

**CURRICULUM VITAE ABREVIADO (CVA)**

**IMPORTANT** – The Curriculum Vitae cannot exceed 4 pages. Instructions to fill this document are available in the website.

**Part A. PERSONAL INFORMATION**

|             |                    |  |  |
|-------------|--------------------|--|--|
| First name  | Juan               |  |  |
| Family name | Fernández Olivares |  |  |
|             |                    |  |  |
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|             |                    |  |  |

(\*) *Mandatory*

**A.1. Current position**

|                   |   |                |           |
|-------------------|---|----------------|-----------|
| Position          | Associate Professor (Profesor Titular)  |                |           |
| Initial date      | 23/07/2003  |                |           |
| Institution       | University of Granada   |                |           |
| Department/Center | Computer Science and AI / ETSI Informática y Telecomunicación   |                |           |
| Country           | Spain   | Teleph. number | 675726155 |
| Key words         | Automated Planning and Scheduling, Machine Learning, Knowledge Engineering for Planning, Applications of Automated Planning |                |           |

**A.2. Previous positions (research activity interruptions, indicate total months)**

| Period    | Position/Institution/Country/Interruption cause     |
|-----------|---|
| 1996-2003 | Profesor asociado (Lecturer)/Universidad de Granada |
| 1992-1996 | Software developer/Combisa S.A.                     |

**A.3. Education**

| PhD, Licensed, Graduate | University/Country     | Year |
|-------------------------|------------------------|------|
| PhD in Computer Science | Universidad de Granada | 2001 |
|                         |                        |      |

(Include all the necessary rows)

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

PhD in Computer Science from the University of Granada since 2001, associate professor at the same university since 2003 in the area of Computer Science and Artificial Intelligence. He is member of the Intelligent Systems Research Group of the UGR and member of the Data Science and Computational Intelligence (DaSCI) Research Institute of Andalusia (Spain). His research is focused on different areas of Automated Planning and Scheduling, recently with its integration with Machine Learning (developing both Classical and Neurosymbolic approaches), and its application to several real domains such as Intelligent Manufacturing, Emergency Management, e-Tourism, e-Learning, Business Process Management, Medical Informatics, Intelligent Transport and Videogames. He enjoys 20 years of teaching experience with full time doctoral degree, direction of 5 doctoral theses whose authors currently enjoy management positions in technology companies. He enjoys 5 six-year research/transference terms (4 for research, the last granted in 2015-2021 period, 1 for transference). Author of 81 international and national publications (in the field of Automated Planning and Machine Learning in Artificial Intelligence) of which 16 JCRs, 20 international conferences (10 top tier, receiving international awards like best application paper ICAPS2006), 7 national conferences,



8 book chapters, 2 edited books, 2 international competitions (both awarded as winner: International Competition on KE for Planning ICKEPS 2009, International Planning Competition IPC2020), 12 international workshops. He has participated in 15 R&D projects in public national calls (8 as PI, funding of 575.415,68€) and European projects (1 as PI, funding 60K€) all in the field of Automated Planning, and the last two national projects in the field of integration of Planning and Machine Learning. 11 contracts/collaborative projects with companies (8 as PI, funding of 539,746.08) mostly transferring Automated Planning and Machine Learning technology for decision support. He accumulates a total funding of more than one million euros. He is also co-founder of 2 spin-offs in the field of Artificial Intelligence and has received 3 international transfer awards. He has given 5 seminars by invitation in national and international centers. He has made a postdoctoral stay (University of Ulm), has produced 4 publications in international collaboration, in the area of Automated Planning and its applications. He is a member of program committees on a continuous basis at top international conferences such as ICAPS, IJCAI or AAAI, and evaluator on several calls for grants on technological development based on AI and other digital technologies (20 projects in 2020 a 2021) and in SGS consulting (through UGR-OTRI agreement).

