** of the Public Affairs Working Group (PAWG) of *EAMBES*

## Teaching/Mentoring

- *Mentoring 3 senior post-doc, 4 post-docs and supervised 11 PhD students (7 ongoing, 4 completed successfully their PhD).*
- *Supervisor* of more than 30 u.g. and p.g. projects in the UK and more than 60 in Italy.
- *PhD external examiner*: Un. of Reading, Istituto Sant'Anna di Pisa, Un. di Parma, Un. La Sapienza di Roma, Un. of Sarajevo
- Taught modules:
  - 2020/21, *Module Leader*, “*Medical Device design, management and assessment*” BEng/MEng in Biomedical Engineering (average 10 studs per year)
  - 18/19/20/21, *Module Leader*, “*Biomedical and Clinical Engineering*”, 2<sup>nd</sup> year BEng (45 studs)
  - 2018/19, *Module Leader*; “*Fundamentals of Biomedical Engineering*”, MSc/PhD in Biomedical Engineering (12 studs)
  - 2015/16 to 2020/21, *Module Leader*, “*Health Technology Engineering: design, management and assessment of health technologies*” MSc /PhD in Biomedical Engineering (average 10 studs per year)
  - 2014/15, *Module Leader* “*Circuits, Devices and Power Systems*”, 1<sup>st</sup> year BEng/MEng in General Engineering (350 studs)
  - In Italy: 2010/12, “*HTA*”, Master in Clinical Risk Management and Health Economy, Univ. of Sannio, Italy; 2005/11, “*HTA*”, “*Telemedicine*”, “*Biomedical devices*”, Master in Health Economy, Faculty of Medicine, UNINA; 2005/11, “*Principles of Biomedical Engineering*”, “*Management and Automation of Healthcare Organizations*”, “*Telemedicine*”, “*Biomedical Devices*”, BEng and MSc in Biomedical Engineering, UNINA
- *Invited lectures*: “*Resilience of medical devices in low-resource settings: preliminary results from field studies in Sub Saharan Africa*” (5<sup>th</sup> Dec 2018, University Strathclyde, **Glasgow**, UK), “*Applied Biomedical Signal Processing and Intelligent eHealth*” (8<sup>th</sup> Aug 2018, UCL, **London**, UK), “*Early Health Technology Assessment (eHTA): reverse engineering applied to health economics to increase healthcare innovation cost-effectiveness*” (26 November 2017, Duke-NUS Medical School, **Singapore**)
- *Founder and coordinator of the IFMBE training programme* (Summer School and eLearning) in HTA: <http://htad.ifmbe.org/>

## Patent Application

- PCT application number PCT/GB2015/052581 and No RM2014A000504, title “*Method to predict falls*”, status “*pending*”, authors: L **Pecchia**, S Stranges, P Melillo, G De Pietro, G Sannino, filed the 5<sup>th</sup> of September 2014.
- PCT application number GB1912487.4, title “*Electrocardiogram-based blood glucose level monitoring*”, authors Leandro **Pecchia**, Mihaela Porumb, filed 30<sup>th</sup> of August 2019

## Editorial participations

- Assistant Editor of the *IEEE Journal of Biomedical and Health Informatics* (IEEE)
- Assistant Editor of the *Biomedical Signal Processing and Control Journal* (Elsevier)
- Assistant Editor of *Health and Technology Journal* (Springer).
- Guest Editor for the *BMC Medical Informatics and Decision Making Journal*<sup>2</sup>
- Guest Editor for the *IET Healthcare Technology Letters Journal*<sup>3</sup>.

