

Activities Report 2023



INDEX

1. Presentation
2. Executive summary
3. Mission, vision and values
4. Organisational chart of the research centre
5. Human resources
 - 5.1. Number of researchers
 - 5.2. Technical and administrative staff
6. Research projects
 - 6.1. Description of ongoing projects
 - 6.2. New projects initiated during the year
7. Scientific publications and outputs
 - 7.1. Scientific articles
 - 7.2. Books and book chapters
 - 7.3. Papers and presentations at congresses

8. Collaborations and partnerships

8.1. Collaborations with other institutions

8.2. Participation in research networks

9. Scientific dissemination activities

9.1. Scientific events organised

10. Acknowledgements and awards received

11. Financial management

11.1. Annual budget

11.2. Sources of funding

11.3. Balance sheet

12. Challenges and future prospects

13. Conclusions

1. Presentation

The Sports Science Research Centre of the Rey Juan Carlos University (CIDE)¹ is a multidisciplinary research centre of the URJC, which carries out quality research and training in the field of Physical Activity and Sport Science.

The Centre offers consultancy and knowledge transfer services, both to society as a whole and to the business and associative fabric of the Physical Activity and Sport Sector.

The Centre has its headquarters in the premises of the Fuenlabrada Campus Stadium of the Rey Juan Carlos University, located at Camino del Molino, 5. 28942 Fuenlabrada (Madrid).

The CIDE is formally constituted by agreement of the Governing Council on 30th March 2023 as a natural evolution of the Centre for Sports Studies, which was launched at the Rey Juan Carlos University through a specific agreement with the CSIC in 2016.

Since its incorporation to the Rey Juan Carlos University, the Sports Science Research area has generated **more than 3 million euros in external funding** and has launched more than 56 projects.

We are considered a **High-Performance Research Group**, according to the Rey Juan Carlos University standards, and have climbed to the **151-200 institutions group in the Shanghai 2023 Ranking in Sport Science** in our second year included in the ranking (up 100 places from 251-300 in 2022). ²

¹ <https://cide.urjc.es/>

² <https://www.shanghairanking.com/rankings/grsssd/2023>

2. Executive Summary

The present document includes the main activity of the **Centre for Research in Sport Sciences (CIDE)** since its formal constitution by agreement of the Governing Council on 30 March 2023. This new Centre is the natural evolution of **the Centre for Sports Studies (CED)**, which was launched at the Rey Juan Carlos University through a specific agreement with the CSIC in 2016.

On 14th April 2023, the **Regulations for the organisation and operation of the Rey Juan Carlos University Sports Science Research Centre** were published in the BOURJC, and on May the 3rd, Prof. Alfonso Jiménez Gutiérrez, Echegaray Professor in the Area of Physical and Sports Education, was appointed Director of the CIDE, following an open electoral process.

In these 8 months of operation, the CIDE has implemented an ambitious and effective work plan, focused on six synergetic actions:

- clearly defining its structure and organisation, in **five areas of clear specialisation** (which in the future will give rise to its own research groups);
- establishing the basis for the development and implementation of a **four-year Strategic Plan** (2023-2027), where critical research areas have been identified in each case, KPIs have been defined for each one, and a specific roadmap has been identified;
- strengthening the development of the **capacity and talent of our researchers**, integrating mentoring as an axis of effective support;
- Executing 18 ongoing projects without incident, with a total allocation of **934.322,60 €**;
- obtaining 18 new projects, through both competitive calls and research contracts (art. 60 LOSU), for a value of **503.581 €**;
- regularly publishing the results of our work in each area of specialisation (with **58 JCR articles** published).

On the other hand, the CIDE research team has completed the favourable verification of a new official postgraduate programme (Official Master's Degree in Physical Preparation for Health and Exercise in Chronic Pathologies³), which will start its activity in the 2024/25 academic year. This programme will clearly reinforce one of the areas of the centre with the greatest potential for future research activity, the use of physical exercise as an instrument of prevention and improvement of the quality of people affected by chronic diseases (research area in Physical Activity, Exercise, Health and Quality of Life).

And finally, in collaboration with the International Doctoral School, we have applied for the verification of a new Doctoral Programme in Education and Sport Sciences, which has recently received a favourable report after the final phase of allegations in the Madrid+d Foundation (answered in March 2024). It would be reasonable to consider that the first students of the new programme could also join in the academic year 2024/25.

As we indicated in the introduction, the Sports Science Research area is a young, small area, but with a lot of talent and ambition, which since its incorporation into the Rey Juan Carlos University has generated more than 3 million euros in external funding and has launched more than 56 projects. And all this considering that the researchers assigned to the CIDE have a full teaching load and lack structural support for the management and administration of ongoing projects.

Following is some detailed information on our activity in these first eight months of life as a Research Centre.

³ <https://www.urjc.es/estudios/master/8771-preparacion-fisica-para-la-salud-y-ejercicio-en-patologias-cronicas>

3. Vision, Mission and Objectives:

3.1. Vision of the Centre for Sports Science Research (CiDE)

- To become a unique and singular agent of reference, through our impact, contributions and collaborations, within the ecosystem of Sport Science in our country and internationally.

3.2. Mission of the Centre for Sports Science Research (CiDE)

- To promote and develop innovative and quality research in the field of Physical Activity and Sport Science capable of transforming the perception of the value and recognition of the impact of sports and physical activity in society.

3.3. Objectives of the Sport Science Research Centre (CiDE)

This Mission of the Centre for Sports Science Research (CiDE) is specified in the following objectives:

- To promote and develop innovative and quality research in the field of Physical Activity and Sport Science.
- To promote the generation of knowledge in the scientific community, based on the research results obtained and published in scientific journals.
- To develop quality research training, in cooperation with other national and international research centres.
- To develop specialised training programmes for Sport Science professionals, contributing to the permanent updating of their knowledge and professional improvement.
- To promote the transfer of research results, so that they achieve an effective impact on the professional activity of Physical Trainers, Sports Directors and Physical Education Teachers, in the fields related to Physical Activity and Health, Sports Performance and Sports Education.

4. Organisational chart of the Research Centre:

The Centre for Sports Science Research (CIDE) has been provided with a highly operational and functional organisational structure, which will allow it to grow organically in the coming years, as new researchers join the Centre.

The core of the operational management lies with the Director of the Centre, with the support of the Deputy Director and the Secretary. In our case, these are the following people:

- Director: Prof. Alfonso Jiménez Gutiérrez.
- Deputy Director: Prof. Miguel Ángel Fernández Del Olmo.
- Secretary: Dr. Xián Mayo Mauriz.

Strategic and scientific decision-making is carried out by the centre's **Executive Committee**, which includes the leaders and coordinators of the different research areas:

- Leader of the Performance and Physiology Research Area: Dr. Juan del Coso. Coordinator: Dr. Arturo Casado Alda.
- Research Area Leader in Didactic and Behavioural Analysis of Sport: Prof. Fernando Del Villar. Coordinator: Dr. Alexander Gil Arias.
- Leader of the Research Area in Learning and Motor Control: Prof. Miguel Ángel Fernández Del Olmo. Coordinator: Dr. Antonio Luque.
- Leader of the High-Performance Research Area: Dr. Pedro Jiménez Reyes.
- Research Area Leader in Physical Activity, Exercise, Health and Quality of Life: Prof. Alfonso Jiménez. Coordinator: Dr. Xián Mayo Mauriz.

The monitoring of research activities, as well as the operational management of the use of resources, is carried out by the **centre's working group**, which includes the centre's director and the coordinators of the research areas.

In addition, the centre has a **Centre Council**, which brings together all the researchers linked to the centre.

Finally, although they have not yet been set up in this first year of the CIDE's operation, we will soon have two groups of external researchers, the **Advisory Council**, made up of leading figures in our scientific field, and a group of **associated external researchers**.

Figure #1 below, presents the structure of CIDE's organisational chart.