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

#### **C.1. Publications** (see instructions)

**C. Núñez-Molina, P. Mesejo, J. Fdez-Olivares.** A Review of the Integration of Symbolic and Subsymbolic Methods for Sequential Decision Making. Preprint submitted to ACM Surveys, 2023

**Leonardo Jara, Rubén Ariza-Valderrama, Juan Fernández-Olivares, Antonio González, Raúl Pérez:** Efficient inference models for classification problems with a high number of fuzzy rules. Appl. Soft Comput. 115: 108164 (2022).

**Carlos Núñez-Molina, Juan Fernández-Olivares, Raúl Pérez:** Learning to select goals in Automated Planning with Deep-Q Learning. Expert Syst. Appl. 202: 117265 (2022).

**José Á. Segura-Muros, Raúl Pérez, Juan Fernández-Olivares:** Discovering relational and numerical expressions from plan traces for learning action models. Appl. Intell. 51(11): 7973-7989 (2021).

**Juan Fdez-Olivares, Eva Onaindia, Luis A. Castillo, Jaume Jordán, Juan A. Cózar:** Personalized conciliation of clinical guidelines for comorbid patients through multi-agent planning. Artif. Intell. Medicine 96: 167-186 (2019)

**Andres Jimenez Ramirez, Irene Barba, Juan Fernández-Olivares, Carmelo Del Valle, Barbara Weber:** Time prediction on multi-perspective declarative business processes. Knowl. Inf. Syst. 57(3): 655-684 (2018)

**Inmaculada Sánchez-Garzón, Arturo González-Ferrer, Juan Fernández-Olivares:** A knowledge-based architecture for the management of patient-focused care pathways. Appl. Intell. 40(3): 497-524 (2014)

**Arturo González-Ferrer, Annette ten Teije, Juan Fernández-Olivares, Krystyna Milian:** Automated generation of patient-tailored electronic care pathways by translating computer-interpretable guidelines into hierarchical task networks. Artif. Intell. Medicine 57(2): 91-109 (2013)

**Arturo González-Ferrer, Juan Fernández-Olivares, Luis A. Castillo:** From business process models to hierarchical task network planning domains. Knowl. Eng. Rev. 28(2): 175-193 (2013)

**Juan Fernández-Olivares, Luis A. Castillo, Juan A. Cózar, Óscar García-Pérez:** Supporting clinical processes and decisions by hierarchical planning and scheduling. Comput. Intell. 27(1): 103-122 (2011)

**Luis A. Castillo, Lluvia Morales, Arturo González-Ferrer, Juan Fernández-Olivares, Daniel Borrajo, Eva Onaindia:** Automatic generation of temporal planning domains for e-learning problems. J. Sched. 13(4): 347-362 (2010)

**C.2. Congress,** indicating the modality of their participation (invited conference, oral presentation, poster)



C Núñez-Molina, P Mesejo, J Fernández-Olivares. NeSIG: A Neuro-Symbolic Method for Learning to Generate Planning Problems. Preprint submitted to IJCAI2023. arXiv:2301.10280. **Submitted**

C. Núñez-Molina, P Mesejo, J Fernández-Olivares. A Proposal to Generate Planning Problems with Graph Neural Networks. ICAPS 2022 PRL Workshop on Bridging the Gap Between AI Planning and RL. Vienna, Austria. 2022. **ORAL PR.**

Ignacio Vellido-Expósito, Juan Fernández-Olivares, Raúl Pérez, Luis A. Castillo: Analyzing Driver Behavior Compliance under HoS Regulations. VEHITS 2022: 463-470. **ORAL PR.**

Carlos Núñez-Molina, Ignacio Vellido-Expósito, Vladislav Nikolov-Vasilev, Raúl Pérez, Juan Fdez-Olivares: A Proposal to Integrate Deep Q-Learning with Automated Planning to Improve the Performance of a Planning-Based Agent. CAEPIA 2021: 23-32. **ORAL PR.**

