Dr Vitomir Racic
Curriculum Vitae

1 CONTACT DETAILS

Current employer	Politecnico di Milano Department of Civil and Environmental Engineering
Work address	Piazza Leonardo da Vinci, 32 20133 Milan Italy
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2 QUALIFICATIONS

Academic

2005 BSc degree in Structural Engineering, 1st class with distinction
University of Belgrade

2010 PhD degree
University of Sheffield
PhD thesis entitled *Experimental measurement and mathematical modelling of near-periodic human-induced dynamic force signals*
PhD viva date: 22nd December 2009
Degree ceremony: 16th March 2010

2014 *Certificate in Learning and Teaching* awarded by the School of Education and accredited by the UK Higher Education Academy (MSc level)

2014 Fellow of The UK Higher Education Academy

Miscellaneous

2008 Gym Assistant, Fitness Professionals, UK

2008 First Aid for Appointed Persons, The University of Sheffield

3 AWARDS

- Delta Holding Awards for 100 top students at the University of Belgrade, 2001.
- Professor Krajcinovic Award for the best marks it the Department of Engineering Mechanics and Theory of Structures, 2002.
- The Embassy of The Kingdom of Norway in Belgrade, One-Fellowship Awarding Program "*15 Millions for the top 100*", 2004.
- Certificate of Merit as an award to the best student coming from the territory under the competence of Regional Chamber of Commerce of Uzice, Serbia, 2004.
- Faculty of Civil Engineering Awards (8 awards) for the best student in the class, University of Belgrade, 2001-2005.
- Universities UK Overseas Award (ORS) and Departmental Scholarship (University of Sheffield), 2006.
- First Student Prize for a poster entitled "*Biomechanical approach to modelling human-structure dynamic interaction"*, Department of Civil & Structural Engineering, University of Sheffield, 2007.

- Second Student Prize for a poster entitled "*Human walking and running forces: novel experimental characterisation and application in civil engineering dynamics*", Young Researchers' Conference, IStrucE, London, 2009.

4 POSTS

CURRENT APPOINTMENTS

Jun 2015 - to date	Associate Professor Department of Civil & Environmental Engineering Politecnico di Milano
Oct 2015 - to date	Visiting Lecturer Department of Civil & Structural Engineering University of Sheffield
March 2019 - to date	Visiting Professor Faculty of Civil Engineering University of Belgrade

PAST POSTS

Jan 2011 – Jun 2015	Lecturer in Structural Engineering Department of Civil & Structural Engineering University of Sheffield
Jan 2010 - Jan 2011	Postdoctoral Research Fellow Department of Civil and Structural Engineering, Vibration Engineering Section, University of Sheffield
Aug 2006 - Dec 2009	PhD Student Department of Civil and Structural Engineering, Vibration Engineering Section, University of Sheffield
Oct 2004 - Jun 2006	Teaching Assistant (UG level) Department of Engineering Mechanics and Theory of Structures Faculty of Civil Engineering, University of Belgrade

5 TEACHING

Oct 2015 - to date	Structural Mechanics (MSc level) and Supervisor of UG and MSc dissertations Department of Civil and Environmental Engineering, Politecnico di Milano Theory and Design of Constructions and Structures (MSc level) Department of Architecture, Built Environment and Construction Engineering, Politecnico di Milano
Nov 2018 – to date	Vibration Engineering (MSc level) and Supervisor of MSc dissertations Faculty of Civil Engineering, University of Belgrade Funded by Erasmus+
Oct 2011 - Oct 2016	Linear Systems and Structural Analysis (MSc level), Vibration Engineering (MSc level), Civil and Structural Engineering Mechanics 1 (UG level) and Supervisor of UG and MSc dissertations Department of Civil and Structural Engineering, University of Sheffield

