

## Europass Curriculum Vitae

### Personal information

**First name(s) / Surname(s)** **Aurelio Cappozzo**  
**Address** Via Alessandria 153, 00198 Rome (Italy)  
**Telephone(s)** +393486002215  
**Fax(es)**  
**E-mail(s)** aurelio.cappozzo@gmail.com  
**Nationality** Italian  
**Date of birth** April 27, 1946  
**Gender** Male

### Occupational field

University Professor  
 Presently retired from Academy due to age limit.

### Work experience

<p><b>Dates</b></p> <p><b>Occupation or position held</b></p> <p><b>Main activities and responsibilities</b></p> <p><b>Name and address of employer</b></p>	<p>1971 - 1976</p> <p>Assistant professor in Medical Physics</p> <p>teaching and research</p> <p>University of Rome "La Sapienza" - Institute of Human Physiology Rome</p>
<p><b>Dates</b></p> <p><b>Occupation or position held</b></p> <p><b>Main activities and responsibilities</b></p> <p><b>Name and address of employer</b></p>	<p>1976 - 1994</p> <p>Associate professor in Medical Physics</p> <p>teaching and research</p> <p>University of Rome "La Sapienza" - Institute of Human Physiology Rome</p>
<p><b>Dates</b></p> <p><b>Occupation or position held</b></p> <p><b>Main activities and responsibilities</b></p> <p><b>Name and address of employer</b></p>	<p>1994 - 2000</p> <p>Full professor in Bioengineering</p> <p>teaching and research</p> <p>University of Sassari - Department of Biomedical Sciences Sassari</p>
<p><b>Dates</b></p> <p><b>Occupation or position held</b></p> <p><b>Main activities and responsibilities</b></p> <p><b>Name and address of employer</b></p>	<p>2000 - 2016</p> <p>Full professor in Bioengineering</p> <p>teaching, research, member of the university senate, department director</p> <p>University of Rome "Foro Italico" - Department of Movement, Human, and Health Sciences Rome</p>
<p><b>Dates</b></p> <p><b>Occupation or position held</b></p> <p><b>Main activities and responsibilities</b></p> <p><b>Name and address of employer</b></p>	<p>1985 - 2014</p> <p>Faculty member</p> <p>teaching, administration</p> <p>Doctoral program in Bioengineering - University of Bologna "Alma Mater" - Bologna</p>



## Education and training

Dates	1965 - 1970
Title of qualification awarded	M.Sc. (Laurea)
Principal subjects / occupational skills covered	Electronic Engineering
Name and type of organisation providing education and training	Polytechnic of Milan Milan
Dates	1979 - 1982
Title of qualification awarded	Philosophy doctorate
Principal subjects / occupational skills covered	Bioengineering
Name and type of organisation providing education and training	Bioengineering Unit, University of Strathclyde Glasgow

## Personal skills and competences

Mother tongue(s) **Italian**

Other language(s)

Self-assessment  
*European level (\*)*

**English**

**French**

Understanding				Speaking				Writing	
Listening		Reading		Spoken interaction		Spoken production			
C2	Proficient user	C2	Proficient user	C1	Proficient user	C1	Proficient user	C1	Proficient user
B1	Independent user	B2	Independent user	A2	Basic User	A2	Basic User	A1	Basic User

(\*) [Common European Framework of Reference \(CEF\) level](#)

Additional information

### ADMINISTRATION

2003-2006 and 2008-2012: Director of the Department of Human Movement and Sport Sciences of the University of Rome "Foro Italico"

2002-2006 and 2008-2012: Member of the Academic Senate of the University of Rome "Foro Italico"

2011 - 2014: Member of the Board of Directors of the Virtual Physiological Human Institute.

2013 – 2016: Director of the Interuniversity Centre of Bioengineering of the Human Neuromuscularskeletal System.

### VISITING PROFESSORSHIPS

1988 – 1990: at the Laboratoire de Physiologie du Mouvement, CNRS, Université Paris-Sud, Orsay (France)

2005 – 2008: at the Sport Science Department, University of Reims Champagne-Ardenne (France)

2005: at the Vrije Universiteit Brussel

2010: at the School of Health, Physical Education and Recreation, Department of Kinesiology, Indiana University, Bloomington (USA)

2010 – present: at the Facultad de las Ciencias de la Actividad Física y el Deporte, University of Granada (Spain), Master course in Investigación en Actividad Física y Deporte.

### OFFICES HELD IN PROFESSIONAL SOCIETIES

1982 - 1990: member of the Executive Council of the European Society of Biomechanics as Meeting Committee Chairman, vice-President, Secretary General, and Newsletter editor.

1985 - 1995: member at large of the Executive Council of the International Society of Biomechanics, then President-elect, President and Past-President.