## Conference organization

- 2021 **Organising Committee**, World Congress on Medical Physics and Biomedical Engineering, 12-17 June 2021, **Singapore**
- 2020 **Scientific Committee**, IV ICEHTMC, 28-29 October 2021, **Lake Buena Vista, Florida, USA**
- 2019 **Local Organising Committee**, III ICEHTMC, 20-22 October 2019, **Rome, Italy**
- 2019 **Track Chair**, HTA & Clinical Engineering, MEDICON2018, 26-28 Sep '19, **Coimbra**, Portugal
- 2017 **Chair**, 2<sup>nd</sup> Summer School on Health Technology Assessment, 28-30 September 2017, University of **Patra**, Greece
- 2017 **Track Chair**, Health Technology Assessment at the IFMBE EMBE'17 & NBC'17, 11-15 June 2017, **Tampere** Finland
- 2016 **Conference Chair**, Int. Symposium on Analytic Hierarchy Process (ISAHP2016), 4-7 August 2016, **London**, UK

<sup>1</sup> The Italian Ministry of Research and High Education, <https://www.anvur.it/en/activities/asn/>

<sup>2</sup> <http://www2.warwick.ac.uk/fac/sci/eng/research/grouplist/biomedicaleng/abspie/bmcspecial>

<sup>3</sup> <http://digital-library.theiet.org/journals/htl/special-issues>

- 2016 | **Track Chair**, Track 10: “Clinical engineering” and “Health Technology Assessment”, MEDICON2016, 31<sup>st</sup> March-2<sup>nd</sup> April 2016, **Paphos**, Cyprus
- 2015 | **Chair**: 1<sup>st</sup> Summer School on Health Technology Assessment, 8<sup>th</sup>-10<sup>th</sup> September 2015, University of **Warwick**, UK
- 2015 | **Track Chair**, Track 13: *Informatics in Health Care and Public Health*, World Congress on Medical physics and Biomedical Engineering, 7-12 June 2015, **Toronto**, Canada, WC2015
- 2014 | **Conference Chair**, 6th Int. Work-conference on Ambient Assisted Living (IWAAL2014), **Belfast** 2-5 December 2014
- 2011-14 | International Program Committee Member: IFMBE MBEC2014, **Dubrovnik**, Croatia; ISAHP2014, **Washington DC**, USA; ICHI2013, **Villamoura**, Portugal; MEDICON2013, **Seville**, Spain; ISAHP2013, **Kuala Lumpur**, Malaysia; MIM2013, **St. Petersburg**, Russia; ISAHP2011, **Sorrento** (Naples), Italy.

#### Invited speeches

“Gatekeeping platforms in healthcare”, British Chamber of Commerce at Brussel, **Brussel**, 25<sup>th</sup> of November 2020; “Machine learning for precision medicine and remote monitoring of chronic conditions”, IEEE Italian Chapter, Università Campus Bio-Medico di **Roma**, 5<sup>th</sup> of November 2020; “Applied Biomedical Signal Processing and Intelligent eHealth”, 26<sup>th</sup> of June 2020, Monterrey University, **Mexico City**, Mexico; “Medical device regulation, assessment and management”, 5 December 2019, University Abomey Calavi, **Cotonou**, Benin; “Medical device regulation and assessment: new challenges for biomedical engineers”, XXXVIII Scuola annuale di Bioingegneria, 2019, **Bressanone**, Italy; “Artificial Intelligence for redesigning medical devices for low-resource settings”, ICBHI2019, 17-20 April 19, **Taipei**, Taiwan; “3D printing, artificial intelligence and design of medical devices for low resource settings”, IV WHO Global Forum on Medical Devices, 13-15 Dec 2018, **Visakhapatnam**, India; “The need for RWD/RWE: recommendations from IFMBE”, SIHTA2018, 11-13 Oct 2018, **Rome**, Italy; “Towards a framework for designing medical devices resilient to lower-resource setting working conditions”, 1<sup>st</sup> Int. Conf. on Collaborative BME for Open Source Medical Technologies, **Pisa**, Italy, 1<sup>st</sup> Sept 2018; “Adverse event prediction”, II ICEHTMC 2017, 21-22 September 2017, **Sao Paulo**, Brazil; “HTA in Low income countries”, HTAi Meeting, 17-21 June 2017, **Roma**, Italy; “HTA in Low income countries”, III WHO Global Forum on Medical Devices, 10-12 May 2017, **Geneva**, Switzerland; “HTA of medical devices: challenges in design and adoption”, Africa Health 2016, 8-10 June 2016, **Johannesburg**, South Africa; “Does Heart Rate Variability serve as a potential fall risk factor in the elderly?”, ECSS2016, 6<sup>th</sup>-9<sup>th</sup> July 2016, **Vienna**, Austria; “Pre-market HTA of Medical Devices: an overview”, World Congress on Medical Physics and Biomedical Engineering, June 7-12, 2015, **Toronto**, Canada; “Premarket evaluation of medical devices”, MBEC2014, **Dubrovnik**, Croatia; “Modelli di supporto alle decisioni”, SIAIS 2013, **Florence**, Italy; “The rule of Biomedical Engineers in HTA”, MEDICON 2013, **Seville**, Spain; “Application of AHP in the Health Technology Assessment”, ISAHP2013, **Kuala Lumpur**, Malaysia; “From the research to the market”, XXXI Scuola annuale di Bioingegneria, 2012, **Bressanone**, Italy; “Application of AHP via the web”, ISAHP 2009, **Pittsburgh**, Pennsylvania, USA