Oct 2006 - Jan 2011	Teaching Assistant in Structural Mechanics (UG level), Linear Systems and Structural Analysis, and Vibration Engineering (MSc level), University of Sheffield
Oct 2004 - Jun 2006	Teaching Assistant in Structural Analysis 1, Structural Analysis 2 and Theory of Structures (UG level), University of Belgrade

6 RESEARCH

MAIN RESEARCH INTERESTS

- Vibration serviceability assessment of slender civil engineering structures.
- Experimental measurements of human-induced dynamic loads: multidisciplinary approach involving civil structural engineering and biomechanics of human locomotion.
- Numerical generators of human-induced dynamic loads of civil engineering structures, such as footbridges, floors, stadia, staircases and entertaining venues.
- Synchronisation of human body motion in groups and crowds: multidisciplinary approach between structural dynamics, biomechanics and psychology.
- Human-structure dynamic interaction: human-induced dynamic loading on perceptibly moving structures.
- Wireless and video-based motion tracking of multiple objects.

PhD PROJECTS

- “Wireless technology and data analytics for structural health monitoring of civil infrastructure", Mr Nicky de Battista. October 2010 - October 2014.
- “Dynamic interaction between pedestrian crowd and footbridges”, Mr Erfan Shahabpoor. November 2010 - November 2014.
- “Vision-based motion tracking of multiple objects”, Mr Feng Zheng. September 2012 - December 2015.
- “Vertical pedestrian-induced loading of civil structures” (working title), Mr Angus Peters. Co-supervision with Prof. John Orr, University of Cambridge. Starting date September 2019.

7 RESEARCH GRANTS

- *Excellence Exchange Scheme:* research visit to Department of Civil Engineering, Technical University of Denmark, Brovej. The University of Sheffield, December 2008.
- Named researcher in *EPSRC Platform Grant EP/G061130/1: "Dynamic performance of large civil engineering structures: an integrated approach to management, design and assessment",* 1 Jul 2009 - 30 April 3013, value £758,493.
- Co-investigator on EPSRC responsive mode grant EP/I029567/1 “Synchronisation in dynamic loading due to multiple pedestrians and occupants of vibration-sensitive structures”, 1 January 2012 - 30 May 2015, value £518,684.
- Principle investigator on EPSRC First Grant EP/K036378/1 “Advanced measurement, modelling and utilisation of bouncing and jumping loading induced by groups and crowds”, 1 November 2013 - 31 October 2015, value £98,913.
- Collaborator on EPSRC Frontier Engineering Grant EP/K03877X/1 “Modelling complex and partially identified engineering problems - application to the individualised multiscale simulation of the musculoskeletal system”, 9 September 2013 - 8 September 2018, value £4,859,494.

- Co-investigator on PRIN 2015-2018 Research Projects of National Interest (Progetti di ricerca di Rilevante Interesse Nazionale), Prot. 2015TTJN95 “Identification and monitoring of complex structural systems”, value 494,487€.

8 PROFESSIOANL STANDING

TEACHING

- “Undergraduate Research Grant”, a prestigious scheme awarded by the UK IStructE aims to support challenging research projects carried out during term time as part of the assessed work of a degree programme. Up to ten grants awarded annually across the UK. Awarded three years in a row 2011-2013.
- ERASMUS+ KA1 international credit mobility between Politecnico di Milano and University of Belgrade. October 2018 - December 2020.

PUBLICATION STATISTICS

- h-index: Scopus 16; Google Scholar 20
- citations: Scopus 1068; Google Scholar 1439

INVITED PRESENTATIONS

- Codamotion User and Workshop Meeting: presentation of research project entitled “*Human walking and running forces: novel experimental characterisation and application in civil engineering dynamics*”. Universite de la Mediterrannee, Faculte des Sciences du Sport, Marseille, France, January 2008.
- 9th Workshop in Speckled Computing: “E*xperimental measurement of dynamic loads of structures induced by active humans*”. University of Edinburgh, UK, November 2010.