Fernandez-Olivares, J., Vellido, I., & Castillo, L. (2021). Addressing HTN Planning with Blind Depth First Search. 10th International Planning Competition: Planner and Domain Abstracts (IPC 2020), 1-4. **ORAL PR.**

Juan Fernández-Olivares, Raúl Pérez: Driver Activity Recognition by Means of Temporal HTN Planning. ICAPS 2020: 375-383. **ORAL PR.**

José Á. Segura-Muros, Raúl Pérez, Juan Fernández-Olivares: Using Inductive Rule Learning Techniques to Learn Planning Domains. IPMU (3) 2018: 642-656. **ORAL PR.**

Inmaculada Sánchez-Garzón, Juan Fernández-Olivares, Eva Onaindia, Gonzalo Milla, Jaime Jordán, Pablo Castejón: A Multi-agent Planning Approach for the Generation of Personalized Treatment Plans of Comorbid Patients. AIME 2013: 23-27. **ORAL PR.**

Ezequiel Quintero, Vidal Alcázar, Daniel Borrajo, Juan Fernández-Olivares, Fernando Fernández, Angel García Olaya, Cesar Guzman, Eva Onaindia, David Prior: Autonomous Mobile Robot Control and Learning with the PELEA Architecture. Automated Action Planning for Autonomous Mobile Robots 2011. **ORAL PR.**

Arturo González-Ferrer, Annette ten Teije, Juan Fernández-Olivares, Krystyna Milian: Careflow Planning: From Time-Annotated Clinical Guidelines to Temporal Hierarchical Task Networks. AIME 2011: 265-275. **ORAL PR.**

Juan Fernández-Olivares, Luis A. Castillo, Óscar García-Pérez, Francisco Palao: Bringing Users and Planning Technology Together. Experiences in SIADEX. ICAPS 2006: 11-20. **ORAL PR.**

Luis A. Castillo, Juan Fernández-Olivares, Óscar García-Pérez, Francisco Palao: Efficiently Handling Temporal Knowledge in an HTN Planner. ICAPS 2006: 63-72. **ORAL PR.**

**C.3. Research projects**, indicating your personal contribution. In the case of young researchers, indicate lines of research for which they have been responsible.

**H2020 R&D programme Grant No 101016442.** AIPLAN4EU: Bringing AI Planning to the European On-Demand AI Platform. Cascade funding Subgrant 1781686."Integration of Temporal HTN planner SIADEX in UPF". European Commission. I P: Juan Fernández Olivares. Sept 2022-Sept2023. **60000€.** Investigador Principal.

**PYC20 RE 049 UGR.** JACOB: ASISTENTE INTELIGENTE PARA LA A LA TOMA DE DECISIONES SOBRE SERVICIOS DE TRANSPORTE ADAPTADOS A REGULACIONES EUROPEAS DE HORAS DE SERVICIO. Junta de Andalucía. Ayudas a proyectos de I+D+i en el Ámbito de Ecosistemas de Innovación de los Centros de Excelencia Internacional. IP: Juan Fernández Olivares, Raúl Pérez. Julio 2021-Abril 2023. **116.000€.** Investigador Principal. In Progress.

**B-TIC-668-UGR20.** Preconor: Reconocimiento de la Actividad de Conductores Mediante Técnicas de Aprendizaje y Planificación Automáticos. Aplicación en la Predicción y Prescripción de Servicios de Transporte Eficientes y Seguros. Consejería de Transformación Económica, Industria, Conocimiento y Universidades. IP: Juan Fernández Olivares. Julio 2021- Junio 2023. **(30.000€).** Principal Investigator. In progress.

**RTI2018-098460-B-I00.** IMLAP: Integración de aprendizaje y planificación automáticos para analítica prescriptiva. Aplicación a la toma de decisiones en empresas de transporte. MINISTERIO DE CIENCIA, INNOVACIÓN Y UNIVERSIDADES. Juan Fernández Olivares. 2019-2022. **38.478,00 EUR.** Investigador Principal Consolidado.