#### Memberships

- 2017 | Member, British Institute of Physics and Engineering in Medicine (IPEM)
- 2009 | *Albo degli Ingegneri*, Provincia di Napoli, Napoli, Italy

## Papers

Author of 100+ peer-reviewed papers, including journal, conferences, book chapters, patents. *Further details in:* <http://scholar.google.com/citations?user=VtMBzjYAAAAJ&hl=it>

1. Castaldo R, Cavalieri C, Soricelli A, Salvatore M, **Pecchia** L and Franzese M (2021) Machine learning for prostate cancer diagnosis: a systematic literature review of radiomic and genomic method performance, *Journal of Medical Internet Research* (Accepted the 17th of January 2021)
2. Komarzynski Sandra, Wreglesworth Nicholas I, Griffiths Dawn, **Pecchia** L, Subbe Christian P., Hughes Stephen F, Davies Elin H., Innominato Pasquale F, (2021) Embracing Change: Learnings from implementing multidimensional digital remote monitoring in oncology patients at a district general hospital during the COVID-19 pandemic. *JCO Clinical Cancer Informatics*, 5 (2021) 216-220. [View](#)
3. Castaldo R., Chappell M. J., Byrne H., Innominato P. F., Hughes S., Pescapè A., & L. **Pecchia**. (2021). Detection of melatonin-onset in real settings via wearable sensors and artificial intelligence. A pilot Study. *Biomedical Signal Processing and Control*, 65, 2021, [View](#)
4. Porumb, M, Iadanza, E, Massaro, S, **Pecchia**, L (2020) A convolutional neural network approach to detect congestive heart failure. *Biomedical Signal Processing and Control*, 55, [View](#)
5. Porumb, M, Stranges, S, Pescapà, A, **Pecchia**, L (2020) Precision medicine and artificial intelligence : a pilot study on deep learning for hypoglycemic events detection based on ECG. *Scientific Reports*, 10 (1), [View](#)
6. **Pecchia** L, Piaggio D, Maccaro A, Formisano C, Iadanza E. (2020) The inadequacy of regulatory frameworks in time of crisis and in low-resource settings: personal protective equipment and COVID-19, *Health and Technology*, 2020, [View](#)
7. Iadanza E, Goretti F, Sorelli M, Melillo P, **Pecchia** L, Simonelli F, Gerardelli M (2020), “Automatic Detection of Genetic Diseases in Pediatric Age Using Pupillometry”, *IEEE Access*, 8(1):34949-34961, [View](#)
8. Medenou M, Ahouandjinou M.H., Piaggio D., Houessouvo R.C., **Pecchia** L, Jossou T.R, (2020) New intelligent network approach for monitoring physiological parameters: the case of Benin, *Health and Technology*, <https://doi.org/10.1007/s12553-020-00418-5>, [View](#)
9. Marano S., Marano M., **Pecchia** L., *Frontiers in Hemodialysis Part II: Toward Personalized and Optimized Therapy*, *Biomedical Signal Processing and Control*, (2020), Vol. 61, <https://doi.org/10.1016/j.bspc.2020.102029>
10. Di Pietro L, Piaggio D, Oronti I, Maccaro A, Houessouvo RC , Medenou D, De Maria C, **Pecchia** L, Ahluwalia A. (2020) “A framework for assessing healthcare facilities in low-resource settings: field studies in Benin and Uganda”, *Journal of Medical and Biological Engineering*, Vol. 40, <https://doi.org/10.1007/s40846-020-00546-3>