1991 – 2000: member of the Steering Committee of the World Congresses in Biomechanics.

1999 – 2001: President of the Italian Society for Clinical Movement Analysis.

#### ADVISORY (since 2000)

2001 - 2007: member of the Scientific Council of the inter-university computing consortium (CASPUR) – Roma.

2008 - 2016: member of the Scientific Council of the Research Centre of Sports Traumatology, Medical School, Università Cattolica del Sacro Cuore – Roma.

2011 – 2014: member of the Board of Directors of the Virtual Physiological Human Institute.

#### EDITORIAL WORK

1981 - 1984: Editorial Consultant Board member of the Journal of Biomechanics.

1984 - 1994: Editorial Board member of the Journal of Biomechanics.

1992 - 2004: Editorial Board member of Clinical Biomechanics.

1993 - 2006: Editorial Board member of Gait and Posture

2002 - present: Editorial Board member of Series on Biomechanics

2009 – present: Associate Editor of the Journal of Biomechanics

2013 – present: Member of the Advisory Board of the International Journal of Kinesiology and Sports Science (IJKSS)

2013 – present: Member of the Editorial Board of ISRN Biomedical Engineering

#### CAREER ACHIEVEMENT AWARDS

2016: XIV international symposium on 3DHMA - Taipei - Taiwan

2015: XVI Congresso SIAMOC, Padova - Italia

#### AWARDS

1986: Medal for “Merits in mechanics for his outstanding contributions in the development of biomechanics especially in musculo-skeletal mechanics and gait analysis” awarded by the Slovak Science Academy.

2005: Chair of the Year Award given by the Vrije Universiteit Brussel.

#### HONORARY MEMBERSHIP IN PROFESSIONAL SOCIETIES

1986: the Latvian Society of Biomechanics.

1986: the Check Society of Mechanics.

1992: the European Society of Biomechanics.

#### ACADEMIC DEGREE ADJUDICATION JURY IN FOREIGN INSTITUTIONS

Member of doctoral degree adjudication jury at the University of Claude Bernard Lyon I, University Paris-Sud, Orsay, Arts et Métiers ParisTech, University of Reims Champagne-Ardenne (France), University of Oxford (United Kingdom), University of Toronto (Canada), University of Granada (Spain).

Member of the adjudication jury for the Habilitation à Diriger des Recherches at the University of Reims Champagne-Ardenne and Claude Bernard Lyon 1.

#### EDUCATION AND RESEARCH ACTIVITY EVALUATION

Member of expert panels for the evaluation of the educational and research activity of departments of Strathclyde University (Glasgow), Swiss Federal Institute of Technology in Zurich, Dutch Institute for Fundamental and Clinical Human Movement Sciences, Vrije Universiteit in Brussels.

#### EVALUATION OF RESEARCH PROJECTS

Revision of several research projects submitted to, among others: the Israel Science Foundation, the Vrije Universiteit Brussel, the Katholieke Universiteit Leuven, and the Research Foundation Flanders (Belgium), the University of Padua, and the Italian Ministry of Education, University and Research (Italy).

## ORGANISATION OF INTERNATIONAL SCIENTIFIC EVENTS

1986 "Study Institute and Conference on Biomechanics of Human Movement: Applications to Ergonomics, Sport and Rehabilitation", Formia, Italy (170 participants).

1986 "International Conference: Trends in Human Biomechanics Research and Applications in Medicine and Surgery", Riga, U.S.S.R. (for the European Society of Biomechanics) (1200 participants).

1989 "Symposium on Bioloocomotion: a Century of Research Using Moving Pictures", Formia, Italy (130 participants).

1992 "Eighth Meeting of the European Society of Biomechanics", Roma, Italy (410 participants).

## COMPLETED FUNDED RESEARCH PROJECTS (since 2004)

2004 "Methodological issues in the 3-D reconstruction of subject-specific lower limb bones during movement"- Italian Ministry of the University and Scientific Research – PRIN: € 64,700.

2005 "Functional evaluation of the upper limb" – Italian Ministry of Health and ISPELS: € 95,000.

2006 "Obtaining optimal functional recovery and efficient managed care for chronic stroke population" – Istituto Superiore di Sanità: € 11,000.

2006 "Engineering and marketing of a wearable device for the evaluation of performance and motor capacity" – FILAS: € 120,000.

2007 "Biomechanical assessment of a new footwear for sports and medical use" – Galileo project - Franco-Italian University - (in collaboration with Université de Reims Champagne-Ardenne, France): € 4,700.

2002 – 2007 Projects funded by the University of Rome "Foro Italico": € 135,000.

2005 – 2008 Funds drawn from professional activity revenues: € 120,000.