INVITED LECTURES & SEMINARS

- “Experimental measurements and modelling of human ground reaction forces” University of Jena, Germany, 10 August 2010.
- “Human-induced dynamic loading of structures”, University of Belgrade, Serbia, 12th December 2011.
- “Dynamic performance of civil engineering structures under human-induced excitation”, Columbia University NYC, USA, 26 January 2012.
- “Experimental measurements of crowd-induced loading of civil engineering structures”, National University of Singapore, Singapore, 24 May 2012.
- “Crowed-induced vibrations of civil engineering structures”, Politecnico di Torino, Italy, 16 Jul 2012.
- “Vibration serviceability of civil engineering structures under human-induced excitation”, University of Genoa, Italy, 18 July 2012.
- “Towards a novel approach to vibration serviceability assessment of entertaining venues due to dynamic crowd action”, The Institution of Structural Engineers (IStructE) Yorkshire Regional Group, Sheffield, UK, 22 January 2014.
- “Vibration serviceability assessment of entertaining venues due to dynamic crowd action”, Seminar on Human-Induced Vibrations and Human-Structure Interaction, The University of Warwick, UK, 11 December 2014.
- “Vibrations of structures induced by active crowds”, Princeton University, Princeton, USA, 9 February 2015.
- “Human-induced vibrations of structures: state-of-the-art research and perspectives”, University of Belgrade, Serbia, 13 December 2017.

CONFERENCES: ORGANISATION AND CHAIRING

- IMAC XXX: A Conference and Exposition on Structural Dynamics, 30 January - 2 February 2012, Jacksonville, Florida, USA. Organising and co-chairing two sessions entitled: Human Induced Vibrations I and II.
- IMAC XXXI: A Conference and Exposition on Structural Dynamics, 11-14 February 2013, Orange County, California, USA. Organising and co-chairing a session entitled: Human Induced Vibrations of Civil Structures.
- COMPDYN2013: 4th International Conference on Computational Methods in Structural Dynamics and Earthquake Engineering, 12-14 June, Kos Island, Greece. Organising and co-chairing a session entitled: Human Induced Vibrations.
- SEMC2013: The 5th International Conference on Structural Engineering, Mechanics and Computation, 2-4 September 2013, Cape Town, South Africa. Organising and co-chairing a session entitled: Vibration Serviceability of Civil Engineering Structures.
- IMAC XXXII: A Conference and Exposition on Structural Dynamics, 3-6 February 2014, Orlando, Florida, USA. Organising and co-chairing a session entitled: Human Induced Vibrations of Civil Structures.
- IMAC XXXIII: A Conference and Exposition on Structural Dynamics, 2-5 February 2015, Orlando, Florida, USA. Organising and co-chairing a session entitled: Human Induced Vibrations of Civil Structures.
- IMAC XXXIV: A Conference and Exposition on Structural Dynamics, 25-28 January 2016, Orlando, Florida, USA. Organising and co-chairing a session entitled: Human Induced Vibrations of Civil Structures.
- IMAC XXXV: A Conference and Exposition on Structural Dynamics, 30 January – 2 February 2017, Orange County, California, USA. Organising and co-chairing a session entitled: Human Induced Vibrations of Civil Structures.
- EURODYN 2017: X International Conference on Structural Dynamics, 10-13 September 2017, Rome, Italy. Co-chairing a session entitled: Human Induced Vibrations and Vibration Serviceability.
- IMAC XXXVI: A Conference and Exposition on Structural Dynamics, 12-15 February 2018, Orlando, Florida, USA. Organising and co-chairing sessions entitled: Structural Vibrations I, II and III. Co-chairing a session entitled: Full Scale Operational SID.
- IMAC XXXVII: A Conference and Exposition on Structural Dynamics, 28-31 January 2019, Orlando, Florida, USA. Organising sessions entitled: Structural Vibrations I and II.

MEMBERSHIP

- Society of Experimental Mechanics, Inc.

