MINISTERIO DE CIENCIA E INNOVACIÓN

AGENCIA ESTATAL DE INVESTIGACIÓN

CURRICULUM VITAE (CVA)

CVA date	10-oct-2022

Part A. PERSONAL INFORMATION

First and Family name	**VICTOR MANUEL SOTO HERMOSO**		
Gender	Male	Age	55
E-mail	vsoto@ugr.es		
Researcher codes	Open Researcher and Contributor ID (ORCID) :	**0000-0002-0213-5844**	
	WoS Researcher ID :	**M-5384-2014**	

A.1. Current position:

Position	Full Profesor (CATEDRÁTICO de Universidad)	Initial date	11-02-2017
Institution	Universidad de Granada (University of Granada) (UGR)		
Department / Center	Dpto. Physical Education and Sport. School of Sport Sciences. Sport and Health University Research Institute (iMUDS) of UGR		
Address and Country	Granada, Spain	Phone number	+34 958 246637
Specialization: Biomechanics, Sport	Espec. code UNESCO: 240604, 610611		
Keywords	Biomechanics, Motion Analysis, Ergonomics, Performance, Risk Prevention, Health, Quality of Life, Technological Development, Photogrammetry, Virtual Advisors, Artificial Intelligence, Exoskeletons, Athletics, Running, Locomotion, Healthy Cities.		

A.2. Previous positions (research activity interuptions, art. 14.2.b):

Period	Position/Institution/Country/Interruption cause
1991-1993	Research scholarship. University of Granada (Spain)
1993-1998	Profesor Asociado Tipo 1, 2 y 3. University of Granada (Spain)
1998-1999	Profesor Titular Interino. University of Granada (Spain)
1999-2017	Profesor Titular de Universidad. University of Granada (Spain)

A.3. Education:

PhD, Licensed, Graduate	University/Country	Year
PhD in Physical Activity and Sport Sciences	U.Granada (Spain)	1995
Degree in Physical Activity and Sport Sciences	U.Granada (Spain)	1990

Part B. CV SUMMARY *(max. 5000 characters, including spaces)*

I started my research activity in 1989, thanks to a scholarship, developing 3D photogrammetric technologies for the analysis of movement. In 1990 I started doctoral studies. In 1991 I was awarded a Predoctoral Scholarship (FPI) from Junta de Andalucía (Spain). I read my thesis in 1995, focused on the development of biomechanical systems applied to sports.

My main research line has been oriented towards Sports Biomechanics and Technological Development for Movement Analysis. Biomechanics is an internationally consolidated research area (UNESCO code: 240604). In recent years I have broadened my research lines into the field of Ergonomics, Performance Analysis-Optimization, Musculoskeletal risk prevention, Health promotion through Physical Activity, Virtual Advisors, Artificial Intelligence applied to Sports, and Exoskeletons. My last projects, in which I participate as Principal Researcher (IP), go in these directions.

My undergraduate and graduate university teaching activity, has been mainly linked to Sports Biomechanics and other related subjects such as: Ergonomics and Physical Activity for Health.

These are my most outstanding actions of my research activity:

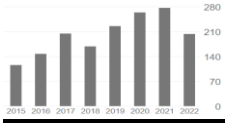
- Principal Researcher (IP) in projects and contracts financed by prestigious entities:
  - IP in 1 Project “PROFIT” call.
  - IP in 4 Projects “Plan Nacional/Estatal de Investigación Fundamental y Retos”.

- IP in 2 Projects “Plan Nacional”, Innplanta call, for Sport & Health U.Research Institute.
- IP in 2 Projects funded by “Centro Mixto UGR-MADOC”.
- IP in 2 Projects “Plan Nacional, Ayudas Infraestructuras y Equipam.Científico-Técnico”.
- IP in 1 Contract funded by the Ministery of Defense of the Spanish Goverment.
- IP in 1 Project funded by “Plan Andaluz I+D+I, Ayudas Actividades de Transferencia”.
- IP in 1 Project funded by “Ministerio de Educación y Formación Profesional”.
- IP in 1 Contract funded by the enterprise ITURRI S.A.
- IP in 1 Project funded by Programa P32, Plan Propio, University of Granada.