2008-2011 Vinci project funded the Franco-Italian University: "Biomécanique du cureur amputé tibial" (in collaboration with the Laboratoire de Biomécanique - Arts et Métiers ParisTech, CNRS, France): € 4,500.

2011-2012 Galileo project funded by the Franco-Italian University: "Identification de paramètres mécaniques et estimation des variables cinématiques et dynamiques du système postural et locomoteur" (in collaboration with the Laboratoire d'Informatique, de Robotique et de Microélectronique - Université Montpellier 2 (France): € 4,000.

2011-2012 Galileo project funded by the Franco-Italian University: "Estimation optimisée de la cinématique du genou pour l'obtention des efforts articulaires au cours du mouvement" (in collaboration with the Laboratoire de Biomécanique - Arts et Métiers ParisTech, CNRS, France).

2010-2013 Reaserch project "Motor ability assessment of the elderly using a remote monitoring system" funded by the Lazio regional goverment: € 103,800.

2012-2014 SIVAM project funded by the Italian Ministry of Economic Development: Wearable Sensors for Motor Ability Evaluation (in collaboration with: College of Health Sciences - University of Delaware, USA; Faculty of Engineering - National University of Singapore, Singapore; Prince of Wales Hospital, Faculty of Medicine, Department of Orthopaedic and Traumatology - The Chinese University of Hong Kong, Hong Kong, China; Institute of Biomedical Engineering - National Taiwan University, Taiwan. € 161,600.

2012-2014 A piecewise elastic model of the human tibiofemoral joint: a feasibility study. Research fund of the University of Rome "Foro Italico". € 48,000

2013-2016 MISSION-T2D "Multiscale Immune System Simulator for the Onset of Type 2 Diabetes integrating genetic, metabolic and nutritional data" - FP7-ICT-2011-9. € 230,000.

2013-2016 "Fall risk estimation and prevention in the elderly using a quantitative multifactorial approach". PRIN 2010/2011. € 182,000.

## PATENTS

1977 "Knee joint mechanism for A/K prostheses", in collaboration with con T. Leo and R. Vitelli; registered by the CNR, 52319-A.

2009 "A method for the measurement of muscular power output and related measurement device". In collaboration with M. Donati, M. Figura, P. Picerno, M. Zok; patent application n. RM2009A000058.

2011 "A device for the measurement of the knee rotation angles under different loads of a specific patient", in collaboration with A. Cereatti, F. Margeritini, PP. Mariani; patent application n. RM2011A000075.

## SPIN-OFF PROMOTION

2007: Promoter and former president of the academic spin off company Sensorize srl.

## BOOK EDITORSHIP

1983 Co-editor with T. Leo of "Biomeccanica del Movimento: quali Applicazioni Cliniche", Centro per l'Ingegneria Biomedica dell'Università di Roma "la Sapienza".

1990 Co-editor with N. Berme of "Biomechanics of Human Movement: Applications to Rehabilitation, Sports and Ergonomics", Bertec Corporation, Worthington, Ohio, U.S.A.

1992 Co-editor with M. Marchetti and V. Tosi of "Biocomotion: a Century of Research Using Moving Pictures", Promograph, Roma.

1997 Co-editor with P. Allard, A. Lundberg and C. Vaughan of "Three-dimensional analysis of human locomotion", John Wiley pub.

2005 Co-editor with A. Cappello and E.P. di Prampero of "Bioingegneria della Postura e del Movimento", Patron Editore, Bologna, Italy.

## JOURNAL SPECIAL ISSUE EDITORSHIP

2017 Human movement analysis: The soft tissue artefact issue." Camomilla V, Dumas R, Cappozzo A. J Biomech.

## SELECTED PUBLICATIONS IN ARCHIVE JOURNALS

"A general computing method for the analysis of human locomotion", A. Cappozzo, T. Leo and A. Pedotti. Journal of Biomechanics, 8(1975): 307-320.

"The interplay of muscular and external forces in human ambulation", A. Cappozzo, F. Figura, M. Marchetti and A. Pedotti. Journal of Biomechanics, 9(1976): 35-43.

"Evaluation of hip arthroprostheses by means of body environment simulators", A. Cappozzo, L. Cini, A. Pizzoferrato, C. Trentani and S. Sandrolini-Cortesi. Journal of Biomedical Material Research, 11(1977): 657-669.

"A polycentric knee-ankle mechanism for above-knee prostheses", A. Cappozzo, T. Leo and S. Sandrolini-Cortesi. Journal of Biomechanics, 13(1980): 231-239.

"Analysis of the linear displacement of the head and trunk during walking at different speeds", A. Cappozzo. Journal of Biomechanics, 14(1981): 411-425.