EDITORIAL BOARDS

- Shock and Vibration
- Vibration
- Journal of Civil, Construction and Environmental Engineering
- Mathematical Problems in Engineering

PEER-REVIEWING WORK

- ASCE Journal of Bridge Engineering
- ASCE Journal of Engineering Mechanics
- ASCE Journal of Structural Engineering
- Building and Environment
- Computers and Structures

- Composite Structures
- Engineering Structures
- Journal of Sound and Vibration
- Mechanical Systems and Signal Processing
- Measurement
- Probabilistic Engineering Mechanics
- Shock and Vibration
- Vibration
- Mathematical Problems in Engineering
- International Journal of Mechanical Sciences
- Medical Engineering & Physics

PhD EXAMINAR

- University of Oxford
- University of Warwick
- University of Sheffield
- Monash University
- Politecnico di Milano

9 PUBLICATION RECORD

REFEREED JOURNAL PAPERS

RJ01 **Racic, V.**, Pavic, A., Brownjohn, J.M.W. (2009) Experimental identification and analytical modelling of human walking forces: literature review. Journal of Sound and Vibration 326, 1-49.

RJ02 **Racic, V.**, Pavic, A. (2009) Mathematical model to generate asymmetric pulses due to human jumping. ASCE Journal of Engineering Mechanics 135 (10), 1206-1211.

RJ03 **Racic, V.**, Pavic, A., Brownjohn, J.M.W. (2009) Number of successive cycles necessary to achieve stability of selected ground reaction force variables during continuous jumping. Journal of Sports Science and Medicine 8, 639-647.

RJ04 **Racic, V.**, Pavic, A. (2010) Mathematical model to generate near-periodic human jumping force signals. Mechanical Systems and Signal Processing 24, 138-152.

RJ05 **Racic, V.**, Brownjohn, J.M.W., Pavic, A. (2010) Reproduction and application of human bouncing and jumping forces from visual marker data. Journal of Sound and Vibration 329, 3397-3416.

RJ06 **Racic, V.**, Pavic, A. (2010) Stochastic approach to modelling near-periodic jumping force signals. Mechanical Systems and Signal Processing 24, 3037-3059.

RJ07 **Racic, V.**, Brownjohn, J.M.W. (2011) Stochastic model of near-periodic vertical loads due to humans walking. Advanced Engineering Informatics 25 (2), 259-275.

RJ08 **Racic, V.**, Brownjohn, J.M.W. (2012) Mathematical modelling of random narrow band lateral excitation of footbridges due to pedestrians walking. Computers & Structures 90-91, 116-130.

RJ09 **Racic, V.**, Pavic, A., Brownjohn, J.M.W. (2013) Modern facilities for experimental measurement of dynamic loads induced by humans: a literature review. Shock and Vibration 20 (1), 53-67.

RJ10 **Racic, V.**, Morin, J.B. (2014) Data-driven modelling of dynamic excitation of bridges induced by people running. Mechanical Systems and Signal Processing 43, 153-170.

RJ11 **Racic, V.**, Chen, J. (2015) Data-driven generator of stochastic dynamic loading due to people bouncing. Computers and Structures 158, 240-250.

RJ12 Brownjohn, J.M.W, **Racic, V.**, Chen, J. (2016) Universal response spectrum procedure for predicting walking-induced floor vibration. Mechanical Systems and Signal Processing 70-71, 741–755.

RJ13 Shahabpoor, E., Pavic, A., **Racic, V.** (2016) Identification of mass-spring-damper model of walking humans. Structures 5, 233-246.

RJ14 Chen, J., Guo, L., **Racic, V.** (2016) Acceleration response spectrum for predicting floor vibration due to occupants jumping. Engineering Structures 112, 71-80.

RJ15 Chen, J., Guo, L., **Racic, V.** (2016) Acceleration response spectrum for prediction of structural vibration due to individual bouncing. Mechanical Systems and Signal Processing 76-77, 394-408..