**TIN2015-71618-R.** PLAN MINER:INTEGRACION DE PLANIFICACION AUTOMATICA Y MINERIA DE PROCESOS PARA EL APRENDIZAJE DE DOMINIOS DE PLANIFICACION JERARQUICA A PARTIR DE LA EXPERIENCIA ALMACENADA EN R. Ministerio De Economía Y Competitividad. Juan Fernández Olivares (Universidad de Granada). 2016-2018. **83.127 EUR.** Investigador Principal.

**TIN2011-27652-C03-03.** PLaInteraction: Multi-Agent Planning by Interaction.. MINISTERIO DE CIENCIA E INNOVACIÓN. Fernandez-Olivares, Juan (Universidad de Granada). 2012-2014. **97.647 EUR.** Investigador Principal.

**P08-TIC-03572.** ONCOTHERAPER: SISTEMA INTELIGENTE DE AYUDA A LA DECISIÓN CLÍNICOTTERAPÉUTICA PARA LA PERSONALIZACIÓN DE TRATAMIENTOS EN ONCOLOGÍA PEDIÁTRICA. Proyecto de Excelencia Junta de Andalucía. Fernandez-Olivares, Juan (Universidad de Granada). 2009-2013. **272.923,68 EUR.** Investigador Principal.

**TIN2008-06701-C03-02.** PLANNING, EXECUTION AND LEARNING ARCHITECTURE. Ministerio de Ciencia e Innovación. Juan Fernández Olivares. 2009-2012. **53.240 EUR.** Investigador Principal.

**C.4. Contracts, technological or transfer merits,** Include patents and other industrial or intellectual property activities (contracts, licenses, agreements, etc.) in which you have collaborated. Indicate: a) the order of signature of authors; b) reference; c) title; d) priority countries; e) date; f) Entity and companies that exploit the patent or similar information, if any

Contrato art.83 LOU. Desarrollo de las herramientas GantaBI OneClick, en concreto en sus módulos GantaBI CLASIFICADOR y GantaBI WRANGLER.. GANTABI S.L.. Fernandez-Olivares, Juan (Universidad de Granada). 2019-2020. 61084 EUR. Investigador Principal

Contrato art.83 LOU. Elaboración de informe experto sobre las principales aplicaciones en el mercado de Inteligencia Artificial.. ACCENTURE. Fernandez-Olivares, Juan (Universidad de Granada). 2016-2016. 11495 EUR. Investigador Principal

Contrato art.83 LOU. Realización de las tareas del paquete de trabajo número tres de I+D+I del proyecto 'Oncotheraper 2.0: Adaptación, integración y explotación de un sistema inteligente hospitalario para la personalización, ejecución y monitorización de planes de tratamiento. IACTIVE INTELLIGENT SOLUTIONS. Fernandez-Olivares, Juan (Universidad de Granada). 2012-2012. 5263,5 EUR. Investigador Principal

Contrato art.83 LOU. SISTEMA INTELIGENTE DE GESTIÓN DE RIESGOS DE IT (SIGRIT). Fernandez-Olivares, Juan (Universidad de Granada). 2009-2011. 51620 EUR. Investigador Principal

Contrato art.83 LOU. INTEGRA. BOEING RESEARCH AND TECHNOLOGY INSTITUTE EUROPE S.L.. Castillo-Vidal, Luis (Universidad de Granada). 2008-2011. 573245,91 EUR. Investigador colaborador.

Contrato art.83 LOU. SIADEX: Sistema Inteligente para la ayuda la decisión en la extinción de Incendios forestales. EGMASA-Junta de Andalucía. Juan Fernández Olivares, Luis Castillo Vidal (Universidad de Granada). 2003-2007. 267.000 EUR. Investigador Principal.

Creación de Spin-off. IACTIVE INTELLIGENT SOLUTIONS. Rol: Cofundador.

Creación de Spin-off. COGNOCARE Ltd. (USA). Rol: Cofundador.