"Low frequency self-generated vibration during ambulation in normal men", A. Cappozzo. Journal of Biomechanics, 15(1982): 599-609.

"Angular displacement in the upper body of A/K amputees during level walking", A. Cappozzo, F. Figura, F. Gazzani, T. Leo and M. Marchetti. Prosthetics and Orthotics International, 6(1982): 131-138.

"The forces and couples in the human trunk during level walking", A. Cappozzo. Journal of Biomechanics, 16(1983): 265-277.

"Force actions in the human trunk during running", A. Cappozzo. The Journal of Sports Medicine and Physical Fitness, 23(1983): 14-22.

"A stereophotogrammetric system for kinesiological studies", A. Cappozzo. Journal of Biomedical Engineering and Computing, 21(1983): 217-223.

"Comparative evaluation of techniques for the harmonic analysis of human motion data", A. Cappozzo and F. Gazzani. Journal of Biomechanics, 16(1983): 767-776.

"Compressive loads in the lumbar vertebral column during normal level walking", A. Cappozzo.

Journal of Orthopaedic Research, 1(1984): 292-301.

"Gait analysis methodology", A. Cappozzo; Human Movement Science, 3(1984): 27-50.

"Lumbar spine loading during half-squat exercises", A. Cappozzo, F. Felici, F. Figura and F. Gazzani. Medicine and Science in Sports and Exercise, 17(1985): 613-620.

"Three-dimensional analysis of human locomotor acts: experimental methods and associated artefacts", A. Cappozzo; Human Movement Science, 10(1991): 589-602.

"Prediction of ramp traversability for wheelchair dependent individuals", A. Cappozzo, F. Figura, F. Felici, M. Marchetti and B. Ricci. Paraplegia, 29(1991): 470-478.

"Position and orientation of bones during movement: anatomical frame definition and determination", A. Cappozzo, F. Catani, U. Della Croce and A. Leardini. Clinical Biomechanics, 10(1995): 171-178.

"Position and orientation of bones during movement: experimental artefacts", A. Cappozzo, F. Catani, A. Leardini, M.G. Benedetti and U. Della Croce. Clinical Biomechanics, 11(1996): 90-100.

"Multiple anatomical landmark calibration for optimal bone pose estimation", A. Cappello, A. Cappozzo, P.F. La Palambora, L. Lucchetti and A. Leardini. Human Movement Science 16(1997): 259-274.

"Surface-marker cluster design criteria for 3-D bone movement reconstruction" A. Cappozzo, A. Cappello, U. Della Croce and F. Pensalfini. IEEE Transactions on Biomedical Engineering 44(1997): 1165-1174.

"Skin movement artifact assessment and compensation in the estimation of knee joint kinematics", L. Lucchetti, A. Cappozzo, A. Cappello and U. Della Croce. Journal of Biomechanics 31 (1998): 977-984.

"Validation of a functional method for the estimation of the hip joint centre location", A. Leardini, A. Cappozzo, F. Catani, S. Toksvig-Larsen, A. Petitto, V. Sforza, G. Cassanelli and S. Giannini. Journal of Biomechanics 32 (1999): 99-103.

"Pelvis and lower limb anatomical landmark calibration precision and its propagation to bone geometry and joint kinematics", U. Della Croce, A. Cappozzo and D.C. Kerrigan. Medical & Biological Engineering and Computing 37 (1999): 155-161.

"A telescopic inverted-pendulum model of the musculo-skeletal system and its use for the analysis of the sit-to-stand motor task", E. Papa and A. Cappozzo. Journal of Biomechanics 32 (1999): 1205-1212.

"Sit-to-stand motor strategies investigated in able bodied young and elderly subjects", E. Papa and A. Cappozzo. Journal of Biomechanics 33 (2000): 1113-1122.

"A spot check for estimating stereophotogrammetric errors", U. Della Croce and A. Cappozzo. Medical & Biological Engineering and Computing 38 (2000): 260-266.

"Effects of hip joint centre mislocation on gait analysis results", R. Stagni, A. Leardini, A. Cappozzo, M. G. Benedetti and A. Cappello. Journal of Biomechanics 33 (2000): 1479-1487.

"Hemodynamics as a possible internal mechanical disturbance to balance", S. Conforto, M. Schmid, V. Camomilla, T. D'Alessio and A. Cappozzo. Gait and Posture 14 (2001): 28-35.

"Minimum measured-input models for the assessment of motor ability", A. Cappozzo. Journal of Biomechanics 35 (2002): 437-446.

"The sensitivity of posturographic parameters to acquisition settings", M. Schmid, S. Conforto, V. Camomilla, A. Cappozzo, T. D'Alessio. Medical Engineering & Physics 24(2002): 623-631.