RJ16 Feng, Z.,Shao, L., **Racic, V.**, Brownjohn, J.M.W. (2016) Measuring human-induced vibrations of civil engineering structures via vision-based motion tracking. Measurement 83, 44-56.

RJ17 Shahabpoor, E., Pavic, A., **Racic, V.** (2016) Interaction between walking humans and structures in vertical direction: a literature review. Shock and Vibration, volume 2016, article ID 3430285, 22 pages.

RJ18 Bocian, M., Brownjohn, J.M.W., **Racic, V.**, Hester, D., Quattrone, A., Monnickendam, R. (2016) A framework for experimental identification of localised vertical pedestrian forces on full-scale structures using wireless inertial sensors. Journal of Sound and Vibration 376, 217-243.

RJ19 Venuti, F., **Racic, V.**, Corbeta, A. (2016) Modelling framework for dynamic interaction between multiple pedestrians and vertical vibrations of footbridges. Journal of Sound and Vibration 379, 245-263.

RJ20 Di Marco, R., Rossi, S., **Racic, V.**, Cappa, P., Mazza, C. (2016) Concurrent repeatability and reproducibility analyses of four marker placement protocols for the foot-ankle complex. Journal of Biomechanics 49 (14), 3168-3176.

RJ21 Shahabpoor, E., Pavic, A., **Racic, V.**, Zivanovic, S. (2017) Effect of group walking traffic on dynamic properties of pedestrian structures. Journal of Sound and Vibration 387, 207-225.

RJ22 Shahabpoor, E., Pavic, A., **Racic, V.** (2017) Structural vibration serviceability: new design framework featuring human-structure interaction. Engineering Structures 136, 295-311.

RJ23 Kumar, P., Kumar, A., **Racic, V.**, Erlicher, S. (2018) Modelling vertical human walking forces using self-sustained oscillator. Mechanical Systems and Signal Processing 99, 345-363.

RJ24 Shahabpoor, E., Pavic, A., **Racic, V.** (2018) Identification of walking human model using agent-based modelling. Mechanical Systems and Signal Processing 103, 352-367.

RJ25 Kumar, P., Kumar, A., **Racic, V.** (2018) Modelling of longitudinal human walking force using self-sustained oscillator. International Journal for Structural Stability and Dynamics 18 (6) 1850080:1-29.

RJ26 Guo, Y., Guo, L., **Racic, V.**, Shu Wang, S., Billings, S.A. (2018) Modelling the nonlinear oscillations due to vertical bouncing using a new restoring force system identification method. International Journal of Signal and Imaging Systems Engineering 11 (1), 52-64.

RJ27 Guo, L., Chen, J., **Racic, V.** (2018) A data-driven wavelet-based approach for generating jumping loads. Mechanical Systems and Signal Processing 106, 49-61.

RJ28 Bocian, M., Brownjohn, J.M.W., **Racic, V.**, Hester, D., Quattrone, A., Gilbert, L., Beasly, R. (2018) Time-dependent spectral analysis of interactions within groups of walking pedestrians and vertical structural motion using wavelets. Mechanical Systems and Signal Processing 105, 502-523.

RJ29 Gazzola, F., **Racic, V.** (2018) A model of synchronisation in crowd dynamics. Applied Mathematical Modelling 59, 305-318.

RJ30 Brownjohn, J.M.W., Chen, J., Bocian, M., **Racic, V.**, Shahabpoor, E. (2018) Using inertial measurement units to identify medio-lateral ground reaction forces due to walking and swaying. Journal of Sound and Vibration 426, 90-110.

RJ31 Mohammed, A., Pavic, A., **Racic, V.** (2018) Improved model for human induced vibrations of high-frequency floors. Engineering Structures 168, 950-966

RJ32 D.A. Mella, D.A., Brevis, W., Higham, J.E., **Racic, V.**, Sumsel, L. (2019) Image-based tracking technique assessment and application to a fluid-structure interaction experiment. Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science 233 (16), 5724-5734.

