



CURRICULUM VITAE (CVA)

Part A. PERSONAL INFORMATION

CV date	27/1/23
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First name	Sergi		
Family name	Grau Carrión		
Open Researcher and Contributor ID (ORCID) (*)	0000-0001-8223-2398		

A.1. Current position

Position	Associate Professor		
Initial date	01/09/2014		
Institution	University of Vic-Central University of Catalonia		
Dep. /Centre	Engineering / Faculty of Sciences, Technology and Engineering		
Country	Spain	Teleph. number	+34661432377
Key words	Computer Science		

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

Period	Position/Institution/Country/Interruption cause
2013-2014	Associate professor – Polytechnical University of Catalonia (UPC) – Spain
2009-2010	Lecturer – Polytechnical University of Catalonia (UPC) – Spain
2005-2009	Adjunct professor – Polytechnical University of Catalonia (UPC) – Spain

A.3. Education

PhD, Licensed, Graduate	University/Country	Year
PhD in Computer Science	Polytechnical University of Catalonia (UPC) – Spain	2009
Computer Science degree	Polytechnical University of Catalonia (UPC) – Spain	2011

Part B. CV SUMMARY

Dr. Sergi Grau is currently a Associate Professor at the Universitat de Vic – Universitat Central de Catalunya (UVic-UCC) and the coordinator of the Digital Care research group at the University of Vic, a group with more than 20 researchers from areas such as technology, health, neuropsychology, education or social.

His research focuses on the use of digital technologies in the field of health and education. He has participated in projects and publications on the use of digital technologies for cognitive rehabilitation, the reeducation of learning difficulties, and the creation of tools to help professionals to create virtual environments in an intuitive way.

He has participated in 12 national and international projects. He has published more than 30 research articles in conferences, magazines and books. He is supervising three doctoral thesis, he has supervised several master's theses and final projects of degree very related to the theme of this project.



In 2016, licensed di-Test, a digital product for cognitive evaluation, and Numerus, a digital product with tools for interventions to reinforce numerical processing and calculus. In relation to di-Test, it is a collection of tests for the cognitive evaluation of the basic functions in the learning process: sustained attention, work memory, reader processes and numerical processing and calculation. In relation to Numerus method, it is a collection of tools for the acquisition and improvement of numerical processing and calculation. It is a learning tool for the basic concepts of mathematics, for P5, 1st and 2nd of primary education (EP), for all children of the school, classroom. It allows kids to work individually, in small groups, or throughout the classroom together.

In the last 7 years he has dedicated much of his work to management which has an impact on scientific production, although he manage to participate in competitive projects as a researcher. First as head of department (2 years) and currently as dean of the Faculty of Science and Technology (5 years). From September 2022, his term ends and he returned to his dedication focused on research and teaching.

Part C. RELEVANT MERITS

C.1. Publications

Ochandorena-Acha, M., Terradas-Monllor, M., Nunes Cabrera, T. F., Torrabias Rodas, M., Grau, S. (2022). Effectiveness of virtual reality on functional mobility during treadmill training in children with cerebral palsy: A single-blind, two-arm parallel group randomised clinical trial (VirtWalkCP project). *BMJ Open*, 12(11).

Reifs, D., Reig-Bolaño, R., Casals, M., Grau-Carrión, S. (2022). Interactive Medical Image Labeling Tool to Construct a Robust Convolutional Neural Network Training Data Set: Development and Validation Study. *Jmir Medical Informatics*, 10(8).

Cruz Herrera, M. D. L., Fuster-Casanovas, A., Catalina, Q. M., Mensa, M. C., Pinillos, P. A., Guitart, I. V., Grau-Carrión, S., Vidal-Alaball, J. (2022). Use of virtual reality in the reduction of pain after the administration of vaccines among children in primary care centers: Protocol for a randomized clinical trial. *Jmir Research Protocols*, 11(4).

R. Mateu-Estivill, S. Forné, A. López-Sala, C. Falcón, X. Caldú, J.M. Sopena, A. Sans, A. Adan, S. Grau, N. Bargalló, J.M. Serra-Grabulosa Functional connectivity alterations associated to reading difficulties in early readers. *Brain Imaging and Behavior*, 15(4), 2109–2120 (2021) Impact factor: 3.43, Q1

Reifs, R. Angosto, A. Fernandez, S. Grau, R. Reig-Bolaño. Tissue Segmentation for Automatic Chronic Wound Assessment *Frontiers in Artificial Intelligence and Applications*, Vol. 319, 381-384, 2019. Impact factor: 0.257, Q3

S. Moya, D. Tost, S. Grau, A. Barnekow, E. Felix. SKETCH'NDO: A framework for the creation of task-based serious games *Journal of Visual Languages & Computing*, vol. 34. Pp. 1-10, 2016. Impact factor: 1.171, Q3

S. Grau, R. Reig, A. Puig, M. López, I. Rodríguez. Games4Learning: How to integrate serious games to personalized learning itineraries? *Proceedings of the First workshop in on Gaming, Simulation and Play (WGSP)*. Pages 1275-1280 Vol 1. 2015.