"Femoral anatomical frame: assessment of various definitions", U. Della Croce, V. Camomilla, A. Leardini, A. Cappozzo. Medical Engineering and Physics 25 (2003): 425-431.

"Is it feasible to reconstruct body segment 3-d position and orientation using accelerometric data?" D. Giansanti, V. Macellari, G. Maccioni, A. Cappozzo. IEEE Transactions on Biomedical Engineering 50 (2003): 476-483.

"Clinical characteristics of flexed posture in elderly women" L. Balzini, L. Vannucchi, F. Benvenuti, M. Benucci, F. Monni, A. Cappozzo, S. J. Stanhope. Journal of the American Geriatrics Society 51 (2003): 1419-26.

"Estimation of the centre of rotation: a methodological contribution", A. Cereatti, V. Camomilla, A. Cappozzo, Journal of Biomechanics, 37 (2004): 413-416.

"An optimisation algorithm for human joint angle time-history generation using external force data", C. Mazzà, A. Cappozzo. Annals of Biomedical Engineering, 32 (2004): 764-772.

"Knowledge discovery in databases of biomechanical variables: application to the sit to stand motor task", G. Vannozzi, U. Della Croce, A. Starita, F. Benvenuti, A. Cappozzo. Journal of

NeuroEngineering and Rehabilitation, 1 (2004):7.

"Human movement analysis using stereophotogrammetry. Part 1: theoretical background" A. Cappozzo, U. della Croce, A. Leardini, L. Chiari. *Gait Posture*, 21 (2005): 186-196.

"Human movement analysis using stereophotogrammetry. Part 2: experimental errors" L. Chiari, A. Cappozzo, U. della Croce, A. Leardini. *Gait Posture*, 21 (2005): 197-211

"Human movement analysis using stereophotogrammetry. Part 3: soft tissue artifact assessment and compensation" A. Leardini, L. Chiari, U. della Croce, A. Cappozzo. *Gait Posture*, 21 (2005): 212-225.

"Human movement analysis using stereophotogrammetry. Part 4: assessment of anatomical landmark mislocation and its effects on joint kinematics" U. della Croce, A. Leardini, L. Chiari, A. Cappozzo, *Gait Posture*, 21 (2005): 226-237.

"Musculo-skeletal system modelling in the evaluation of the motor disability" A. Cappozzo, V. Camomilla, U. Della Croce, C. Mazzà, L. Quagliarella, G. Vannozzi, M.Zok. *Theoretical Issues in Ergonomics Science* (2005), 6(3-4).

"An optimized protocol for the hip joint centre determination using the functional method", V. Camomilla, A. Cereatti, G. Vannozzi, A. Cappozzo. *Journal of Biomechanics*, 39 (2006):1096-1106.

"Reconstruction of skeletal movement using skin markers: comparative assessment of bone pose estimators" A. Cereatti, U. Della Croce, A. Cappozzo. *Journal of Neuroengineering and Rehabilitation*, 3 (2006):7-13.

"Biomechanic modelling of sit-to-stand to upright posture for mobility assessment of persons with chronic stroke", C. Mazzà, S. Stanhope, A. Taviani, A. Cappozzo. *Archives of Physical Medicine and Rehabilitation*, 27 (2006): 635-661.

"Assessment of level-walking aperiodicity", F. Pecoraro, C. Mazzà, A. Cappozzo. *Journal of Neuroengineering and Rehabilitation*, 3 (2006):28.

"Propagation of the hip joint centre location error to the estimate of femur vs pelvis orientation using a constrained or unconstrained approach", A. Cereatti, V. Camomilla, G. Vannozzi, A. Cappozzo, *Journal of Biomechanics*, 40(2007): 1228-1234.

"Mobility assessment of patients with facioscapulohumeral dystrophy". M. Iosa, C. Mazzà, R. Frusciantè, M. Zock, I. Aprile, E. Ricci, A. Cappozzo. *Clinical Biomechanics*, 22(2007): 1074-82.

"Enhanced anatomical calibration in in-vivo movement analysis" M. Donati, V. Camomilla, G. Vannozzi, A. Cappozzo. *Gait & Posture*, 26 (2007): 179-185.

"Reliability of the intrinsic and extrinsic patterns of level walking in older women". F. Pecoraro, C. Mazzà, A. Cappozzo, E.E. Thomas, A. Macaluso. *Gait & Posture*, 26(2007): 386-392.

"A neurofuzzy inference system based on biomechanical features for the evaluation of the effects of the physical training". G. Vannozzi, F. Pecoraro, P. Caserotti, A. Cappozzo. *Computer Methods in Biomechanics and Biomedical Engineering*, 11(2008): 11-17

"Should the instructions issued to the subject in traditional static posturography be standardised?". M. Zok, C. Mazzà, A. Cappozzo. *Medical Engineering & Physics*, 30 (2008): 913-916.