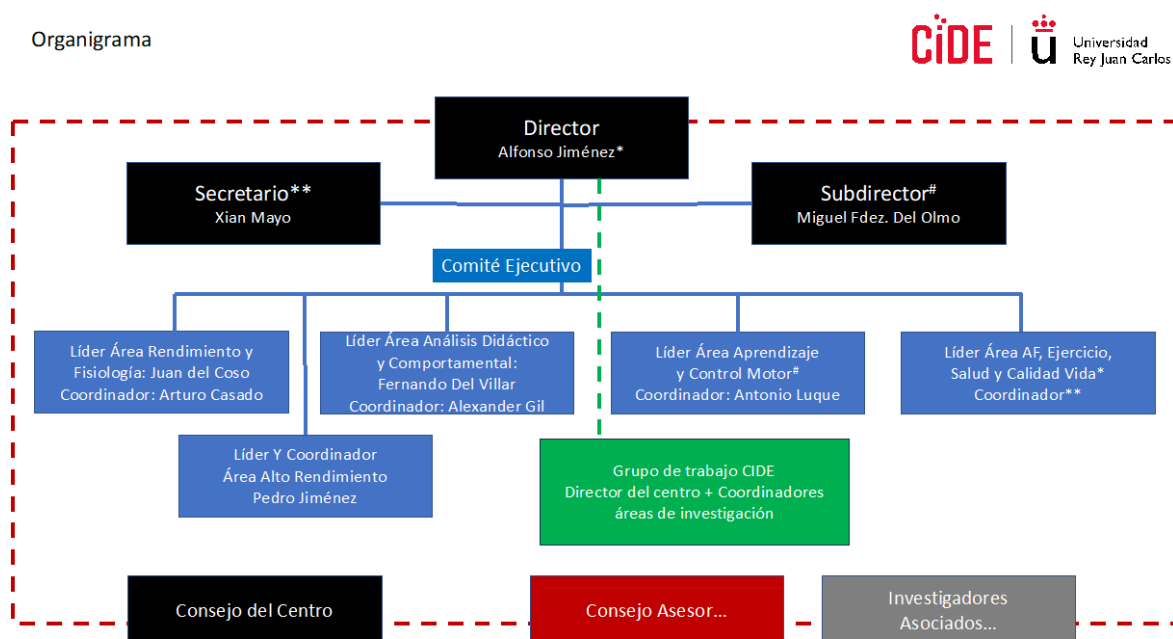


Figure #1:
2023 CIDE's Organisational Chart Structure

5. Human Resources

5.1. Number of researchers:

In 2023, the CIDE had 25 active researchers: 16 faculty researchers (3 professors, 6 associate professors, 3 interim associate professors, 4 assistant professors), 2 postdoctoral researchers, plus 5 predoctoral researchers (all with funding).

This team accumulates a total of 27 six-year research periods. In terms of publications, and according to Scopus data (as of 29/01/2024), our research team has accumulated a total of 1,075 publications, with 38,667 citations and an aggregate IF of 311.

Table #1, included below, includes the details of the CIDE research team in 2023.

Table #1:
List of active researchers at the CIDE in the year 2023

Name	Category	Six-year term
Prof. Alfonso Jiménez Gutiérrez	Professor of University	3
Prof. Miguel Fernández del Olmo	Professor of University	3
Prof. Fernando Del Villar Álvarez	Professor of University	4
Dr. Juan del Coso Garrigós	Associate Professor	3
Dr. Pedro Jiménez Reyes	Associate Professor	2
Dr. Alexander Gil Arias	Associate Professor	2
Dr. Sergio Jiménez Saiz	Associate Professor	2
Dra. Diana Amado Alonso	Associate Professor	1
Dr. Daniel Collado Mateo	Associate Professor	1
Dra. Noa Fogelson	Interim Associate Professor	2
Dr. Fernando Claver Rabaz	Interim Associate Professor	1
Dr. Xián Mayo Mauriz	Interim Associate Professor	1
Dr. Antonio Luque Casado	Assistant Professor	1

Dr. Arturo Casado Alda	Assistant Professor	1
Dr. Joaquín González Ródenas	Assistant Professor	-
Dr. Sergio Jiménez Rubio	Assistant Professor	-
Dra. Inés Nieto Romero	Postdoctoral Researcher	-
Dra. Irene Rocamora	Postdoctoral Researcher	-
Sara Lapresta Romero	Predoctoral Researcher	-
Adrián Castaño Zambudio	Predoctoral Researcher	-
Ana Lavín Pérez	Predoctoral Researcher	-
Eduardo Villamil Cabello	Predoctoral Researcher	-
Luis Eduardo Ranieri	Predoctoral Researcher	-

5.2. Technical and administrative staff

The CIDE has only 1 technical research support staff (part-time), Ana Miravete, who joined the team in September 2023 and is funded by a project of the Centre's director (F980).

Figure #2 below represents the staffing structure of the current staff assigned to the CIDE.

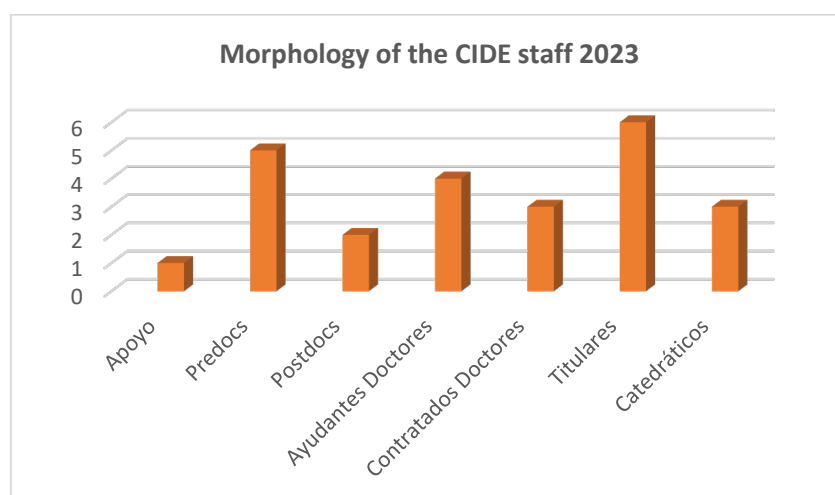


Figure #2: Staffing structure of the current staff assigned to the CIDE

6. Research projects

The number of research projects underway, plus those obtained in 2023, amounts to a total of **36 research projects and contracts**, with a total endowment of funds of **1.473.903,60 €**.

6.1. Description of ongoing projects

During the year 2023, **18 active projects** have been developed in the CIDE, involving a total budget of **934.322,60€**. Table #2 below presents the details of each project, including PI, funding entity, amount and start and end dates of each project.

Table #2:
Ongoing projects and contracts at the CIDE in 2023

PI/PIs	Title	Funding Agency	Amount €	Start Date	End Date
Alfonso Jiménez Gutiérrez, Xian Mayo Mauriz	Social and economic impact of promoting active behaviour, applying the Social Return of Investment (SROI) model.	GO fit Life, Science & Technology, S.A.	75.000,00 €	2/12/22	1/12/25
Alfonso Jiménez Gutiérrez, Xian Mayo Mauriz	Social and economic impact of promoting active behaviour in Spain, applying Social Return of Investment (SROI) models.	Fundación España Activa	72.000,00 €	10/11/22	9/11/25
Antonio Luque Casado	INVESTIGO Programme grant for the recruitment of 93 young people to carry out research projects as researchers, technologists, technical staff and other professional profiles in R&D&I.	Comunidad de Madrid	34.108,92 €	28/10/22	27/10/23

Daniel Collado Mateo	INVESTIGO Programme grant for the recruitment of 93 young people to carry out research projects as researchers, technologists, technical staff and other professional profiles in R&D&I.	Comunidad de Madrid	34.108,92 €	28/10/22	27/10/23
Joaquín González Rodenas	INVESTIGO Programme grant for the recruitment of 93 young people to carry out research projects as researchers, technologists, technical staff and other professional profiles in R&D&I.	Comunidad de Madrid	34.108,92 €	28/10/22	27/10/23
Miguel Ángel Fernández del Olmo	INVESTIGO Programme grant for the recruitment of 93 young people to carry out research projects as researchers, technologists, technical staff and other professional profiles in R&D&I.	Comunidad de Madrid	34.108,92 €	28/10/22	27/10/23
Antonio Luque Casado	Effects of aerobic physical exercise as a facilitating strategy of neuroplasticity mechanisms induced by non-invasive brain stimulation on sustained attention performance.	COMUNIDAD DE MADRID	44.564,00 €	15/6/22	14/6/24

Alexander Gil Arias	Monitoring of running mechanics to apply scientific criteria in the development of physical-sports rehabilitation programmes with professional and amateur sportsmen and women.	GO fit Life, Science & Technology, S.A.	6.662,92 €	6/5/22	5/5/23
Alfonso Jiménez Gutiérrez, Xian Mayo Mauriz	Implications of social impact on the development of active behaviour.	GO fit Life, Science & Technology, S.A.	24.000,00 €	28/2/22	27/2/24
César Bernal Bravo, Daniel Collado Mateo	Study on Animal Assisted Socio-educational Interventions	Asociación de Educadores-as sin Fronteras	20.000,00 €	19/12/21	18/12/24
Alfonso Jiménez Gutiérrez	Impacto social y económico del fomento de un estilo de vida físicamente activo mediante la creación de una unidad piloto de investigación denominada THiNK Active	EuropeActive	80.000,00 €	26/5/21	25/5/25
Alfonso Jiménez Gutiérrez	Go Fit Lab Management: consultancy and scientific-technical advice in the management of the Go Fit Lab Research Unit.	GO fit Life, Science & Technology, S.A.	70.000,00 €	11/5/21	10/5/23
Miguel Ángel Fernández del Olmo, Alfonso Jiménez Gutiérrez	Industrial Doctorates 2020. Parkinson and Exercise, with the company Ingesport Health and Spa Consulting, S.A.	Comunidad de Madrid	28.000,00 €	30/11/20	29/11/23