- I lead the project of the Sport and Health University Research Institute (iMUDS) since its creation, construction, equipment, and start-up; being its current director, coordinating a group of 121 researchers, and 22 research groups.
- Researcher in 10 Research Projects and 2 “Acciones Especiales, Plan Nacional/Estatal”.
- Researcher in 6 Reseacher Projects from “Ministerio Educación Cultura y Deporte-CSD”.
- IP in 17 Projects of Biomechanical Support to Spanish Sport Federations: athletics, cycling.
- Researcher in 4 Projects funded by “Plan Propio de la UGR”.
- I participate in laboratories specialized in biomechanics: Member of the Biomechanical Lab in Dpto. Physical Education (1993-2004). Member and Director “Ergolab” Lab in School of Sport Sciences (2005-2011). Member and Director of “Human Lab” in iMUDS (from 2012).
- Director of 3 scholarships (FPU). Director of 5 Research Suport Technicians that were contracted with the funding of some research projects from “Plan Nacional de I+D+i”.
- I have been part of two research groups funded by Junta de Andalucía (Spain): CTS-362 (1989-2004), and CTS-545 (from 2004 to present). Responsible of the research group: “Actividad Física, Deporte y Ergonomía para la Calidad de Vida” (CTS-545).
- Member of the next Research Societies: Sociedad Ibérica de Biomecánica y Biomateriales, International Society of Biomechanics, International Society of Biomechanics in Sports.
- Total funding received:
  - Projects funded by prestigious entities: 9,274,155 €, being IP in 9,062,929 €.
  - Special relevance Contracts with enterprises & public entities: 696,410€, IP in 157,030€
  - Other Contracts managed by “Fundación General UGR”: 35,617 €, IP in 35,617 €.

General indicators of quality of scientific production (JCR articles, h Index, thesis):

<table>
<tr>
<td>Citation Index by <u>Google Scholar</u>:
• Nº Citations
• h-index
• i10-index</td>
<td><u>global</u>
2330
24
47</td>
<td><u>from 2017</u>
1360
18
38</td>
<td>Impact in <u>Web of Science</u>:
Sum of times cited = 766
h-index= 13</td>
</tr>
<tr>
<td colspan="2"><u>99 Articles</u> in scientific journals:
83 International
17 National.

Total of JCR articles: 71
1st quartil Q1: 17 ; Q2: 19 ; Q3: 16</td>
<td>Citations in Web of Science:
 
</td>
<td>Citations in Google Scholar:
 
</td>
</tr>
<tr>
<td colspan="2">Sexenios Investigación: 4, last in 2013-2018
Sexenios Transferencia: 1, 2009-2018</td>
<td>13 Thesis, 7 from 2010
5 Thesis in development</td>
<td>3 Books
6 Book Chapters</td>
</tr>
</table>

Part C. RELEVANT MERITS *(sorted by typology)*

C.1. PUBLICATIONS, including books: (10 papers most relevants from 2012)

Ruiz-Alias,SA; Molina-Molina,A; Soto-Hermoso,VM; García-Pinillos,F (2022). A systematic review of the effect of running shoes on running economy, performance and biomechanics: analysis by brand and model. Sports Biomechanics. (JCR, **Q2** in Sport Sciences).

García-Pinillos,F; Jaén-Carrillo,D; Latorre-Román,PA; Escalona-Marfil,C; Soto-Hermoso,VM; Lago-Fuentes,C; Pueyo-Villa,S; Domínguez-Azpíroz,I; Roche-Seruendo,LE. (2021). Does Arch Stiffness Influence Running Spatiotemporal Parameters? An Analysis of the Relationship between Influencing Factors on Running Performance. International Journal of Environmental Research and Public Health. 18, 5, 2437. (JCR, **Q1** in Public, Environ. & Occupational Health).

Delgado-García,G; Vanrenterghem,J; Mildenberger,C; Rodríguez Gallego,L: Chicano-Gutiérrez,JM; Soto-Hermoso,VM. (2021). Accuracy and reliability of a low-cost methodology to assess 3D body posture based on commercial cameras and Excel templates. Measurement. 173, 108638. (JCR, **Q1** in Engineering, multidisciplinary).

García-Pinillos,F; Jaén,D; Soto,VM; Latorre,PA; Delgado,P; Martínez,C; Cartón,A; Roche,LE (2020). Agreement between the spatiotemporal gait parameters from a markerless motion capture system and two different systems: treadmill-based photoelectric cell and high-speed video analysis. Journal of Medical Internet Research mHealth and uHealth (JMIR mHealth and uHealth). 8(10):e19498. (JCR, **Q1** in Medical Informatics, y Health Care Sciences & Services).