"Joint kinematics estimate using wearable inertial and magnetic sensing modules". P. Picerno, A. Cereatti, A. Cappozzo. *Gait & Posture*, 28 (2008): 588-595

"Anatomical frame identification and reconstruction for repeatable lower limb joint kinematics estimates". M. Donati, V. Camomilla, G. Vannozzi, A. Cappozzo. *Journal of Biomechanics*, 41 (2008): 219-226.

"Control of the upper body accelerations in young and elderly women during level walking". C. Mazzà, M. Iosa, F. Pecoraro, A. Cappozzo. *Journal of Neuroengineering and Rehabilitation*, 5 (2008): 30.

"Non-invasive assessment of superficial soft tissue local displacements during movement: a feasibility study". Camomilla V, Donati M, Stagni R, Cappozzo A. *Journal of Biomechanics*, 42(2009): 931-7.

"Hip joint centre location: an ex vivo study". Cereatti A, Donati M, Camomilla V, Margheritini F, Cappozzo A. *Journal of Biomechanics*, 42(2009): 818-823.

"Gender differences in the control of the upper body accelerations during level walking". Mazzà C, Iosa M, Picerno P, Cappozzo A. *Gait Posture*, 29 (2009): 300-303.

"Control of the upper body movements during level walking in patients with facioscapulohumeral dystrophy". Iosa M, Mazzà C, Pecoraro F, Aprile I, Ricci E, Cappozzo A. *Gait and Posture*. 31(2010): 68-72.

"Is the human acetabulofemoral joint spherical?". Cereatti A, Margheritini F, Donati M, Cappozzo A. *J Bone Joint Surg Br*. 92-B(2) (2010): 311-314.

"Does Whole-Body Vibration Training Have Acute Residual Effects on Postural Control Ability of

Elderly Women?". Carlucci F, Mazzà C, Cappozzo A. *J Strength Cond Res.* 24(12) (2010): 3363-3368.

"Head stabilization in children of both genders during level walking". Mazzà C, Zok M, Cappozzo A. *Gait Posture*, 31(4) (2010): 429-432.

"A spot check for assessing static orientation consistency of inertial and magnetic sensing units". Picerno P, Cereatti A, Cappozzo A. *Gait Posture* 33 (3) (2011): 373-378.

"Tibio-femoral joint constraints for bone pose estimation during movement using multi-body optimization". Bergamini E, Pillet H, Hausselle J, Thoreux P, Guerard S, Camomilla V, Cappozzo A, Skalli W. *Gait Posture*, 3(4) (2011): 706-11.

"An optimized Kalman filter for the estimate of trunk orientation from inertial sensors data during treadmill walking". Mazzà C, Donati M, McCamley J, Picerno P, Cappozzo A. *Gait & Posture*. 35 (2012): 138-42.

"A least-squares identification algorithm for estimating squat exercise mechanics using a single inertial measurement unit". Bonnet V, Mazzà C, Fraisse P, Cappozzo A. *J Biomech.* 45 (2012): 1472-7.

"Assessing hopping developmental level in childhood using wearable inertial sensor devices". Masci I, Vannozzi G, Getchell N, Cappozzo A. *Motor Control.* 16 (2012): 317-28.

"Assessing locomotor skills development level in childhood using wearable inertial sensor devices: the running paradigm". Masci I, Vannozzi G, Bergamini E, Pesce C, Getchell N, Cappozzo A. *Gait Posture.* 37(2013): 570-4.

"Trunk Inclination Estimate During the Sprint Start Using an Inertial Measurement Unit: A Validation Study". Bergamini E, Guillon P, Camomilla V, Pillet H, Skalli W, Cappozzo A. *J Appl Biomech.* 29 (2013): 622-7.

"A hip joint kinematics driven model for the generation of realistic thigh soft tissue artefacts". Camomilla V, Cereatti A, Chèze L, Cappozzo A. *J Biomech.* 46(2013): 625-30.

"Use of weighted Fourier linear combiner filters to estimate lower trunk 3D orientation from gyroscope sensors data". Bonnet V, Mazza C, McCamley J, Cappozzo A. *Journal of Neuroengineering and Rehabilitation*, 11 (2013): 10-29.

"Real-time estimate of body kinematics during a planar squat task using a single inertial measurement unit". Bonnet V, Mazzà C, Fraisse P, Cappozzo A. *IEEE Trans Biomed Eng.* 60(2013): 1920-6..

"Integration of human walking gyroscopic data using empirical mode decomposition" Bonnet V, Ramdani S, Azevedo-Coste C, Philippe P, Mazzà C, Cappozzo A. *Sensors* 14 (2013): 370-381.