Noa Fogelson	Evaluating cognitive effects of methylphenidate in Parkinson's disease patients using electrophysiological measures.	Agencia Estatal de Investigación - Ministerio de Ciencia e Innovación	84.700,00 €	1/6/20	31/5/24
Pedro Jiménez Reyes	Study of the effect of individualised training programmes on the optimisation of the Strength-Speed profile, kinetics and kinematics of sprinting in elite athletes.	Agencia Estatal de Investigación	37.510,00 €	1/6/20	31/5/23
Fernando Del Villar Álvarez	Programme of research activities of the Observatory of the España Activa Foundation at the Universidad Rey Juan Carlos	Fundación España Activa	48.000,00 €	9/1/20	8/1/23
Alfonso Jiménez Gutiérrez	GO fit URJC Chair of Active Living, Physical Exercise and Happiness	GO fit Life, Science & Technology, S.A. (anteriormente Ingesport Health & Spa Consulting SL)	207.000,00 €	18/6/19	17/6/25
Diana Amado Alonso	Educational project of two-way help through educational and therapeutic dance and therapeutic assistance dog.	Office of Animal Assisted Intervention of the URJC and Hospital Fundación de Alcorcón	450 €	16/12/22	17/3/23

6.2. New projects initiated during 2023

On the other hand, and also during the year 2023, **18 new projects and contracts** have been launched, with a total funding of **503.581€**. Table #3 below shows the details of the projects obtained, PI, funding entity, amount and start and end dates of each project.

Table #3:
List of new projects and contracts obtained by the CIDE in the year 2023

Project's Title	MI/MIs	Funding Agency	Total Amount	Start Date	End Date
Research in relation to performance measurement and injury prevention, using data from the "Mediacoch" platform.	Juan del Coso	LALIGA GROUP INTERNATIONAL S.L.	6.780€	04/12/2023	03/12/2024
URJC Centre for Sports Science Research	Alfonso Jiménez	Universidad Rey Juan Carlos	20.000€	01/12/2023	31/12/2024
Consolidated Research Group in Sports Sciences of the Rey Juan Carlos University.	Fernando del Villar	Universidad Rey Juan Carlos	2.736,27€	01/03/2024	30/06/2025
Acquisition of WIMO PRO inertial devices	Alexander Gil Arias	Universidad Rey Juan Carlos	19.689,12€	21/11/2023	20/05/2024
Training and physical preparation of the Spanish Skeleton Team	Pedro Jiménez Reyes	Federación Española de Deportes de Hielo	6.000€	01/10/2023	31/12/2023

Creation and implementation of a Unit for the Evaluation and Impact Assessment of the Plan of Indicators of Sport in Sustainable Development in Ibero-America and the Coordination of the Ibero-American Network of Women and Sport.	Alfonso Jiménez	Consejo Iberoamericano del Deporte	50.000€	01/10/2023	31/12/2024
Effects of the combination of physical exercise and transcranial direct current stimulation on motor function and underlying neurophysiological mechanisms in Parkinson's disease.	Miguel A. Fernández del Olmo	Agencia Estatal de Investigación	113.000€	01/09/2023	31/08/2026
Monitoring of running mechanics to apply scientific criteria in the development of physical-sports rehabilitation programmes with professional and amateur sportsmen and women.	Sergio Jiménez Rubio	Facultad de Ciencias de la Educación y del deporte y Estudios Interdisciplinarios (URJC)	180€	27/06/2023	30/06/2024
Animal-assisted education as a teaching innovation resource	Daniel Collado Mateo	Facultad de Ciencias de la Educación y del deporte y Estudios Interdisciplinarios (URJC)	250€	27/06/2023	31/12/2023

Review of different proposals for calls for aid to Spanish sports federations to invest in technology and audiovisual media to develop the digitalisation of sports training and the identification of sports talent in high performance centres, charged to the European funds of the recovery, transformation and resilience plan.	Alfonso Jiménez	INNOVA NEXT S.L. (BARRABÉS)	3.000€	24/05/2023	23/08/2023
Start-up and development of the Active Citizenship and Sustainable Territory Area of the Spain Future Sport project of the Spanish National Sports Council, developed by the Fundación Deporte Joven itself	Alfonso Jiménez	Fundación Deporte Joven	75.206,62€	24/04/2023	23/10/2023
Consultancy and scientific-technical advice for the implementation of different studies and projects on the positive effects of an active and healthy lifestyle, the improvement of sports performance, the integration of technology and the impact of certain health services.	Alfonso Jiménez	Universidad EUNEIZ SA	18.000€	14/04/2023	13/04/2026
Line of Action No. 3. Programme of Excellence for Alfonso Jiménez Gutiérrez. Multi-annual Agreement between the Community of Madrid and	Alfonso Jiménez	COMUNIDAD DE MADRID	50.000€	21/03/2023	31/12/2024

the Rey Juan Carlos University.					
Implementation of the A-Champs system as a tool for assessment and rehabilitation in Parkinson's disease.	Miguel A. Fernández del Olmo	A-CHAMPS LTD	10.000€	26/01/2023	25/05/2023
Industrial Doctorates 2022. GO fit Super-Run: optimising performance in amateur long-distance runners by manipulating the distribution of training intensities and assisting heart rate variability.	Arturo Casado Alda	COMUNIDAD DE MADRID	73.066,72€	01/01/2023	01/01/2026
Purchase of Tanita MC 780 MA body composition analyser device	Daniel Collado Mateo	Universidad Rey Juan Carlos	4.482€	01/01/2023	30/06/2023
Evaluation of physical activity for minimising the consequences of digital addictions in young adults	Daniel Collado Mateo	Ministerio de Derechos Sociales, Consumo y Agenda 2030	43.190€	01/01/2023	30/06/2024
Spanish Research Network on the Social Return on Investment in Sport	Alfonso Jiménez	Ministerio de Cultura y Deporte	8.000€	01/01/2023	15/11/2023

7. Publications and scientific output

7.1. Scientific Articles

Table #4 below presents the total of 58 scientific articles published by CIDE researchers in 2023, indicating the title of the work, authors and journal of publication (for more detailed information please visit the CIDE website, publications section of the home page, <https://cide.urjc.es/>, from where you can access the DOI of each publication).

Table # 4:
List of scientific articles published by CIDE researchers in 2023

Title	Authors	Journal
Effects of Caffeine Intake on Endurance Running Performance and Time to Exhaustion: A Systematic Review and Meta-Analysis	Wang Z., Qiu B., Gao J., Del Coso J.	Nutrients
A Pilot Study of the Effects of Individualized Home Dual Task Training by Mobile Health Technology in People with Dementia	Villamil-Cabello E., Meneses-Domínguez M., Fernández-Rodríguez Á., Ontoria-Álvarez P., Jiménez-Gutiérrez A., Fernández-del-Olmo M.	International Journal of Environmental Research and Public Health
A Load–Velocity Relationship in Sprint?	van den Tillaar R., Gleadhill S., Jiménez-Reyes P., Nagahara R.	Journal of Functional Morphology and Kinesiology
Effects of a six-week multimodal training programme on the sprinting ability of adolescent rugby sevens players	Sastre-Munar A., Jiménez-Reyes P., Romero-Franco N.	Journal of Sports Sciences
Evaluating the Effectiveness of a Psychological and Adventure-based Multicomponent Therapeutic Program for Victims of Intimate Partner Violence: A Pilot Study	Sáez G., López-Núñez C., Rojo-Ramos J., Morenas-Martín J., Domínguez-Muñoz F.J., Hernández-Albújar Y., Barrios-Fernandez S., Adsuar J.C., Collado-Mateo D.	Journal of Interpersonal Violence