Latorre-Roman,PA; Redondo,F; Parraga,J; Soto-Hermoso,VM; Consuegra,PJ; García-Pinillos,F. (2019). Analysis of foot strike pattern, rearfoot dynamic and foot rotation over childhood. A cross-sectional study. Journal of Sports Sciences. 37, 5: 477-483. (JCR, **Q1** in Sport Sciences)

Latorre-Román,PA; Laredo-Aguilera,JA; García-Pinillos,F; Soto-Hermoso,VM; Carmona-Torres,JM (2018). Physical activity, weight and functional limitations in elderly Spanish people: the National Health Survey (2009–2014). *European Journal of Public Health*. 28, 4, 778-783. (JCR, **Q2** in Public, Environmental & Occupational Health)

Roche-Seruendo,LE.; García-Pinillos,F.; Auria,I.; Bataller,AV.; Latorre,PA.; Soto,VM; (2018). Effects of different percentages of body weight support on spatiotemporal step characteristics during running. *Journal of Sports Sciences*. 36 (13), 1441-1446. (JCR, **Q1** in Sport)

Roche-Seruendo,LE; García-Pinillos,F.; Haicaguerre,J.; Bataller-Cervero,AV.; Soto-Hermoso,VM; Latorre-Roman,PA. (2018). Lack of influence of muscular performance parameters on spatio-temporal adaptations with increased running velocity. *Journal of Strength and Conditioning Research*. 32, 2, 409-415. (JCR, **Q1** in Sport Sciences)

Latorre-Roman,PA.; García-Pinillos,F.; Bujalance-Moreno,P.; Soto-Hermoso,VM; (2017). Acute effects of high-intensity intermittent training on kinematics and foot strike patterns in endurance runners. *Journal of Sports Sciences*. 35 (13), 1247-1254. (JCR, **Q1** in Sport Sciences)

Heredia-Jimenez,JM; Orantes,EM; Soto,VM. (2016). Variability of gait, bilateral coordination, and asymmetry in women with fibromyalgia. *Gait & Posture*. 45, 41-44. (JCR, **Q1** in Sport)

C.2. CONGRESS

C.2.1. Conferencia invitada: "Iniciativas puestas en marcha a nivel autonómico: el papel de los asesores virtuales“. Jornadas de Políticas públicas de deporte, educación y salud. Instituto Andaluz del Deporte. 28-junio-2022.

C.2.2. Conferencia invitada: Introducción a las nuevas tecnologías en el deporte. IV Jornadas Autonómicas del Deporte Aragonés 2015: Tecnología Aplicada al Deporte. Universidad Internacional Menéndez Pelayo (UIMP). U.Zaragoza, Campus Huesca, 23-octubre-2015.

C.3. RESEARCH PROJECTS and GRANTS: (10 projects most relevants from 2012)

C.3.1. Project: “Innovación y transferencia de las nuevas tecnologías aplicadas al deporte en la formación profesional” (TICsDeportivasFP). Ref. IAFP21/00141. Convocatoria 2021 de proyectos de innovación e investigación aplicadas y transferencia del conocimiento en la Formación Profesional. Ministerio de Educación y Formación Profesional. Funding received: 190,000 €. Duration: 1.5 years (2022-2023). IP of UGR subproject: Víctor M. Soto.

C.3.2. Project: “Desarrollo de asesores virtuales y su validación en un proyecto educativo integral para población deportista de bachillerato, formación profesional y universitaria involucrados en formación dual” (EduSport). Ref. PID2020-115600RB-C21. Plan Estatal de I+D+i, convocatoria Retos. Funding received: 36,421 €. Duration: 3 years (2021-2024). IP: Víctor Manuel Soto Hermoso.

C.3.3. Project: “Desarrollo de un prototipo de exoesqueleto pasivo adaptado a bota técnica, para la optimización de la locomoción humana, válido para el ámbito militar y civil (ExoLimb2)”. Ref.5974. Convocatoria 2017 de Ayudas a Actividades de Transferencia de Conocimiento entre los Agentes del Sistema Andaluz del Conocimiento y el Tejido Productivo, Plan Andaluz de I+D+I (PAIDI 2020). Funding received: 90,000 €. Duration: 1.7 years (2019-2021). IP: Víctor Manuel Soto Hermoso.

C.3.4. Project: “Equipamiento avanzado para investigación orientada hacia el desarrollo del concepto de smart cities/healthy cities en el Instituto Mixto Universitario Deporte y Salud”. Ref. EQC2018-004702-P. Plan Estatal de I+D+i, Ayudas para la Adquisición de Equipamiento Científico-Técnico. Funding received: 826,125 €. Duration: 3 years (2018-2020). IP: Víctor Manuel Soto Hermoso.

C.3.5. Project: “Equipamiento para investigación en el ámbito de Big Data aplicado al área del Deporte y la Salud en el Instituto Mixto Universitario deporte y Salud”. Ref. UNGR15-CE-3400. Plan Estatal de I+D+i, Ayudas a Infraestructuras y Equipamiento Científico-Técnico. Funding received: 716,400 €. Duration: 1 year (2016-2017). IP: Víctor M. Soto Her.

C.3.6. Project: “Monitorización y fomento de hábitos saludables, mediante una plataforma basada en sensores portables y asesores virtuales, para la promoción del envejecimiento activo en población activa y mayor” (AVISAME). Ref. DEP2015-70980-R. Plan Estatal de I+D+i, convocatoria Retos. Funding received: 102,850 €. Duration: 3 years (2016-2018). IP: Víctor Manuel Soto Hermoso.

