Dr Leandro Pecchia, PhD

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Reader of Biomedical Engineering, *School of engineering, Faculty of Science, Engineering and Medicine, University of Warwick, link*
Secretary General *International Union for Physical and Engineering Sciences in Medicine (IUPESM), link*
President *European Alliance of Medical and Biological Engineering and Science (EAMBES), link*
Director *Applied Biomedical Signal Processing and Intelligent eHealth (ABSPIE), link*

Qualification Details

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

Current positions

- ***University of Warwick***, *School of Engineering, Library Road, Coventry CV4 7AL, United Kingdom*
  - ***Reader*** in Biomedical Engineering (*Associate Professor Sep18- May20, Assistant Professor Sep 13-Aug 18*).
  - ***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, *UNINA, Italy*
- Jun 08-Jan 09, ***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, 30th-October-1st November 2020,* **Shangai**
- *"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, 11st Oct 2018, **Brussel**, Belgium.
- *"The developmenbt of Clinical Engineering in Europe", BEAI2018, 5th Oct 2018,* **Galway**, IRL
- "HTA and clinical engineering: trends, gaps and opportunities", 20th 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, 6th 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**, Switzerld
- *"Early stage HTA", 16th Int. Conf. on BME (ICBME2016), 7-10 December 2016,* **Singapore**
- "*Biomedical Engineering and European policies*", European Parliament, 31st 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

	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 (BT)	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,* Bosnia and Herzegovenia Academy of Sciance and Arts (since 2021)
- *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 Scientifica Nazionale*, art. 16 law 240/2010), **Italy**[1]
- 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 EMBEC'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

2021-2023	**President**, European Alliance of Medical and Biological Engineering and Science (EAMBES)
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", 2nd 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", 1st year BEng/MEng in General Engineering (350 studs)*
  - In Italy:
    - 2010/12,"*HTA", Master in Clinical Risk Management and Health Economy, Faculty of Medicine, Univ. of Sannio;*
    - 2005/11,*"HTA", "Telemedicine", "Medical devices", Master in Health Economics, Faculty of Medicine, UNINA;*
    - 2005/11,*"Principles of Biomedical Engineering", "Management and Automation of Healthcare Organizations", "Telemedicine", "Medical Devices", BEng and MSc in Biomedical Engendering, UNINA;*
    - 2005/2009, "Biomedical Instrumentation", "Telemedicine", BSc and MSc in Nursing, Faculty of Medicine, UNINA;
- Invited lectures: *"Resilience of medical devices in low-resource settings: preliminary results from field studies in Sub Saharan Africa"* (5th Dec 2018, University Strathclyde, **Glasgow**, UK), *"Applied Biomedical Signal Processing and Intelligent eHealth"* (8th 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 Applications

- 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 5th of September 2014.
- PCT application number PCT/GB1912487.4, title "Electrocardiogram-based blood glucose level monitoring", authors Leandro **Pecchia**, Mihaela Porumb, filed 30th of August 2019

Editorial partecipations

- 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, IET Healthcare Technology Letters Journal*.

Conference organizaiton

2021	**Organising Committee,** World Congress on Medical Physics and Biomedical Engineering, 12-17June 2021, **Singapore**
2020	**Scientific Committee**, IV ICEHTMC, 28-29 October 2021, **Lake Buena Vusta, 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*, 2nd Summer School on Health Technology Assessment, 28-30 September 2017, University of **Patra**, Greece
2017	**Track Chair,** Health Technology Assessment at the IFMBE EMBEC'17 & NBC'17, 11-15 June 2017, **Tampere** Finland

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

2016	**Conference Chair,** Int. Symposium on Analytic Hierarchy Process (ISAHP2016), 4-7 August 2016, **London**, UK
2016	**Track Chair,** Track *10: "Clinical engineering" and "Health Technology Assessment"*, MEDICON2016, 31st March-2nd April 2016, **Paphos**, Cyprus
2015	**Chair:** 1st Summer School on Health Technology Assessment, 8th-10th 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**, 25th of November 2020; "*Machine learning for precision medicine and remote monitoring of chronic conditions*", IEEE Italian Chapter, Università Campus Bio-Medico di **Roma**, 5th of November 2020; "*Applied Biomedical Signal Processing and Intelligent eHealth*", 26th 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",* 1st Int. Conf. on Collaborative BME for Open Source Medical Technologies, **Pisa**, Italy, 1st 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**, Switzerld;"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, 6th-9th 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)
2017	Member, IEEE and IEEE EMBS
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. Piaggio D., Namm G., Melillo P, Simonelli F., Iadanza E., Pecchia L., (accepted May 2021), Pupillometry via smartphone for low-resource settings, Biocybernetics and Biomedical Engineering

2. Dimauro G, Bevilacqua V, **Pecchia** L (2021), Bioelectronic Technologies and Artificial Intelligence for Medical Diagnosis and Healthcare, Electronics, 10(11):1242. View

3. Martinez-Ríosa E, Montesinosa L, Alfaro-Poncea M, **Pecchia** L (2021), A review of machine learning in hypertension detection and blood pressure estimation based on clinical and physiological data, Biomedical Signal Processing and Control, 68 (2021). View

4. Maccaro A, Piaggio D, Pagliara S, **Pecchia** L, (2021) The role of ethics in science. A systematic literature review starting from the first wave of Covid-19, Health and Technology. View

5. Polisena J , Andellini M, Salerno P, Borsci S, **Pecchia** L, Iadanza E, Case Studies on the Use of Sentiment Analysis to Assess the Effectiveness and Safety of Health Technologies. IEEE Access. 9 (2021):66043-66051. View

6. Komarzynski S, Wreglesworth N I, Griffiths D, **Pecchia** L, Subbe C P., Hughes S F, Davies E H., Innominato P 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

7. 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, Vol 23 (4), View

8. 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

9. Maccaro, A., Piaggio, D., Dodaro, C. A., & Pecchia, L. (2020). Mental illness in some Sub Saharan African communities: the perspective of Bioethics and transcultural nursing. Medicina e Morale, 69(4), 493-502. View

10. 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

11. 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

12. **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

13. 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

14. 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

15. 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

16. 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

17. 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

18. 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

19. 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.

20. 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

21. 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

22. **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

23. 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

24. 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

25. 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

26. 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

27. Medenou, Daton, Fagbemi, Latif A., Houessouvo, Roland C., Jossou, Thierry R., Ahouandjinou, Metowanou H., Piaggio, Davide, Kinnouezan, Chams-Deen A., Monteiro, Gabriel A., Idrissou, Moubarack 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

28. 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.

29. 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

30. 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.

31. Pirc, E., **Pecchia**, L., Reberšek, M., Serša, G., Snoj, M., Grošelj, A., & Miklvavčič, 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

32. **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/htl.2017.0090

33. 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.

34. 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.

35. 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

36. 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

37. 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

38. 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.

39. 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.

40. 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

41. 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.

42. 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

43. 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

44. 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

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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. Polisena, 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.
6. Pecchia, L., et al. *3D printing, artificial intelligence and design of medical devices for low resource settings*. in *Fourth WHO Global Forum on Medical Devices*. 2018. AMTZ-Kalam Convention Centre, Visakhapatnam, India.
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.
8. Bergamasco, S., et al. *Extending the lifespan of donated medical devices*. in *Fourth WHO Global Forum on Medical Devices*. 2018. AMTZ-Kalam Convention Centre, Visakhapatnam, India.
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.