Title	Authors	Journal
Impact of advanced footwear technology on critical speed and performance in elite runners	Rodrigo-Carranza V., González-Mohíno F., Casado A., Santos-Concejero J., Galán-Rioja M.Á., González-Ravé J.M.	Footwear Science
A Comparison of Motivation and Physical Activity Levels Between a Sport Education Season and a Hybrid Sport Education and Cooperative Learning Season	Rocamora I., Casey A., González-Víllora S., Arias-Palencia N.M.	Journal of Teaching in Physical Education
Horizontal versus vertical force application: association with the change of direction performance in soccer players.	Robles-Ruiz J., Baena-Raya A., Jiménez-Reyes P., Soriano-Maldonado A., Rodríguez-Pérez M.A.	European Journal of Sport Science
Modeling Gender Differences in Heart Rate During the Diving Reflex: Insights into Physiological Adaptability	Rey-Paredes M., Barquero-Perez O., Goya-Esteban R., Luque-Casado A., Grassi D., Suarez F.	Computing in Cardiology
No impact of combining multi-ingredient supplementation with exercise on body composition and physical performance, in healthy middle-aged and older adults: A systematic review and meta-analysis	Puente-Fernández J., Larumbe-Zabala E., Jiménez A., Liguori G., Rossato C.J.L., Mayo X., Naclerio F.	Experimental Gerontology
Force–velocity profiles in CrossFit athletes: A cross-sectional study considering sex, age, and training frequency	Párraga-Montilla J.A., Cabrera Linares J.C., Jiménez Reyes P., Moyano López M., Serrano Huete V., Morcillo Losa J.A., Latorre Román P.A.	Baltic Journal of Health and Physical Activity
Pacing and packing behaviour in elite and world record performances at Berlin marathon	Muñoz-Pérez I., Lago-Fuentes C., Mecías-Calvo M., Casado A.	European Journal of Sport Science
Training and competition injury epidemiology in professional basketball players: a prospective observational study	Moreno-Pérez V., Ruiz J., Vazquez-Guerrero J., Rodas G., Del Coso J.	Physician and Sportsmedicine

Title	Authors	Journal
Effects of Concurrent Resistance and Endurance Training Using Continuous or Intermittent Protocols on Muscle Hypertrophy: Systematic Review with Meta-Analysis	Monserdà-Vilaró A., Balsalobre-Fernández C., Hoffman J.R., Alix-Fages C., Jiménez S.L.	Journal of Strength and Conditioning Research
Reliability of a Field-Based Test for Hamstrings and Quadriceps Strength Assessment in Football Players	Miralles-Iborra A., Moreno-Pérez V., Del Coso J., Courel-Ibáñez J., Elvira J.L.L.	Applied Sciences (Switzerland)
Agreement between isokinetic eccentric hamstring strength, Nordic hamstring strength and Nordic break-point angle in a sample of trained and healthy individuals	Miralles-Iborra A., Elvira J.L.L., Urban T., Calado A., Del Coso J., Moreno-Pérez V.	European Journal of Sport Science
A New Index to Evaluate Running Coordination Based on Notational Analysis	Martínez-Sobrino J., Navia J.A., Del Campo-Vecino J., Jiménez-Reyes P., Veiga-Fernández S.	Journal of sports science & medicine
Co-existence of peripheral fatigue of the knee extensors and jump potentiation after an incremental running test to exhaustion in endurance trained male runners	Márquez G., González-Hernandez J., Jiménez-Reyes P., Colomer-Poveda D., Boullosa D.	Frontiers in Sports and Active Living
Effect of a semi-immersive virtual reality navigation therapy on quality of life in persons with spinal cord injury	Manzanares A., Cambor Á., Romero-Arenas S., Segado F., Gil-Arias A.	Disability and Rehabilitation: Assistive Technology
Adapted sailing teaching methodology using vsail-trainer simulator as rehabilitation therapy. A feasibility study	Manzanares A., Cambor Á., Romero-Arenas S., Segado F., Gil-Arias A.	Journal of Spinal Cord Medicine
Muscle hypertrophy induced by N-3 PUFA supplementation in absence of exercise: a systematic review of randomized controlled trials	López-Seoane J., Jiménez S.L., Del Coso J., Pareja-Galeano H.	Critical Reviews in Food Science and Nutrition

Title	Authors	Journal
Could the Hybridization of the SE/TGfU Pedagogical Models Be an Alternative for Learning Sports and Promoting Health? School Context Study	López-Lemus I., Del Villar F., Rodríguez-Gutiérrez A., González-Silva J., Moreno A.	Children
Motivation and gender equity in physical education. Could hybridization of pedagogical models help us?	López-Lemus I., Álvarez F.D.-V., Gil-Arias A., Moreno-Domínguez A.	Movimento
Physical Inactivity Levels of European Adolescents in 2002, 2005, 2013, and 2017	López-Fernández J., López-Valenciano A., Pearce G., Copeland R.J., Liguori G., Jiménez A., Mayo X.	International Journal of Environmental Research and Public Health
Benefits of animal-Assisted interventions in preschool children: A systematic review	Lavín-Pérez A.M., Rivera-Martín B., Lobato-Rincón L.L., Villafaina-Domínguez S., Collado-Mateo D.	Clinical Child Psychology and Psychiatry
Validity of On-Line Supervised Fitness Tests in People with Low Back Pain	Lavín-Pérez A.M., León-Llamas J.L., Salas Costilla F.J., Collado-Mateo D., López de las Heras R., Gasque Celma P., Villafaina S.	Healthcare (Switzerland)
Exploring autonomic modulation: day-to-day recovery after exercise sessions in breast cancer survivors	Lavín-Pérez A.M., Collado-Mateo D., Hinojo González C., de Juan Ferré A., Ruisánchez Villar C., Mayo X., Jiménez A.	Frontiers in Oncology
An online home-based exercise program improves autonomic dysfunction in breast cancer survivors	Lavín-Pérez A.M., Collado-Mateo D., Hinojo González C., Batista M., Mayo X., Ruisánchez Villar C., Jiménez A.	Frontiers in Physiology
The Role of Self-Efficacy and Activity Patterns in the Physical Activity Levels of Women with Fibromyalgia	Lavín-Pérez A.M., Collado-Mateo D., Gil Arias A., Gutiérrez L., Écija C., Catalá P., Peñacoba C.	Biology

Title	Authors	Journal
Effects of exercise on immune cells with tumor-specific activity in breast cancer patients and survivors: a systematic review and meta-analysis	Lavín-Pérez A.M., Collado-Mateo D., Abbasi S., Ferreira-Júnior J.B., Hekmatikar A.H.A.	Supportive Care in Cancer
The impact of a multicomponent training program on physical fitness and joint injuries in Spanish male professional soccer players	Jiménez-Rubio S., Raya-González J., Lobo-Triviño D., García-Calvo T.	Journal of Sports Sciences
Analysis of the most demanding passages of play in elite youth soccer: a comparison between congested and non-congested fixture schedules	Jiménez S.L., Mateus N., Weldon A., Bustamante-Sánchez Á., Kelly A.L., Sampaio J.	Science and Medicine in Football
The effects of high-vs. Low-load resistance training on strength and hypertrophy: A systematic review [Los efectos del entrenamiento de fuerza comparando cargas altas versus cargas bajas sobre la fuerza y la hipertrofia: una revisión sistemática]	Jiménez S.L., Alix-Fages C., Del Coso J., Balsalobre-Fernández C.	E-Balonmano.com: Revista de Ciencias del Deporte
Longitudinal Effects of Traditional and Rest Redistribution Set Configurations on Explosive-Strength and Strength-Endurance Manifestations	Janicijevic D., González-Hernández J.M., Jiménez-Reyes P., Márquez G., García-Ramos A.	Journal of Strength and Conditioning Research
Research Trends in the Effect of Caffeine Intake on Fat Oxidation: A Bibliometric and Visual Analysis	Gutiérrez-Hellín J., Del Coso J., Espada M.C., Hernández-Beltrán V., Ferreira C.C., Varillas-Delgado D., Mendoza Laiz N., Roberts J.D., Gamonales J.M.	Nutrients
Effect of caffeine intake on fat oxidation rate during exercise: is there a dose-response effect?	Gutiérrez-Hellín J., Aguilar-Navarro M., Ruiz-Moreno C., Muñoz A., Varillas-Delgado D., Amaro-Gahete F.J., Del Coso J.	European Journal of Nutrition
Patient's Perception and Real Execution of Walking as Physical Exercise: Looking	Gutiérrez L., Lavín-Pérez A.M., Catalá P., Écija C., Collado-	Applied Sciences (Switzerland)