"The onset of type 2 diabetes: proposal for a multi-scale model". Castiglione F, Tieri P, De Graaf A, Franceschi C, Liò P, Van Ommen B, Mazzà C, Tichel A, Bernaschi M, Samson C, Colombo T, Castellani GC, Capri M, Garagnani P, Salvioi S, Nguyen VA, Bobeldijk-Pastorova I, Krishnan S, Cappozzo A, Sacchetti M, Morettini M, Ernst M. *JMIR Res Protoc.* 2 (2013): e44.

"Generalized mathematical representation of the soft tissue artefact". Dumas R, Camomilla V, Bonci T, Cheze L, Cappozzo A. *J Biomech.* 47 (2014): 476-481.

"Metrics for Describing Soft-Tissue Artefact and Its Effect on Pose, Size, and Shape of Marker Clusters". Grimpampi E, Camomilla V, Cereatti A, de Leva P, Cappozzo A. *IEEE Trans Biomed Eng.* 61 (2014): 362-367

"A soft tissue artefact model driven by proximal and distal joint kinematics". Bonci T, Camomilla V, Dumas R, Chèze L, Cappozzo A. *J Biomech.* 47(2014):2354-61.

"Assessment of waveform similarity in clinical gait data: the linear fit method". Iosa M, Cereatti A, Merlo A, Campanini I, Paolucci S, Cappozzo A. *Biomed Res Int.* 2014: 214156.

"Estimating orientation using magnetic and inertial sensors and different sensor fusion approaches: accuracy assessment in manual and locomotion tasks." Bergamini E, Ligorio G, Summa A, Vannozzi G, Cappozzo A, Sabatini AM. *Sensors (Basel).* 14(2014):18625-49. doi: 10.3390/s141018625.

"Hip joint centre position estimation using a dual unscented Kalman filter for computer-assisted orthopaedic surgery." Beretta E, De Momi E, Camomilla V, Cereatti A, Cappozzo A, Ferrigno G. *Proc Inst Mech Eng H.* 228(2014):971-82. doi: 10.1177/0954411914551854.

"What portion of the soft tissue artefact requires compensation when estimating joint kinematics?" Dumas R, Camomilla V, Bonci T, Chèze L, Cappozzo A. *J Biomech Eng.* 137(2015):064502. doi: 10.1115/1.4030363. Epub 2015 Apr 24.

"A model of the soft tissue artefact rigid component." Camomilla V, Bonci T, Dumas R, Chèze L, Cappozzo A. *J Biomech.* 48(2015):1752-9. doi: 10.1016/j.jbiomech.2015.05.007. Epub 2015 Jun 5.

"Estimation of subject-specific ligament length variation during knee flexion." Bergamini E, Pillet H, Rochcongar G, Thoreux P, Skalli W, Cappozzo A, Rouch P. *Comput Methods Biomech Biomed*



Engin.;18 Suppl 1 (2015):1888-9. doi: 10.1080/10255842.2015.1069556. Epub 2015 Jul 30. No abstract available.

"How Angular Velocity Features and Different Gyroscope Noise Types Interact and Determine Orientation Estimation Accuracy." Pasciuto I, Ligorio G, Bergamini E, Vannozzi G, Sabatini AM, Cappelzozzo A. *Sensors (Basel)*. 15(2015):23983-4001. doi: 10.3390/s150923983.

"Wheelchair Propulsion Biomechanics in Junior Basketball Players: A Method for the Evaluation of the Efficacy of a Specific Training Program." Bergamini E, Morelli F, Marchetti F, Vannozzi G, Polidori L, Paradisi F, Traballese M, Cappelzozzo A, Delussu AS. *Biomed Res Int*. 2015:275965. doi: 10.1155/2015/275965. Epub 2015 Oct 12.

"Rigid and non-rigid geometrical transformations of a marker-cluster and their impact on bone-pose estimation." Bonci T, Camomilla V, Dumas R, Chèze L, Cappelzozzo A. *J Biomech*. 48(2015):4166-72. doi: 10.1016/j.jbiomech.2015.10.031. Epub 2015 Oct 30.

"Effects of walking on low-grade inflammation and their implications for Type 2 Diabetes." Morettini M, Storm F, Sacchetti M, Cappelzozzo A, Mazzà C. *Prev Med Rep*. 2(2015):538-47. doi: 10.1016/j.pmedr.2015.06.012. eCollection 2015. Review.

"Assessing the Performance of Sensor Fusion Methods: Application to Magnetic-Inertial-Based Human Body Tracking." Ligorio G, Bergamini E, Pasciuto I, Vannozzi G, Cappelzozzo A, Sabatini AM. *Sensors (Basel)*. 16(2016):153. doi: 10.3390/s16020153.