C.3.7. Project: “Sistema ergonómico integral para la evaluación de la locomoción como predictor de la calidad de vida relacionada con la salud en mayores” (ERGOLOC). Ref.DEP2012-40069. Plan Nacional de I+D+i, convocatoria de Investigación Fundamental. Funding received: 50,820 €. Duration: 3 years (from jan-2013 to dec-2015). IP: Víctor M. Soto Her.

C.3.8. Two Projects for the “Edificación, Infraestructura y Equipamiento del Instituto Mixto Universitario Deporte y Salud” (iMUDS). Ref. PCT-300000-2010-6, y Ref. INP-2011-0016-PCT-300000-ACT11. Plan Nacional de I+D+i, Convocatorias INNPLANTA 2010 y 2011, Subprograma de Actuaciones Científico-Tecnológicas para las Entidades Públicas instaladas en los Parques Científicos y Tecnológicos. Funding received en 2010: 3,120,000 €. Funding received in 2011: 3,059,227 €. Duration: 3 years (2010-2013). IP (in both projects): Víctor Manuel Soto Hermoso.

C.3.9. Project: “Promoción de actividad física saludable y mejora de la calidad de vida mediante un sistema ergonómico de evaluación integral y prevención de riesgos” (PAQOL). Ref. DEP2009-11850. Nacional de I+D+i, convocatoria de Investigación Fundamental. Funding received: 146,410 €. Duration: 3 years (ene-2010 hasta dic-2012). IP: Víctor M. Soto Her.

C.4. CONTRACTS, Technological or Transfer Merits: (10 most relevants from 2012)

C.4.1. Project: “Optimización y valorización de un prototipo de exoesqueleto pasivo para bota técnica” (ExoBoot4D)”. Ref.xxx. Programa P32, Proyectos de Desarrollo Tecnológico (prototipos y pruebas de concepto)”, convocatoria 2022, Plan Propio de Investigación, Univ. Granada. Funding received: 15,000 €. Duration: 1 year (2022-2023). IP: Víctor M.Soto Her.

C.4.2. Research Contract: “Optimización comercial para clientes de centros deportivos basada en Inteligencia Artificial” (OCDIA). Project funded by Ministerio de Asuntos Económicos y Transformación Digital. The Enterprise Intelinova SL contract UGR for some tasks. Funding: 484,000 €. Duration: 20 months. IP: J.M.Benítez. VM.Soto is the IP of Sport Science group.

C.4.3. Research Contract: “Asesoría técnica para el desarrollo de un asesor virtual optimizado para la formación en el uso de exoesqueletos (ITURRI ExoAvatar). Project funded by the enterprise ITURRI S.A. Funding: 20,349.51 €. Duration: 9.5 months. IP: V.M. Soto.

C.4.4. Research Contract: “Exoesqueleto pasivo adaptado a la bota” (ExoBoot). Ref. 10032/18/0053/00 (2018). Project funded by Ministry of Defense of Spain. SEDEF Dir. Gen. Armamento y Material. Funding: 65,000 €. Duration: 4 months. IP: Víctor M. Soto Her.

C.4.5. I have developed some Contracts, for the development of a Technology called “VIRTUAL ADVISORS” applied to health topics. This contracts implies the development of this technology in cooperation with different entities. Entities that fund this contracts: Escuela Andaluza de Salud Pública (EASP); Fundación FIBAO; enterprises Gait Cycle SL. Duration: from 2019 to 2020. Funding received: 51,538.85 €. IP: V.M. Soto.

C.4.6. I have developed 17 Biomechanical Projects for Spanish Sport Federations like Andalucia Athletics Track & Field Federation, and the Spanish Cycling Federation; funded by that entities. Duration: from 1999 to 2008. Funding received: 21,959 €. IP: V.M. Soto.

C.4.7. Creation and Managment of a startup Company called “Soluciones Ergonómicas Integrales S.L.”. This startup/spin-off is a Technological Based Enterprise. Activities: Ergonomics, Risk Prevention, Health Promotion, Quality of life, Performance and Technologies. This Company. This company has allowed to transfer the know-how in R+D+i obtained in our group. I have been Director (CEO) and founder of this startup-spinoff.

C.4.8. I have received 1 TRANSFER acreditation of Spanish Government (Tramo de Transferencia). Comisión Nacional Evaluadora de la Actividad de Transferencia, 15 de abril de 2020. Periodo evaluado: 2009-2018 (both included).

C.4.9. PATENT (pending to approved): “Exoesqueleto pasivo para bota técnica”. Solicitud: ref. 202230383. Titular: Universidad de Granada. Patente Nacional. N/Ref.: 2022/12846.