Title	Authors	Journal
at Self-Efficacy as a Key Variable in Adherence in Patients with Fibromyalgia	Mateo D., Gil-Arias A., Peñacoba C.	
Evolution of Tactics in Professional Soccer: An Analysis of Team Formations from 2012 to 2021 in the Spanish LaLiga	González-Rodenas J., Moreno-Pérez V., Campo R.L.-D., Resta R., Coso J.D.	Journal of Human Kinetics
Effects of gender, age and match status on the creation of shooting opportunities during the U17, U20 and senior FIFA World Cup: A multilevel analysis	González-Rodenas J., Mitrotasios M., Armatas V., Aranda R.	Journal of Human Sport and Exercise
Differences in playing style and technical performance according to the team ranking in the Spanish football LaLiga. A thirteen seasons study	González-Rodenas J., Ferrandis J., Moreno-Pérez V., López-Del Campo R., Resta R., Coso J.D.	PLoS ONE
The Long Way to Establish the Ergogenic Effect of Caffeine on Strength Performance: An Overview Review	Giráldez-Costas V., Del Coso J., Mañas A., Salinero J.J.	Nutrients
Effect of β -alanine and sodium bicarbonate co-supplementation on the body's buffering capacity and sports performance: A systematic review	Gilsanz L., López-Seoane J., Jiménez S.L., Pareja-Galeano H.	Critical Reviews in Food Science and Nutrition
Teacher and Student's Perspectives on Their Experiences Within Hybrid Sport Education-Cooperative Learning Pedagogical Model Units in Elementary Physical Education	Gil-Arias A., Harvey S., Morante Ó.M., Claver F., Fernández-Río J.	Journal of Teaching in Physical Education
Competition Between Desired Competitive Result, Tolerable Homeostatic Disturbance, and Psychophysiological Interpretation Determines Pacing Strategy	Foster C., de Koning J.J., Hettinga F.J., Barroso R., Boullosa D., Casado A., Cortis C., Fusco A., Gregorich H., Jaime S., Jones A.M., Malterer K.R., Pettitt R., Porcari J.P., Pratt C., Reinschmidt P., Skiba P., Splinter A., St Clair Gibson A.,	International Journal of Sports Physiology and Performance

Title	Authors	Journal
	Mary J.S., Thiel C., Uithoven K., van Tunen J.	
Directed connectivity in Parkinson's disease patients during over-ground and treadmill walking	Fernandez-del-Olmo M., Sánchez-Molina J.A., Novo-Ponte S., Fogelson N.	Experimental Gerontology
Cross education is modulated by set configuration in knee extension exercise	Fariñas J., Rial-Vázquez J., Carballeira E., Giráldez-García M.A., Colomer-Poveda D., Sevilla-Sánchez M., Márquez G., Rúa-Alonso M., Nine I., Aracama A., Fernandez-Del-olmo M., Iglesias-Soler E.	Journal of Musculoskeletal Neuronal Interactions
When and How a Judo Contest Ends: Analysis of Scores, Penalties, Rounds and Temporal Units in 2018, 2019 and 2021 World Championships	Dopico-Calvo X., Mayo X., Santos L., Carballeira E., Šimenko J., Ceylan B., Clavel I., Iglesias-Soler E.	Applied Sciences (Switzerland)
The network structure of the VIA-120 inventory of strengths: an analysis of 1,255,248 respondents	Diez G., Roca P., Nieto I., McGrath R.E., Vázquez C.	Journal of Positive Psychology
Effects of acute caffeine intake on combat sports performance: A systematic review and meta-analysis	Díaz-Lara J., Grgic J., Detanico D., Botella J., Jiménez S.L., Del Coso J.	Critical Reviews in Food Science and Nutrition
The Obesity Paradox: Associations between the Body Mass Index and Self-Perceived Health, Depression Status, and Pain Level in Older People	Denche-Zamorano Á., Salas-Gómez D., Carlos-Vivas J., Barrios-Fernandez S., Merellano-Navarro E., Collado-Mateo D., Olivares P.R., Adsuar J.C.	Applied Sciences (Switzerland)
Fibromyalgia, Pain, and Physical Activity: A Bibliometric Analysis	Denche-Zamorano Á., Barrios-Fernandez S., Mendoza-Muñoz M., Carlos-Vivas J., Vega-Muñoz A., Collado-Mateo D., Olivares P.R., Adsuar J.C.	International Journal of Environmental Research and Public Health

Title	Authors	Journal
Microdosing Sprint Distribution as an Alternative to Achieve Better Sprint Performance in Field Hockey Players	Cuadrado-Peñafiel V., Castaño-Zambudio A., Martínez-Aranda L.M., González-Hernández J.M., Martín-Acero R., Jiménez-Reyes P.	Sensors
Differences in the effects of a startle stimulus on rate of force development between resistance-trained rock climbers and untrained individuals: Evidence for reticulospinal adaptations?	Colomer-Poveda D., López-Rivera E., Hortobágyi T., Márquez G., Fernández-Del-Olmo M.	Scandinavian Journal of Medicine and Science in Sports
An umbrella review of randomized control trials on the effects of physical exercise on cognition	Ciria L.F., Román-Caballero R., Vadillo M.A., Holgado D., Luque-Casado A., Perakakis P., Sanabria D.	Nature Human Behaviour
Does Lactate-Guided Threshold Interval Training within a High-Volume Low-Intensity Approach Represent the “Next Step” in the Evolution of Distance Running Training?	Casado A., Foster C., Bakken M., Tjelta L.I.	International Journal of Environmental Research and Public Health
Short-Term Speed Variability as an Index of Pacing Stochasticity in Athletic Running Events	Boullosa D., Patrocínio E., Renfree A., Casado A., Hanley B., Foster C.	Journal of Functional Morphology and Kinesiology
Advances in Nutrition, Dietary Supplements and Ergogenic Aids for Athletic Performance: Trends and Future Prospects	Bonilla D.A., Boullosa D., Del Coso J.	Nutrients
Genotype Distribution of the ACTN3 p.R577X Polymorphism in Elite Badminton Players: A Preliminary Study	Abián-Vicén J., Abián P., Bravo-Sánchez A., Piñas-Bonilla I., Lara B., Del Coso J.	Genes

7.2. Books and Book chapters

During 2023 CIDE researchers have published 2 books and 14 book chapters. Details in each case are included below.

7.2.1. Books:

- AMADO, D. & COLLADO-MATEO, D. (2023). *Factors related to inhibitors and facilitators of adherence to physical exercise in chronic pathologies*. Editorial Dykinson, Madrid.
- MAYO, X., & Bigica, M. (2023). *Exercise is Medicine: A quick guide to exercise prescription*. Wellness Foundation, Cesena, Italy.

7.2.2. Book chapters:

- ALEXANDER GIL-ARIAS, Óscar M. Morante del Cerro, FERNANDO CLAVER and José Ignacio Alonso-Roque. (2023) MODELFIT: Multilevel intervention for the promotion of physically active habits among schoolchildren. In: *Didactic proposals to improve motivation in Physical Education and develop healthy lifestyles* (Editors: Roberto F. Ferriz, David González-Cutre and José A. Julián). Editorial INDE, Barcelona.
- AMADO, D. (2023). Factors related to inhibitors and facilitators of adherence to physical exercise in chronic pathologies (pg. 27-40). In: *Factors related to inhibitors and facilitators of adherence to physical exercise in chronic pathologies*. Editorial Dykinson, Madrid.
- ROCAMORA, I., DEL VILLAR, F., & GIL-ARIAS, A. (2023). Didactics of Physical Education. Practice-based models as an alternative to teaching Physical Education. In M. I. De la Rubia Rivas., M. Gómez Gómez., L. M. Martínez-Domínguez., L. Porto-Pedrosa., E. Ruiz-Simón & A. Verde-Trabada (Eds.) *Didactics applied to primary education*. Almuzara Universidad.
- COLLADO-MATEO, D., Denche-Zamorano, Á, & Villafaina-Domínguez, S. (2023). The PADEX Scale: Assessment of long-term adherence and continuity with exercise. *Key aspects of optimising exercise adherence: Conceptual approach and practical applications*, 19-27, Editorial Dykinson, Madrid.
- COLLADO-MATEO, D. (2023). Adherence to physical exercise: basic concepts and the development of the PADEX scale. *Key issues in optimising adherence to*

physical exercise: Conceptual approach and practical applications, 9-19, Editorial Dykinson, Madrid.