11. Pirc E, Federici C, Bošnjak M, Perić B, Reberšek M, **Pecchia** L., et al. (2020), “Early cost-effectiveness analysis of electrochemotherapy as a prospect treatment modality for skin melanoma”, *Clinical Therapeutics*, Vol 42 (8), <https://doi.org/10.1016/j.clinthera.2020.06.013>
12. Porumb M., Corbin G, Hatterslay J, **Pecchia** L. (2020) "Nocturnal Low Glucose Detection in Healthy, Elderly from one-lead ECG using Convolutional Denoising Autoencoders", *Biomedical Signal Processing and Control*, Vol. 56, <https://doi.org/10.1016/j.bspc.2020.102054>
13. Andellini M., Nocchi F., De Santis S., Bassanelli E., Ritrovato M, **Pecchia** L. (2020) Clinical needs and technical requirements for ventilators for COVID-19 treatment critical patients: an evidence-based comparison for adult and pediatric age, *Health and Technology*, <https://doi.org/10.1007/s12553-020-00478-7>.
14. Merola, G., Sciuto, A., Pirozzi, F., Andreuccetti, J., Pignata, G., Corcione, F., ... **Pecchia** L. & Ceccarelli, G. (2020). Is robotic right colectomy economically sustainable? a multicentre retrospective comparative study and cost analysis. *Surgical Endoscopy*, Vol 34 (9): 4041-4047. <https://doi.org/10.1007/s00464-019-07193-z>
15. Ahouandjinou, M H; Medenou, D; **Pecchia**, L; Houessouvo, R C; Jossou, T R; , (2020), Modeling an Integrated Network for Remote Patient Monitoring, based on the Internet of Things for a More Preventive and Predictive Health System in West Africa, *Global Clinical Engineering Journal*, 3, (2), 19-21, <https://doi.org/10.31354/globalce.v3i2.85>
16. **Pecchia** L, Pallikarakis N, Magjarević R, Iadanza E (2019) “Health Technology Assessment and Biomedical Engineering: global trends, gaps and opportunities”, *Medical Engineering & Physics*. 72 (2019): 19-26 <https://doi.org/10.1016/j.medengphy.2019.08.008>
17. Pokvić LG, Badnjevic A, **Pecchia** L Evidence-based Clinical Engineering: Machine learning algorithms for prediction of defibrillator performance, *Biomedical Signal Processing and Control*. 2019, Vol 54, <https://doi.org/10.1016/j.bspc.2019.101629>
18. Castaldo R., Montesinos L., Melillo P., James C. and **Pecchia** L. (2019). Ultra-short term HRV features as surrogates of short term HRV: a case study on mental stress detection in real life. *BMC Medical Informatics and Decision Making*, 2019, 19:12, <https://doi.org/10.1186/s12911-019-0742-y>
19. Bracale, U., Melillo, P., Piaggio, D., **Pecchia**, L.... & Stabilini, C. (2019). Is Shouldice the best NON-MESH inguinal hernia repair technique? A systematic review and network metanalysis of randomized controlled trials comparing Shouldice and Desarda. *International Journal of Surgery*, 62. pp. 12-21. doi:10.1016/j.ijsu.2019.01.001
20. S. Massaro, L. **Pecchia**, (2019) *Heart Rate Variability (HRV) Analysis: A Methodology for Organizational Neuroscience*, *Organizational Research Methods*, 22(1): 354-393, <https://doi.org/10.1177/1094428116681072>
21. Medenou, Daton, Fagbemi, Latif A., Houessouvo, Roland C., Jossou, Thierry R., Ahouandjinou, Metowanou H., Piaggio, Davide, Kinnouezan, Chams-Deen A., Monteiro, Gabriel A., Idrissou, Moubarrack A. Y., Iadanza, Ernesto and **Pecchia**, Leandro