RJ33 Martinelli, L., **Racic, V.**, Dal Lago, B., Foti, F. (2020) Testing walking-induced vibration of floors using smartphone recordings. Robotics 9 (2) 37.

RJ34 Chen, J., Ren, J., **Racic, V.** (2020) Prediction of floor responses to crowd bouncing loads by response reduction factor and spectrum method. Advances in Structural Engineering 24 (7) 1427-1438.

RJ35 García-Diéguez, M., **Racic, V.**, Zapico-Valle, J.L. (2021) Complete statistical approach to modelling variable pedestrian forces induced on rigid surfaces. Mechanical Systems and Signal Processing 159, 107800.

BOOKS

B01 Petronijevic, M., **Racic, V.** (2006) Theory of structures, solved examples of exam papers (in Serbian), Faculty of Civil Engineering, University of Belgrade, Serbia.

B02 Catbas, F.N., Pakzad, S., **Racic, V.,** Pavic, A., Reynolds, P., editors (2013) Topics in Dynamics of Civil Structures, Volume 4. Proceedings of the 31st IMAC, A Conference on Structural Dynamics 2013. Springer Science & Business Media.

MEDIA

M01 **Racic, V.** (2008) Human walking and running forces: novel experimental characterisation and application in civil engineering dynamics. Motion Times, Journal for the motion-capture community, invited article.

M02 **Racic, V.** (2010) Applying walking and running forces. The Structural Engineer, invited article.

M03 **Racic, V.** (2016) Emerging research on vibration serviceability of footbridges due to pedestrian crowds. Construzioni Metalliche, Sep/Oct issue, invited article.

REFEREED CONFERENCE PAPERS

CP01 **Racic, V**., Zivanovic, S., Pavic, A. (2006). FE modelling and updating of unique fink truss footbridge. ISMA'06 - International Conference of Sound and Vibration, 18-20 September, Leuven-Belgium.

CP02 Zivanovic, S., **Racic, V**., El-Bahnasy, I., Pavic, A. (2007). Statistical characterisation of parameters defining human walking as observed on an indoor passerelle. EVACES '07 – Experimental Vibration Analysis for Civil Engineering Structures, 24-26 October, Porto, Portugal.

CP03 **Racic, V.**, Pavic, A., Brownjohn, J.M.W. (2008) Human walking and running forces: novel experimental characterization and application in civil engineering dynamics. IMAC XXVI: A Conference and Exposition on Structural Dynamics, 4-7 February, Orlando, Florida, USA.

CP04 **Racic, V.**, Pavic, A., Brownjohn, J.M.W. (2008) Novel experimental characterisation of bouncing and jumping forces. EURODYN 2009, 7th European Conference on Structural Dynamics, 7-9 July, Southampton, UK.

CP05 **Racic, V.**, Brownjohn, J.M.W., Pavic, A. (2009) Novel Experimental Characterisation of human induced dynamic loading, IMAC XXVII: A Conference and Exposition on Structural Dynamics, 9-12 February, Orlando, Florida, USA.

CP06 **Racic, V.**, Pavic, A., Brownjohn, J.M.W. (2010) Mathematical modelling of near-periodic jumping force signals. IMAC XXVIII: A Conference and Exposition on Structural Dynamics, February, 2010, Jacksonville, Florida, USA.

CP07 **Racic, V.**, Brownjohn, J.M.W., Pavic, A. (2010) Reproduction and application of pedestrian forces from visual marker data, IUTAM 2010: International Union of Theoretical and Applied Mechanics, Symposium titled 'Analysis and simulation of human motion', 13-15 September, Leuven, Belgium.

CP08 **Racic, V.**, Pavic, A., Brownjohn, J.M.W. (2011) Measurement and application of bouncing and jumping loads using motion tracking technology. IMAC XXIX: A Conference and Exposition on Structural Dynamics, 30 January - 3 February, Jacksonville, Florida, USA.