- Sara Santos, Diogo Coutinho, Adam L. Kelly, SERGIO L. JIMÉNEZ SÁIZ, Alberto Lorenzo Calvo & Jaime Sampaio. (2023). Creativity: Creating Supportive and Enriching Environments. In: *Talent Identification and Development in Youth Soccer. A Guide for Researchers and Practitioners*. Edited By Adam Kelly. Ed. Routledge.
- Sevilla-Sánchez, M., LUQUE-CASADO, A., FERNÁNDEZ-DEL-OLMO, M.A (2023). Transcranial direct current stimulation and motor learning. En Arias, N., Jiménez-García, A. (Eds.), *An Insight into Neuromodulation: Current Trends and Future Challenges*, pp. 55–71. New York: Nova - Medicine & Health. **Accepted September 2023 / Published in March 2024.*
- DEL COSO J, Lara B, Salinero J.J. (2023). Chapter 32. Genetics and performance. Epigenetics and the genes that determine sporting performance. In: *Exercise Physiology - 4th ed.*; Publishers: López Chicharro J, Fernández Vaquero A. Madrid, Editorial Panamericana
- LAVÍN PÉREZ, A. M. (2023). Adherence to physical exercise in people with breast cancer: how to design a programme that promotes adherence to physical exercise? *Key issues in optimising adherence to physical exercise: Conceptual approach and practical applications*, pg. 113- 132. Dykinson.
- LAVÍN PÉREZ, A. M., & Fernández Sánchez, J. (2023) Promoting adherence to physical exercise in people with breast cancer as a function of inhibitors and facilitators, goal setting and cognitive-affective variables. *Key issues in optimising adherence to physical exercise: Conceptual approach and practical applications*, pg.133-146. Dykinson.
- LAVÍN PÉREZ, A. M. (2023). Factors related to physical exercise programme design to promote adherence in patients with chronic diseases and older adults. *Key issues in optimising adherence to physical exercise: Conceptual approach and practical applications*, pg.41-64. Dykinson.
- LAVÍN PÉREZ, A.M., JIMÉNEZ, A. (2023). Recommendations about physical exercise in breast cancer. In *Lifestyle and breast cancer: Pre-, in- and post-treatment actions*, pg.155-160. Spanish Society of Senology and Mammary Pathology.
- González, M. L., Domínguez, S. V., García, Á. M., Llamas, J. L. L., & PÉREZ, A. M. L. Strategies for adherence to physical exercise programmes with people with fibromyalgia: dance as an alternative to conventional exercise. *Key aspects for optimising adherence to physical exercise*, pg.161-186. Dykinson.
- Foster, C., De Koning, J., CASADO, A., and Renfree, A. (2023). Pacing: combining pre-competition pacing strategy and competitive tactics to derive within-

competition decision making. p. 111-124. In: *Endurance training. Science and Practice*. 2nd edition. Editor. Iñigo Mújika. Human Kinetics, Champaign, IL.

7.3. Lectures and presentations at congresses

During 2023 CIDE researchers have given **11 invited lectures and presented 9 scientific papers at national and international conferences**. Details in each case are included below.

- JIMÉNEZ, A. Keynote speaker at 2023 EuropeActive's 14th International Standards Meeting. Keynote: *THiNKActive Workforce Analysis of Exercise Professionals across EU*. Madrid, 22nd November 2023.
- JIMÉNEZ, A. Keynote speaker at IDRD Public Event in partnership with UNESCO, *The SROI Evaluation of sport and recreation programmes in Bogotá DC*. IDRD, Bogotá, October 2023.
- JIMÉNEZ, A. Keynote speaker at the 2023 Australia National Sports Convention Forum. Keynote: *Health and Social Impact modelling, from Global learnings to local environments*. 27th July 2023, Melbourne (Australia).
- JIMÉNEZ, A. Speaker at *Tutorial Lecture on SROI Modelling for Sport & Physical Activity*, 2023 ACSM Annual Meeting, Denver (CO), 30th May 2023.
- Martínez-Pérez, V., Alameda, C., Martín-Arévalo, E., Fuentes, L.J., Bekinschtein, T.A., FERNÁNDEZ-DEL-OLMO, M.A., Sanabria, D. & LUQUE-CASADO, A.* (2023). The impact of prefrontal High-Definition transcranial direct current stimulation (HD-tDCS) on conflict resolution and its phenomenological dynamics. 23rd Conference of the European Society for Cognitive Psychology, September 2023, Oporto, Portugal.
- Rey-Paredes, M., Barquero-Pérez, O., Goya-Esteban, R., LUQUE-CASADO, A., Grassi, D., Suárez, F. (2023). Modeling Gender Differences in Heart Rate During the Diving Reflex: Insights into Physiological Adaptability. 50th *Computing in Cardiology Conference*, October 2023, Atlanta, Georgia, USA. Published in: *Computing in Cardiology*, (50), DOI: 10.22489/CinC.2023.148. <https://cinc.org/archives/2023/pdf/CinC2023-148.pdf>
- Martínez-Pérez, V. M., Martín-Arévalo, E., Fuentes, L., FERNÁNDEZ-DEL-OLMO, M. F. D., Sanabria, D., & LUQUE-CASADO, A.* (2023). The impact of prefrontal tDCS on conflict resolution and its phenomenological dynamics: A HD-tDCS/EEG randomized sham-controlled novel approach based on Drift Diffusion Modeling. 11th IBRO World Congress of Neuroscience, September 2023,

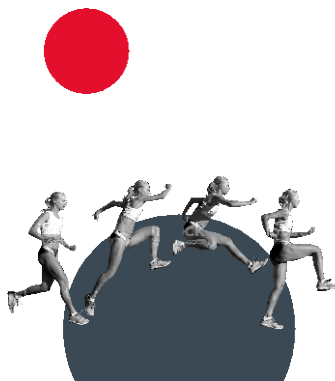
- Granada, Spain. Published in: IBRO Neuroscience Reports, 15, S866. <https://doi.org/10.1016/j.ibneur.2023.08.1803>
- DEL COSO J. The importance of genetics in sport. XII International Congress of the Spanish Association of Sports Sciences. 21-23 June 2023.
 - DEL COSO J. ACTN3 and physical performance in Football. Workshop Football Analytics. 22-23 June 2023.
 - LAVÍN-PÉREZ, A. M. GO fit Cancer: Effects of exercise, and its scheduling based on heart rate variability, in breast cancer survivors. (2023) *Exercise for Health Summit – Europe Active*.
 - LAVÍN-PÉREZ, A. M. The poetics of space. Stage interventions in non-conventional spaces. (2023) *I Congress on Humanism and Pedagogies for Artistic Education*.
 - LAVÍN-PÉREZ, A. M. Service-Learning in Physical Education for the development of Physical Activities for the Natural Environment through active recreation in Secondary Education. (2023) *III International Congress on Teaching Innovation*.
 - NIETO, I., MAYO, X., Davies, L., Reece, L., Stafford, B., & JIMENEZ, A. Consensus on a Social Return on Investment model of Physical Activity and Sport: Delphi study protocol. Exercise for Health SUMMIT. Meliá Castilla Hotel, Madrid, España. 2023 Presentación oral.
 - NIETO, I., MAYO, X., Davies, L., Reece, L., Stafford, B., & JIMENEZ, A. Consensus on a Social Return on Investment model of Physical Activity and Sport: A Delphi study. Exercise for Health SUMMIT. Meliá Castilla Hotel, Madrid, España. 2023 Presentación oral.
 - NIETO, I., MAYO, X., Davies, L., Reece, L., Stafford, B., & JIMENEZ, A. Methodology and Models for Evaluating the Social Return on Investment in Sport and Physical Activity. Event SOCIALISATION OF PRELIMINARY RESULTS "Measuring sport: indicators in sustainable development and social return on investment". Hyatt Place Convention Center, Bogotá, Colombia. 2023 Oral presentation.
 - Carl Foster, Renato Barroso, Daniel Bok, Daniel Boullosa, ARTURO CASADO, Cristina Cortis, Andrea Fusco, JosJ. de Koning. Losing Contact And Letting Go As Features Of Pacing Strategy In Distance Running. Comunicación en ACSM 2023, Denver, CO.
 - CASADO, A. Second Edition of the International Congress in Exercise, Biomechanics and Nutrition. Organised by the University of Setubal. Keynote: Plenary Lecture. Title of the presentation: "Training Volume, intensity distribution and periodization in well-trained and elite distance runners".

- CASADO, A. XIII Spanish Olympic Committee Coaches' Seminar (25/10/2023). Organised by COE and CSD. Load control in fractional training of moderate intensity through lactate.
- CASADO, A. Individual and Team Sports Congress (12/12/2023). Organised by COE and CSD. New perspectives for monitoring and implementing endurance training.
- CASADO, A. Lecture given at the University of León in the Faculty of Physical Activity and Sport Sciences. Control of the load in fractional training of moderate intensity through lactate.

7.4. Scientific-technical reference reports

Finally, CIDE researchers have developed and presented in 2023 **two scientific-technical reference reports**, one national and one international, derived from ongoing externally funded projects.