"Multilevel Upper Body Movement Control during Gait in Children with Cerebral Palsy." Summa A, Vannozzi G, Bergamini E, Iosa M, Morelli D, Cappelzozzo A. *PLoS One*. 11(2016):e0151792. doi: 10.1371/journal.pone.0151792. eCollection 2016.

"Modeling the Human Tibiofemoral Joint Using Ex Vivo Determined Compliance Matrices." Lamberto G, Richard V, Dumas R, Valentini PP, Pennestri E, Lu TW, Camomilla V, Cappelzozzo A. *J Biomech Eng*. 138(2016):061010. doi: 10.1115/1.4033480.

"Knee Kinematics Estimation Using Multi-Body Optimisation Embedding a Knee Joint Stiffness Matrix: A Feasibility Study." Richard V, Lamberto G, Lu TW, Cappelzozzo A, Dumas R. *PLoS One*. 11(2016):e0157010. doi: 10.1371/journal.pone.0157010. eCollection 2016.

"To what extent is joint and muscle mechanics predicted by musculoskeletal models sensitive to soft tissue artefacts?" Lamberto G, Martelli S, Cappelzozzo A, Mazzà C. *J Biomech*. 62(2017):68-76. doi: 10.1016/j.jbiomech.2016.07.042. Epub 2016 Aug 24.

"Femur, tibia and fibula bone templates to estimate subject-specific knee ligament attachment site locations." Pillet H, Bergamini E, Rochcongar G, Camomilla V, Thoreux P, Rouch P, Cappelzozzo A, Skalli W. *J Biomech*. 49(2016):3523-3528. doi: 10.1016/j.jbiomech.2016.09.027. Epub 2016 Sep 23.

"A constrained extended Kalman filter for the optimal estimate of kinematics and kinetics of a sagittal symmetric exercise." Bonnet V, Dumas R, Cappelzozzo A, Joukov V, Daune G, Kulić D, Fraise P, Andary S, Venture G. *J Biomech*. 62 (2017):140-147. doi: 10.1016/j.jbiomech.2016.12.027. Epub 2016 Dec 29.

"Overcoming the limitations of the Harmonic Ratio for the reliable assessment of gait symmetry." Pasciuto I, Bergamini E, Iosa M, Vannozzi G, Cappelzozzo A. *J Biomech*. 53(2017):84-89. doi: 10.1016/j.jbiomech.2017.01.005. Epub 2017 Jan 7.

"Soft tissue displacement over pelvic anatomical landmarks during 3-D hip movements." Camomilla V, Bonci T, Cappelzozzo A. *J Biomech*. 62(2017):14-20. doi: 10.1016/j.jbiomech.2017.01.013. Epub 2017 Jan 17.

"Comparative assessment of knee joint models used in multi-body kinematics optimisation for soft tissue artefact compensation." Richard V, Cappelzozzo A, Dumas R. *J Biomech*. 62(2017):95-101. doi: 10.1016/j.jbiomech.2017.01.030. Epub 2017 Jan 31.

"Joint kinematics estimation using a multi-body kinematics optimisation and an extended Kalman filter, and embedding a soft tissue artefact model." Bonnet V, Richard V, Camomilla V, Venture G, Cappelzozzo A, Dumas R. *J Biomech*. 62(2017):148-155. doi: 10.1016/j.jbiomech.2017.04.033. Epub 2017 May 17.

"SIAMOC position paper on gait analysis in clinical practice: General requirements, methods and appropriateness. Results of an Italian consensus conference." Benedetti MG, Beghi E, De Tanti A, Cappelzozzo A, Basaglia N, Cutti AG, Cereatti A, Stagni R, Verdini F, Manca M, Fantozzi S, Mazzà C, Camomilla V, Campanini I, Castagna A, Cavazzuti L, Del Maestro M, Croce UD, Gasperi M, Leo T, Marchi P, Petrarca M, Piccinini L, Rabuffetti M, Ravaschio A, Sawacha Z, Spolaor F, Tesio L, Vannozzi G, Visintin I, Ferrarin M. *Gait Posture*. 58(2017):252-260. doi: 10.1016/j.gaitpost.2017.08.003. Epub 2017 Aug 5.

"Human movement analysis: The soft tissue artefact issue." Camomilla V, Dumas R, Cappelzozzo A. *J Biomech*. 62(2017):1-4. doi: 10.1016/j.jbiomech.2017.09.001. Epub 2017 Sep 8. No abstract

available.

#### BIBLIOMETRIC ANALYSIS

From Scopus:

based on documents published between 1973 and present: h index = 36, citations = 6599.