S. Moya, S. Grau and D. Tost First-Person Locomotion in 3D Virtual Environments: a Usability Analysis *Journal of Universal Computer Science*, 20, pp 1026-1045, 2014. Impact factor to: 0.466, Q4



C. Zuchella, E. Sinforiani, C. Tassorelli, E. Cavallini, D. Tost, S. Grau, S. Pazzi, S. Puricelli, S. Bernini, S. Bottiroli, T. Vecchi, G. Sandrini and G. Nappi. Serious games for screening pre-dementia conditions: from virtuality to reality? A pilot project *Functional neurology*, 29, pp. 1-4, 2014. Impact factor: 1.855, Q3

S. Moya, S. Grau and D. Tost. The Wise Cursor: assisted selection in 3D Serious Games. *The Visual Computer Journal*, 29, pp. 795-804, 2013. Impact factor: 0.576, Q3

P. Abellan, S. Grau, D. Tost and A. Puig. Region-based illustrative visualization of multimodal datasets. *Computerized Medical Imaging and Graphics*, 37, pp. 263–271, 2013. Impact factor: 1.467, Q3

S. Moya, S. Grau and D. Tost. Interactive graphical design of 3D serious neurorehabilitation games. *Presence – Teleoperators and virtual environments*, 21, pp. 58-68, 2012. Impact factor: 0.692, Q4

D. Tost, S. Grau and S. Moya. Personalization of virtual environments navigation and tasks for neurorehabilitation. *Virtual reality and environments*, pp. 135-150, 2012.

E. Verges, D. Tost, D. Ayala, E. Ramos and S. Grau. 3D Pore analysis of sedimentary rocks. *Sedimentary geology*, 234, pp. 109-115, 2011. Impact factor: 1.537, Q2

S. Grau, E. Vergés, D. Tost and D. Ayala. Exploration of porous structures with illustrative visualization.

Computer and Graphics, 34, pp. 398-408, 2010. Impact factor: 0.72, Q3

C.3. Research projects

Title: Co-created ITC solutions for Alzheimer's Informal Caregiving

Financing entity: European Commission, KA2

Duration, from: 01/01/2020 to: 31/12/2022 Grant amount: 765.553€

Principal investigator: Anna Ramon Aribau

Title: Development and validation of gamified tools for the detection of learning difficulties

Financing entity: Generalitat de Catalunya

Duration, from: 01/03/2020 to: 28/02/2024 Grant amount: 33.960€

Principal investigator: Sergi Grau Carrión and Josep Maria Serra Grabulosa

Title: Development of a craving support tool

Financing entity: Generalitat de Catalunya

Duration, from: 21/12/2019 to: 20/12/2023 Grant amount: 33.960€

Principal investigator: Sergi Grau Carrión and Anna Ramon Aribau

Title: Mobile application for the prevention of relapses in addictions

Financing entity: Diputació de Barcelona

Duration, from: 01/01/2019 to: 31/12/2019 Grant amount: 6.175€

Principal investigator: Sergi Grau Carrión and Anna Ramon Aribau

Title: Development of a craving support tool

Financing entity: Generalitat de Catalunya

Duration, from: 21/12/2019 to: 20/12/2022 Grant amount: 33.960€

Principal investigator: Sergi Grau Carrión and Anna Ramon Aribau

Title: Impact and improvement in the follow-up of wound healing using artificial intelligence

Financing entity: Generalitat de Catalunya

Duration, from: 01/10/2018 to: 30/09/2021 Grant amount: 8.472€

Principal investigator: Sergi Grau Carrión



Title: 3D scanners in biomedical manufacturing and pre-manufacturing
Financing entity: Generalitat de Catalunya
Duration, from: 09/01/2016 to: 09/01/2019 Grant amount: 23.472€
Principal investigator: Sergi Grau Carrión

Title: Acquisition and analysis of medical data using BigData and IoT
Financing entity: Generalitat de Catalunya
Duration, from: 09/01/2016 to: 09/01/2019 Grant amount: 23.472€
Principal investigator: Sergi Grau Carrión

Title: Serious games for heart surgery training (GAMES4HEART)
Financing entity: Ministerio de Ciencia e Innovación
Duration, from: 01/01/2012 to: 31/12/2014 Grant amount: 88.693€
Principal investigator: Daniela Tost Pardell

Title: Neurolearning: Telematic system of neuropsychological intervention based on interactive virtual environments
Financing entity: Ministerio de Industria, Turismo and Comercio
Duration, from: 01/01/2008 to: 31/12/2010 Grant amount: 74.810€
Principal investigator: Sergi Grau and Daniela Tost

Title: Neurorehabilitació 3e+d
Financing entity: ACC10 (Generalitat de Catalunya)
Duration, from: 01/09/2008 to: 30/06/2010 Grant amount: 180.416€
Principal investigator: Sergi Grau Carrión and Daniela Tost

C.4. Contracts, technological or transfer merits

Title: Smart Aging
Type of contract: private international
Empresa/administración financiadora: Consorzio di Bioingegneria e Informatica Medica (CBIM)
Duration, from: 01/07/2012 to: 01/07/2015 Grant amount: 120.000€
Principal investigator: Sergi Grau Carrión and Daniela Tost Pardell

Title: MIVAL 3D: 3D functional modeling of the mitral valve of the human heart
Type of contract: private national
Empresa/administración financiadora: Pulso, S.A.
Entidades participantes:1
Duration, from: 15/07/2010 to: 15/07/2012 Grant amount: 70.000€
Principal investigator: Sergi Grau Carrión and Daniela Tost Pardell

Title: REHABILITA: Disruptive technologies for the rehabilitation of the future
Type of contract: private national
Empresa/administración financiadora: GMV Soluciones Globales Internet SAU
Entidades participantes:7
Duration, from: 01/06/2010 to: 31/12/2012 Grant amount: 128.840€
Principal investigator: Sergi Grau Carrión and Daniela Tost Pardell

Transfer merits

Currently he has licensed two digital tools for cognitive assessment in childhood and for the re-education of numerical difficulties with the spin-off NeurekaLAB with the participation of the University of Barcelona and the University of Vic (UVic-UCC):

- <http://diposit.ub.edu/dspace/handle/2445/104756>
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