- JIMENEZ, A., NIETO, I., MAYO, X., REECE, L., DAVIES, L. (2023) *Understanding the social and economic value of an incredible industry... a THiNK Active report*. EuropeActive, Brussels, April 2023. DOI: [10.13140/RG.2.2.19610.72640](https://doi.org/10.13140/RG.2.2.19610.72640)
- JIMENEZ, A., NIETO, I., MAYO, X. (2023) 2nd Report on the Social and Economic Impact of the Physical Activity and Sport Sector in Spain (*II Informe sobre el Impacto Social y Económico del sector de la Actividad Física y el Deporte*). National Observatory for Healthy & Active Living, SpainActive Foundation, 4Global, Madrid, June 2023. <https://espanaactiva.es/wp-content/uploads/2023/06/II-Informe-Impacto-Social-y-Econ%C3%B3mico.pdf>



8. Collaborations and alliances

Since the beginning (first as the Centre for Sport Studies, 2016-2022) our research centre has played and is playing an important role within the national and international ecosystem of sport and physical activity. This unique role is materialised through the implementation of a number of unique projects in collaboration with industry, government agencies and third sector organisations that are having a very positive impact on society.

Among them, we would like to differentiate between a series of **scientific and technical support activities** for technological development and innovation (section 8.1.), and a series of **stable collaborations** that have stood out over the years for their trajectory and impact (section 8.2.).

8.1. Scientific-technical support activities for technological development and innovation:

These are activities and projects that are generated from the unique expertise of the researchers at our centre, who collaborate on a one-off basis, providing scientific-technical support for technological development and innovation in the ecosystem of sport. Among these activities we can highlight the following for their relevance in the year 2023:

- Advanced support and consultancy services for High Performance Sport, in ongoing projects (art.60 LOSU contracts in force) with: La Liga (AI application for football match analysis, PI: Juan Del Coso); Spanish Rugby National Teams (Use of strength/speed assessment technology to inform training load, PI: Pedro Jiménez); Consejo Superior de Deportes-CSD (2 consultancy contracts with Innova Next SL to improve the quality of the Open Call for Sports Innovation and Technology for Sports Federations, PI: Sergio Jiménez Saiz, PI: Alfonso Jiménez).
- Advanced support and consultancy services for the application of exercise in clinical conditions, in ongoing projects (art.60 LOSU contracts in force) with providers of neurological disorders (PI: Miguel Fernández Del Olmo).
- Advanced support and consultancy services for the promotion of health and the analysis of the social return on investment and impact on the development of

sport, in ongoing projects (art.60 LOSU contracts in force) with the Ibero-American Sports Council (IP: Alfonso Jiménez), EuropeActive (IP: Alfonso Jiménez).

8.2. Stable collaborations with other institutions

8.2.1. Strategic collaboration with GO fit, through the GO fit LAB⁴ and the URJC-GO fit Research Chair⁵:

Since 2019 we have developed a unique strategic partnership with GO fit Life, Science and Technology, S.A. (formerly Ingesport, Health & Spa Consulting, S.A.) supporting the research activity of its Research Unit, called GO fit LAB, with Prof. Alfonso Jiménez as its PI. Thus, we have established an ongoing Research Chair (2019 to 2025), and in these years we have completed different projects for the company (seven contracts art.60 LOSU) with a total funding allocation of **381.500€**.

During 2023 we have completed an Industrial Doctorate project (funded by the AEI, reference: DIN2018-010129) focused on exercise in cancer survivors with the researcher contracted by the company for 4 years (Ana M. Lavín Pérez):

- Title: *Effects of exercise prescription based on heart rate variability on cardiotoxicity and physical and mental health in breast cancer survivors after chemotherapy treatment*. Competitive Industrial Doctorate Research Programme 2018, State Research Agency. Jiménez Gutiérrez, A. (PI). Start date: 01/01/19, End date: 11/01/24. Funding: 48,000€.

We are currently working on two other Industrial Doctorate projects, funded in this case by the competitive programme of Industrial Doctorates of the Community of Madrid:

- Title: *GOfit Parkinson, development and evaluation of an extensive/permanent physical exercise programme in Parkinson's disease*. Fernández Del Olmo, M. (PI). Project ref. IND2020/BMD-17466. Funding: 73.000€
 - <https://go-fit.es/blog/ejercicio/te-presentamos-la-unidad-de-valoracion-de-la-marcha/>
 - <https://www.youtube.com/watch?v=wtM5nuNVBqs>

⁴ <https://www.urjc.es/i-d-i/innovacion-y-transferencia/1345-catedras-de-investigacion>

⁵ <https://www.urjc.es/i-d-i/innovacion-y-transferencia/1345-catedras-de-investigacion>

- Title: *GO fit SUPER-RUN: Optimising performance in amateur long-distance runners using optimal training patterns prescribed with the assistance of heart rate variability*. Casado Alda, A., Jiménez Gutiérrez, A. (IPs). Project ref. Funding: 73.000€.

Plus another ongoing project fully financed by the company (contract art. 60 LOSU, ref. F928). *Social and economic impact of promoting active behaviour, applying the Social Return of Investment (SROI) model*). IPs: Dr. Xián Mayto and Prof. Alfonso Jiménez.

8.2.2. Strategic collaboration with Fundación España Activa, through the Foundation's Observatory located at the CIDE

The strategic collaboration with the España Activa Foundation dates to the first year of life of the Center for Sports Studies (CED) when, on September 13, 2016, an agreement was signed with the Foundation (then called the Active and Healthy Life Foundation) for the creation within it of the **Active and Healthy Life Observatory**⁶. This new project involves the endowment of the Foundation's own resources for the hiring of a full-time postdoctoral researcher at CED through public competition (initial contract of 106.000€).

Since then, the Observatory of the España Activa Foundation has published **9 scientific-technical reference reports** that have become fundamental instruments for the recognition of the value of an active life for the Spanish society.

The II Report on the Social and Economic Impact of the Physical Activity and Sport Sector was published in 2023⁷ (Jiménez, Nieto, Mayo), and the predoctoral researcher Sara Lapresta Romero has joined the CIDE as a PPI. This incorporation is financed by the contract art. 60 LOSU "*Social and economic impact of the promotion of active behavior in Spain, applying Social Return on Investment Models*" (ref. 911, amount: 72.000 €. PIs: Dr. Xian Mayo, Prof. Alfonso Jiménez).

⁶ <http://espanaactiva.es/observatorio/>

⁷ <https://espanaactiva.es/wp-content/uploads/2023/06/II-Informe-Impacto-Social-y-Econ%C3%B3mico.pdf>

8.3. Participation in Research Networks

During the year 2023, CIDE researchers have actively participated as coordinators or members of different Research Networks, both nationally and internationally. The details in each case are included below.

8.3.1. CIDE-based networks:

Spanish Network for Research on Social Return on Investment in Sport (REIRSID)

<https://reirsid.es/>

- Prof. Alfonso Jiménez (Coordinator PI).
- Dr. Inés Nieto Romero, Researcher.

8.3.2. Networks led by other universities:

International Research Network in Physical Education and Promotion of Healthy Habits (EDUFIS)

<https://edufisaludable.com/>

CIDE Members:

- Dr. Alexander Gil Arias, Network Vice president.
- Dra. Diana Amado, Researcher.
- Dr. Fernando Claver, Researcher.
- Dra. Irene Rocamora, Researcher.

Research Network on Nutrition Applied to Women Athletes (NAMUD).

Coordination: University of Seville. Principal Investigator: Raúl Domínguez Herrera

<https://x.com/rednamud>

CIDE Member:

- Dr. Arturo Casado Alda.

Neuromuscular Performance and Strength Training Optimization Research Network.
<https://refnet.es/>

CIDE Member:

- Dr. Xián Mayo Mauriz.

International Basketball Research Network.
<http://redibrn.com/>

CIDE Member:

- Dr. Sergio Jiménez Saiz.

9. Science dissemination activities

During the year 2023 we can especially highlight two scientific dissemination activities led by CIDE researchers in the specific field of scientific events.

9.1. Scientific events organised

DIANA AMADO ALONSO directed the *I Congress on Humanism and Pedagogies for Artistic Education*, held on October 26, 2023, at the Fuenlabrada Campus of the Universidad Rey Juan Carlos.

ALFONSO JIMÉNEZ served as *Scientific Chair of EuropeActive's 1st Exercise for Health Summit*, held in Madrid (Hotel Meliá Castilla), November 20-22, 2023.

- <https://eahealthsummit.eu>

10. Recognitions and awards received

- Award for the best Final Degree Thesis (FDT) of 2023 in the Area of Sports Sciences of the Madrid Universities of COPLEF. Student Diego Métrida, Director. Dr. ARTURO CASADO ALDA. FDT Project: "*_Validation of the estimation of maximal oxygen consumption in runners through a critical power test_*". [Fallo del jurado al Premio Trabajo Fin de Grado y Trabajo Fin de Máster COPLEF Madrid 2023](#).
- Lecture of official inauguration of the academic year 2023/24 at the Universidad Rey Juan Carlos by Professor JUAN DEL COSO. Title of the master lecture: "*Importance of genetics for sports performance*". Móstoles, 28 september 2023.
- Master lecture of official inauguration of the academic year 2023/24 at the EUNEIZ University of Vitoria by Professor ALFONSO JIMÉNEZ. Title of the master lecture: "*Social and economic impact of physical activity and sport: discovering the true value of an active life and an extraordinary industry*". Vitoria, 23 October 2023.