- (2019) Medical devices in Sub-Saharan Africa: optimal assistance via a Computerized Maintenance Management System (CMMS) in Benin. *Health and Technology*. 9.3 (2019): 219-232. doi:10.1007/s12553-018-00283-3
22. Montesinos L, Castaldo R, and **Pecchia L**. "On the use of approximate entropy and sample entropy with centre of pressure time-series." *Journal of Neuro Engineering and Rehabilitation* 15.1 (2018): 116. doi: 10.1186/s12984-018-0465-9.
  23. Montesinos L, Castaldo R, Cappuccio FP, **Pecchia L**, Day-to-day variations in sleep quality affect standing balance in healthy adults, *Scientific Reports*, 2018, 8.1:17504, <https://doi.org/10.1038/s41598-018-36053-4>
  24. Polisena J, Castaldo R, Ciani O, Federici C, Borsci S, Ritrovato M, Clark D and **Pecchia L**, (2018). HTA Guidelines for Medical Devices: How can We Address the Gaps? The International Federation of Medical and Biological Engineering Perspective, *Int J Technol Assess Health Care*, 34(3):276-289, doi: 10.1017/S0266462318000314.
  25. Pirc, E., **Pecchia, L.**, Reberšek, M., Serša, G., Snoj, M., Grošelj, A., & Miklavčič, D. (2018). Study design of a medical device pre-market assessment: a case study on electrochemotherapy. *Slovenian Medical Journal*, 87(1-2), DOI: <https://doi.org/10.6016/ZdravVestn.2482>
  26. **Pecchia, L.**, Castaldo, R., Montesinos, L., & Melillo, P. (2018). Are ultra-short Heart Rate Variability features good surrogates of short term ones? State-of-the-art review and recommendations. *Healthcare Technology Letters*, 5(3): 94-100, DOI: 10.1049/hlt.2017.0090
  27. L. Montesinos, R. Castaldo and **L. Pecchia** (2017), Wearable Inertial Sensors for Fall Risk Assessment and Prediction in Older Adults: A Systematic Review and Meta-Analysis, *IEEE Transactions on Neural Systems & Rehabilitation Engineering*, 26(3), 573-582, DOI: 10.1109/TNSRE.2017.2771383.
  28. R. Castaldo, P. Melillo, R. Izzo, N. De Luca, **L. Pecchia**, (2017) *Fall prediction in hypertensive patients via short-term HRV Analysis*, IEEE Journal of Biomedical and Health Informatics, Vol. 21(2): 399-406.
  29. Paolo Melillo, Ada Orrico, Franco Chirico, Leandro **Pecchia**, Settimio Rossi, Francesco Testa, Francesca Simonelli, (2017) *Identifying fallers among ophthalmic patients using classification tree methodology*, PLOS ONE 2017 Mar 23;12(3):e0174083. doi:10.1371/journal.pone.0174083
  30. Bracale, U., Sciuto, A., Andreuccetti, J., Merola, G., **Pecchia, L.**, Melillo, P., & Pignata, G. (2017). *Laparoscopic recurrent inguinal hernia repair during the learning curve: it can be done?* Annali Italiani di Chirurgia, 88, 62
  31. S Borsci, J Kuljis; J Barnett, **L Pecchia** (2016), *Beyond the user preferences: Aligning the prototype design to the users' expectations*. Human Factors and Ergonomics in Manufacturing & Service Industries 26 (1), 16-39. DOI: 10.1002/hfm.20611
  32. P. Melillo, R. Izzo, A. Orrico, P. Scala, M. Attanasio, M. Mirra, N. De Luca, **L. Pecchia** (2015) Automatic prediction of cardiovascular and cerebrovascular events using Heart Rate Variability analysis, *PLoS one*, 10(3): e0118504.
  33. Melillo, P., Orrico, A., Scala, P., Crispino, F., & **Pecchia, L.** (2015). *Cloud-Based Smart Health Monitoring System for Automatic Cardiovascular and Fall Risk Assessment in Hypertensive Patients*. Journal of medical systems, 39(10), 1-7.
  34. Sannino G, Melillo P, De Pietro G, Stranges S, **Pecchia L**, (2015) *Blood Pressure Drop Prediction by using HRV measurements in Orthostatic Hypotension*, Journal of Medical Systems, 39(11):292, DOI: 10.1007/s10916-015-0292-5
  35. G. Fico, E. Gaeta, M.T. Arredondo and **L. Pecchia**, (2015) *Analytic Hierarchy Process to define the most important factors and related technologies for empowering elderly people in taking an active role in their health*, Journal of Medical Systems, 39(9) (2015): 1-7.
  36. Sannino G, Melillo P, De Pietro G, Stranges S, **Pecchia L**, (2015) "Short term heart rate variability to predict blood pressure drops due to standing: a pilot study", BMC Medical Informatics and Decision Making, 2015, 15(S3):S2 doi:10.1186/1472-6947-15-S3-S2
  37. P. Melillo, A. Orrico, M. Attanasio, S. Rossi, **L. Pecchia**, F. Chirico, F. Testa, F. Simonelli, (2015) "A pilot study for development of a novel tool for clinical decision making to identify fallers among ophthalmic patients", BMC Medical Informatics and Decision Making, 15(S3):S6 doi:10.1186/1472-6947-15-S3-S6
  38. Castaldo, R, MelilloP, Bracale U, Caserta M, Triassi M, **Pecchia L** "Mental stress and HRV: systematic review with meta-analysis", Biomedical Signal Processing and Control (2015), Volume 18, April 2015, Pages 370–377. DOI: 10.1016/j.bspc.2015.02.012
  39. Melillo P, Jovic A, De Luca N and **Pecchia L** (2015) *An automatic classifier based on heart rate variability to identify fallers among hypertensive subjects*, IET Healthcare Technology Letters, 2 (4): p 89-94, DOI: 10.1049/hlt.2015.0012
  40. A Petrillo, F De Felice, C Vanzanella, F Crispino, J Martin, S Morgan, M Craven, **L Pecchia**, "Government Policy and Health Care management: proposal of a shared decision-making model", 2015, International Journal of Management and Decision Making, 14(3), 183-204. DOI: 10.1504/IJMDM.2015.070757
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#### Relevant oral presentations (only abstract)