CP09 **Racic, V.**, Brownjohn, J.M.W., Pavic, A. (2011) Dynamic loads due to synchronous rhythmic activities of groups and crowds. COMPDYN 2011 - 3rd International Conference on Computational Methods in Structural Dynamics and Earthquake Engineering, Corfu, Greece, 25-28 May.

CP10 **Racic, V.**, Pavic, A., Brownjohn, J.M.W. (2011) Stochastic model of near-periodic jumping forces. EURODYN 2011, 8th European Conference on Structural Dynamics, Leuven, Belgium, 4-6 July.

CP11 Noormohammadi, N., **Racic, V.**, Brownjohn, J.M.W., Wing, A. Johannsen, L. Elliott, M. (2011) Effect of different cues on spectators' synchronisation, a vibration engineering approach. EURODYN 2011, 8th European Conference on Structural Dynamics, Leuven, Belgium, 4-6 July.

CP12 **Racic, V.**, Brownjohn, J.M.W., Pavic, A. (2012) Random model of vertical walking force signals. IMAC XXX: A Conference and Exposition on Structural Dynamics, 30 January - 2 February, Jacksonville, Florida, USA.

CP13 Zivanovic, S., Pavic, A., **Racic, V.** (2012) Towards modelling in-service pedestrian loading of floor structures. IMAC XXX: A Conference and Exposition on Structural Dynamics, 30 January - 2 February, Jacksonville, Florida, USA.

CP14 Papatheou, E., Green, P.L., **Racic, V.**, Brownjohn, J.M.W., Sims, N.D. (2012) A short investigation of the effect of an energy harvesting backpack on the human gait, SPIE: Smart Structures/NDE 2012, 11-15 March 2012, San Diego, California, USA.

CP15 **Racic, V.**, Brownjohn, J.M.W., Pavic, A. (2012) Stochastic model of continuously measured vertical pedestrian loads. IABMAS 2012: 6th International Conference on Bridge Maintenance, Safety and Management, 8-12 July, Stresa, Lake Maggiore, Italy.

CP16 **Racic, V.**, Wang, S., Brownjohn, J.M.W., Elliott, M., Wing, A. (2013) Effect of sensory stimuli on dynamic loading induced by people bouncing. IMAC XXXI: A Conference and Exposition on Structural Dynamics, 11-14 February, Orange County, California, USA.

CP17 Shahabpoor, E., Pavic, A., **Racic, V.** (2013) Using MSD model to simulate human-structure interaction during walking. IMAC XXXI: A Conference and Exposition on Structural Dynamics, 11-14 February, Orange County, California, USA.

CP18 **Racic, V.**, Brownjohn, J.M.W., Pavic, A. (2013) Dynamic loading factors of individual jogging forces. COMPDYN 2013: 4th International Conference on Computational Methods in Structural Dynamics and Earthquake Engineering, 12-14 June, Kos Island, Greece.

CP19 **Racic, V.**, Brownjohn, J.M.W., Pavic, A. (2013) Data-driven model of random lateral pedestrian excitation. SEMC 2013: The 5th International Conference on Structural Engineering, Mechanics and Computation, 2-4 September, Cape Town, South Africa.

CP20 Shahabpoor, E., Pavic, A., **Racic, V.** (2013) Sensitivity analysis of coupled crowd-structure system dynamics to walking crowd properties. SEMC 2013: The 5th International Conference on Structural Engineering, Mechanics and Computation, 2-4 September, Cape Town, South Africa.

CP21 Zheng, F., Brownjohn, J.M.W., **Racic, V.**, Elliott, M. (2013) Video-based motion capture application to characterising rhythmic activities in single or multiple human targets. RPPW 2014: 14th Rhythm Production and Perception Workshop, 11-13 September, Birmingham, UK.