11. Financial management

Analyzing the financial management of the URJC Sports Science Research Center during the year 2023 is a complex task, since the center has lacked a specific budget allocation for the development of its activities by the University. In fact, 100% of the resources that have been used in the development of these activities have been derived from the resources that our own research activity has generated.

It is necessary to highlight the approval in session held on July 27, 2023, of the new Regulations for the contracting of scientific, technical or artistic works, by the Vice-Rectorate for Research, Innovation and Transfer, which allows the research centers of the university, recognized as such (and the CIDE is one of them), to receive an automatic allocation in its organic account⁸⁸ of 4% of the total funds generated in contracts art. 60

⁸⁸ The CIDE organic account was created in June 2023, with reference **30ITCD**.

LOSU, which in our case has been (and will be) a very important element of transformation and positive economic impact.

In addition, and previously (June 12, 2023), it was formally requested by the Dean, Prof. Fernando Del Villar, and the Director of the Department, Dr. Agustín Martínez, that all those contracts established under Article 60 of the LOSU by researchers of the Center for Research in Sport Sciences, automatically generate the part corresponding to the Faculty of Education Sciences. Agustín Martínez, that all those contracts established under Article 60 of the LOSU by researchers of the Center for Research in Sport Sciences, automatically generate the part corresponding to the Faculty of Education and Sport Sciences and Interdisciplinary Studies, and to the Department of Historical and Social Studies, Spanish Language, Literature, Moral Philosophy and Specific Didactics in the new organic account assigned to our Research Center.

With both actions the **total of 5% of the total value of each contract** art. 60 LOSU directly assigned to the CIDE's organic account was reached.

On the other hand, it is important to indicate in relation to the cost of Human Capital, that the costs of the 16 Faculty members of the CIDE are assigned and covered by the Department of Historical and Social Studies, Spanish Language, Literature, Moral Philosophy and Specific Didactics, within the Area of Physical and Sports Education. Therefore, it is the cost of the other 9 researchers of the center, in postdoctoral and predoctoral contracts, as well as the cost of scientific equipment and consumables, which has been produced thanks to the research activity and scientific-technical advice that has been developed in the CIDE during 2023.

In short, the CIDE could be considered again as a **High-Performance Unit**, not only for the quality of its scientific contributions (which it already is, based on the URJC's own indicators or its position in the Shanghai 2023 Ranking), but also for its spectacular capacity to generate external resources in the sports ecosystem, via competitive calls and/or contracts with entities and companies⁹.

⁹ For detailed information on contracts and ongoing and new generation projects at CIDE in 2023, consult section 6 of this report.

This unique performance is manifested by a ratio (only in 2023) of **31.473€ generated per full time teaching** (total funding in new projects and contracts in 2023: **503.581€**). If we consider the total funding under development in ongoing projects and contracts (**1.473.903€**) this ratio reaches **92.118€ per full-time teaching and research staff**.



12. Challenges and future prospects

If we consider that the CIDE formally began its activity in May 2023, our research center faces many and diverse challenges of development and consolidation, but at the same time a stimulating and very dynamic present.

However, trying to be concrete and specific, we can clearly identify a series of relevant challenges for our future development and consolidation, among which the following stand out:

1. Increase our **mass of researchers** in the field of Sports Sciences, both through the incorporation of new researcher (currently we already have two new researchers, Dr. Alba Práxedes and Dr. Marcos A. Soriano, and we are in the final phase of selection of four new Assistant Doctors in the Area of Physical Education

and Sport of our department who will join for the academic year 2024/25¹⁰). Soriano, and we are in the final phase of the selection of four new Assistant Doctors in the Area of Physical and Sports Education of our department to be incorporated for the academic year 2024/25), and with the incorporation of new predoctoral and postdoctoral researchers associated with projects and contracts with competitive funding both internal and external (during these first months of 2024 we have already incorporated a new postdoc, Dr. Ana Lavín, we are in the process of selecting another postdoctoral contract, and pending the resolution of a Juan de la Cierva grant).

2. **To increase our internal collaborations with other research groups and centers within the university**, so far very limited. In fact, the lack of time derived from a teaching load to the limit in the academic year 2023/24 has been the main limiting factor when activating many of the actions to be implemented in this area, aimed at **improving our visibility** within the research ecosystem of the URJC. In this sense, we believe that the Vice-Rector's Office could establish **specific actions aimed at improving this visibility between centers and research groups**, around topics of special relevance and impact, where researchers of the institution are already working from different points of view.
3. **Improve the capacity of our researchers to obtain external funding**, both through competitive calls and through contracts with entities and institutions. With a medium-term focus on quality competitive European funding (such as the MSCA-Doctoral Networks program, for example).
4. It is also important to highlight that this need to improve the capacity to attract external funding reflects another very relevant challenge, which is none other than the **asymmetric development** among the different research groups of the center, and specifically among researchers with consolidated positions (professors and especially full professors). Because of this identified challenge, we have implemented an individual development and non-regulated mentoring plan aimed at improving these capabilities based on the potential talent and expertise of each researcher.

¹⁰ These new additions of researchers to the Physical and Sports Education Area will allow us to go from 16 to 22 full-time faculty members in the 2024/25 academic year (37.5% increase in human capital).

5. **Improve the quality of our publications**, eliminating the so-called "predator journals" as publication options, with special attention to those journals of the publisher MDPI (several of which were removed from the JCR by Clarivate in March 2023). In this regard, it is important to note that, of the 58 scientific articles published in 2023, 18 of them (31%) were published in journals of this publisher.
6. Improve our **external visibility**, as well as the **dissemination and impact of our research results**. The launching of our new center website (<https://cide.urjc.es/>), and the imminent publication of this 100% English edition, will allow us to have a window open to the world to proactively improve this visibility.
7. And finally, we understand that in order to become a reference research center in our field, we must **improve our internationalization**, with more and better international partners, mobility programs for visiting researchers, joint publications with international researchers (today already at a very good level), and another series of specific actions under study and analysis, but that will see the light in 2024.

Our future perspective (and highest aspiration) is to become a **Research Institute**, fulfilling all the criteria and requirements established in the new regulations recently approved for this purpose¹¹, as soon as possible.

¹¹ Regulation of University Institutes and Research Centres of the Rey Juan Carlos University, approved by Agreement of April 19, 2024, of the Governing Council of the University, published in the BOURJC of May 3, 2024.

13. Conclusions

This report of the Center for Sports Science Research (CIDE) for the year 2023 has tried to reflect clearly, and supported by evidence, our solid, intense and rigorous work in our field of research, Sports Science, during our first eight months of operation.

The CIDE is the natural evolution of the Center for Sports Studies, and as such evolution is configured in vision, structure and strategy to become a research unit of competitive quality at all levels.

We understand that our start-up numbers are our best business card, and the talent and capacity of our researchers the best guarantee for a future of positive, excellent and sustainable development and growth.

As we mentioned in the introduction, the Sports Science Research area is a young, small area, but with a lot of talent and ambition, which, since its incorporation to the Universidad Rey Juan Carlos, has generated more than 3 million euros in external funding and has launched more than 56 projects and contracts. And all this, considering that the researchers assigned to the CIDE have a full teaching load, and the center lacks structural support for the management and administration of ongoing projects.

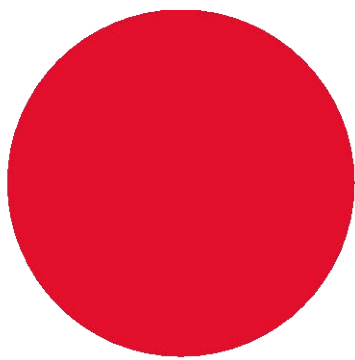
This is why we would like to conclude this document by highlighting that, in view of our results, vision, strategy, talent potential and credibility (inside and outside the sports ecosystem), it would be logical and reasonable to receive strong and committed support from the leaders of our institution... Shall we discuss it?

At Fuenlabrada campus, June 6, 2024

Alfonso Jiménez
Professor Echegaray
Area of Physical and Sports Education
Director CIDE

Our vision...

To become a unique and singular agent of reference, due to our impact, contributions and collaborations, within the ecosystem of Sports Sciences in our country and internationally...



CiDE Research Centre
in Sports Science



Universidad
Rey Juan Carlos