1. Pecchia, L., et al. *HTAi, ISPOR, InHTA, IFMBE, IUPESM and WHO join panel on HTA of medical devices*. in *Fourth WHO Global Forum on Medical Devices*. 2018. AMTZ-Kalam Convention Centre, Visakhapatnam, India.
2. Pecchia, L., J. Polisen, and A.M. Pavlock. *ISPOR International Initiatives on the Assessment of the Value of Medical Technologies*. in *Fourth WHO Global Forum on Medical Devices*. 2018. AMTZ-Kalam Convention Centre, Visakhapatnam, India.
3. Pecchia, L., et al. *The Health Technology Assessment Division (HTAD) of the International Federation for Medical and Biological Engineering (IFMBE): the crucial role of biomedical engineers*. in *Fourth WHO Global Forum on Medical Devices*. 2018. AMTZ-Kalam Convention Centre, Visakhapatnam, India.
4. Pecchia, L., et al. *Harmonising medical device and medical location policies among Africa and Europe*. in *Fourth WHO Global Forum on Medical Devices*. 2018. AMTZ-Kalam Convention Centre, Visakhapatnam, India.
5. Pecchia, L., et al. *Design, assessment and maintenance of medical devices resilience to Sub Saharan Africa (SSA) working conditions: the Warwick experience*. in *Fourth WHO Global Forum on Medical Devices*. 2018. AMTZ-Kalam Convention Centre, Visakhapatnam, India.

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7. Conto, M., et al. *The International Federation of Medical and Biological Engineering (IFMBE) recommendations for HTA Methods Guidelines for Medical Devices: An In-Depth Dialogue*. in *Fourth WHO Global Forum on Medical Devices*. 2018. AMTZ-Kalam Convention Centre, Visakhapatnam, India.
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9. Pecchia, L. and N. Pallikarakis. *Assessment of medical devices in low-income settings*. in *Third WHO Global Forum on Medical Devices*. 2017. Geneva, Switzerland.