CP22 Elliott, M., Zheng, F., **Racic, V.**, Brownjohn, J.M.W., Wing, A. (2013) Many Moving as One? Analyses of movement synchrony within large groups. RPPW 2014: 14th Rhythm Production and Perception Workshop, 11-13 September, Birmingham, UK. September 2013.

CP23 **Racic, V.**, Morin, J.B. (2014) Dynamic loading of bridges due to people running. IABMAS 2014: 7th International Conference on Bridge Maintenance, Safety and Management, 7-11 July, Shanghai, China.

CP24 Zheng, F., **Racic, V**., Brownjohn J.M.W. (2014) Vision-based tracking of human body motion". IMAC XXXII: A Conference and Exposition on Structural Dynamics, 3-6 February, Orlando, Florida, USA.

CP25 Venuti, F., **Racic, V**., Corbetta, A. (2014) Pedestrian-structure interaction in the vertical direction: coupled oscillator-force model for vibration serviceability assessment. EURODYN 2014, 9th European Conference on Structural Dynamics, 30 Jun-2 July, Porto, Portugal.

CP26 Mohammed, S.A., **Racic V.** (2014) Footfall model for design of high frequency floors. EURODYN 2014, 9th European Conference on Structural Dynamics, 30 Jun-2 July, Porto, Portugal.

CP27 Zheng, F., Ling, S., Brownjohn, J.M.W., **Racic, V.** (2014) Learn++ for robust object tracking. BMVC 2014: The British Machine Vision Conference, 1-5 September, Nottingham, UK.

CP28 Georgiou, L., **Racic, V.**, Brownjohn, J.M.W., Elliot M.T. (2015) Coordination of groups jumping to popular music beats. IMAC XXXIII: A Conference and Exposition on Structural Dynamics, 2-5 February, Orlando, Florida, USA.

CP29 Shahabpoor, E., Pavic, A., **Racic, V.** (2015) Identification of mass-spring-damper model of walking humans. Structures Congress 2015, 23-25 April, Portland, Oregon, USA.

CP30 Di Marco, R., Rossi, S., **Racic, V.**, Cappa, P., Mazzà, C. (2015) A comparison between four foot model protocols: the effect of walking on a treadmill. The XXV Congress of the International Society of Biomechanics, 12-16 July, Glasgow, UK.

CP31 Quattrone, A., Bocian, M., **Racic, V.**, Brownjohn, J.M.W., Hester, D., Hudson, E.J., Davies J. (2016) Characterisation of transient actions induced by spectators on sport stadia. IMAC XXXIV: A Conference and Exposition on Structural Dynamics, 25-28 January, Orlando, Florida, USA.

CP32 Mohamed, S.A., Pavic, A., **Racic, V.** (2016) Improved footfall model for vibration of high-frequency floors. SEMC 2016: The 6th International Conference on Structural Engineering, Mechanics and Computation, 5-7 September, Cape Town, South Africa.

CP33 Venuti, F., **Racic, V**., Corbetta, A. (2017) Modelling framework of pedestrian-footbridge interaction in vertical direction. EURODYN 2017, 10th European Conference on Structural Dynamics, 10-13 September, Rome, Italy.

CP34 Shahabpoor, E., Pavic, A., **Racic, V.** (2018) Paradigm shift in structural vibration serviceability: new assessment framework based on human's experience of vibration. IMAC XXXVI: A Conference and Exposition on Structural Dynamics, 12-15 February, Orlando, Florida, USA.

CP35 **Racic, V.**, Chen, J., Pavic, A. (2018) Advanced Fourier-based model of bouncing loads. IMAC XXXVI: A Conference and Exposition on Structural Dynamics, 12-15 February, Orlando, Florida, USA.

CP36 Zivanovic, S., Russel, J.M., **Racic, V.** (2019) Vibration performance of a lightweight FRP footbridge under human dynamic excitation. IMAC XXXVII: A Conference and Exposition on Structural Dynamics, 28-31 January, Orlando, Florida, USA.