



**CURRICULUM VITAE (CVA) (maximum 4 pages)**

<b>Part A. PERSONAL INFORMATION</b>			<b>CV date</b>	September 2024
First and Family name	Joan Serra-Sagrístà		Gender	Male
National ID number	46.643.073-Q	Age (Birth date)	54 (23/10/1969)	
E-mail	<a href="mailto:Joan.Serra@uab.cat">Joan.Serra@uab.cat</a>	Web site	DEIC: <a href="http://deic.uab.cat/~jserra">deic.uab.cat/~jserra</a>	
Researcher identifiers	Researcher ID	B-2000-2009	<a href="#">Researcher ID Link</a>	
	Google Scholar	Joan Serra-Sagrístà	<a href="#">Google Scholar Link</a>	
	Research Gate	Joan Serra-Sagrístà	<a href="#">Research Gate Link</a>	
	Orcid Code	0000-0003-4729-9292	<a href="#">ORCID Link</a>	
	Scopus	6602231756	<a href="#">Scopus Link</a>	
	DBLP	Joan Serra-Sagrístà	<a href="#">DBLP Link</a>	

**A.1. Current position**

Position	Full Professor Public servant: 4664307313 A0504		Since: October 2019
Institution	Universitat Autònoma de Barcelona (UAB)		
Research Group	Group on Interactive Coding of Images (GICI)		
Department	Departament Enginyeria de la Informació i de les Comunicacions (DEIC) Escola d'Enginyeria		
Address	Edifici Q, UAB, C/de les Sitges, Cerdanyola del Vallès, 08193 Barcelona		
UNESCO code	120308	Phone	+34 93 581 18 61
Keywords	data compression, source coding, remote sensing, New Space		

**A.2. Previous positions**

Period	Position/Institution/Country
2002-2019	Associate Professor-TU, Universitat Autònoma Barcelona (UAB)
1998-2002	Associate Professor-TEU, Universitat Autònoma Barcelona (UAB)
1997-1998 & 2000	PhD & PostDoc visiting researcher, University of Bonn (Germany)
1992-1997	Assistant Professor, Universitat Autònoma Barcelona (UAB)

**A.3. Education**

Undergraduate/PhD	University	Year
Bachelor's in Computer Science	Universitat Autònoma de Barcelona (UAB)	1992
Master's in Computer Science	Universitat Autònoma de Barcelona (UAB)	1994
PhD in Computer Science <i>J.Buhmann-U.Bonn, I.Ortuño-UAB</i>	Universitat Autònoma de Barcelona (UAB) <i>Lattice Point Enumeration using the L1 norm</i>	1999

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

--- Joan Serra-Sagrístà earned the Bachelor's Degree (1992) and the PhD Degree (1999) in Computer Science at Universitat Autònoma de Barcelona (UAB). From 1992 to 1997 he was an Assistant Professor with Department of Computer Science at UAB. From 1997 to 1998 he performed a doctoral research stay at University of Bonn (Germany) under the supervision of Prof. J. Buhmann, granted by "La Caixa" savings bank and DAAD. From 1999 to 2002 he was an Associate Professor at E.U.Sabadell. In 2000 he was a visiting researcher at U. Bonn. From 2002 to 2019 he was an Associate Professor. Since 2019 he is Full Professor with Department of Information and Communications Engineering (DEIC) at UAB. From 2002, Head of the research Group on Interactive Coding of Images (GICI). Since 2018 he is Head of Department.

--- His main research interest are source coding and transmission of remote sensing data.

--- 4 six-years research, 1 six-years knowledge transfer and 6 five-years teaching periods.

--- Participated as UAB-MainResearcher or UAB-Responsible/Researcher in respectively 8/24, 25/30, 10/23 projects with respectively European, Spanish, Catalan funds; and in 13/16 technology transfer projects with private companies and administrations (space agencies).



- Main researcher or responsible in over 50 projects and contracts, for a global amount of over 2,5 M€.
- He has edited 15 books, authored 1 book, co-authored 4 book chapters, 71 papers in Clarivate Analytics JCR indexed journals (60 in Tier1, 9 in T2, 2 in T3), 11 papers in other indexed journals, 64 papers in CORE A\*/B/C international conferences and 74 in other conferences.
- Since 2011 he is actively involved in the standardization body Consultative Committee for Space Data Systems (CCSDS), a multinational forum for the development of space data systems standards with participation of main space agencies (ESA, NASA, CNES, ...).
- As Head of GICI research group, he promoted the publication of open-source code implementations (OSI) for most GICI developments, all available at GICI webpage or SourceForge.net –over 6.500 downloads--. To emphasize: first world-wide OSI of CCSDS-122.0 (2007), CCSDS-123.0 (2011) and CCSDS-122.1 (2014) standards (only two OSI for each of them world-wide).
- At the School of Engineering at UAB, he was Coordinator of PhD Program in Computer Science (2005-2009), earning the Quality Award for doctoral programs in 2006 (successively renewed); First Coordinator of the Official Master in Advanced Computer Science (2006-2009); Secretary of DEIC (2012-2018); reporter for UAB Doctorate Commission (2006-2009).
- Supervisor of 14 PhD. Currently supervising 3 PhD.
- Responsible for 8 postdoctoral research stays.
- 2007. Young Research Intensification Award.
- 2007. Promoter and first coordinator of the Spanish Network on Multimedia Content Coding and Transmission (RTCTCM).
- 2010. Best reviewer Award IEEE Trans. on Geoscience and Remote Sensing, Q1.
- 2011 -- today. IEEE Senior Member. Number: 80388288. Membership: IEEE Geoscience Remote Sensing Society, IEEE Signal Processing Society, IEEE Information Theory Society.
- 2011 -- 2015. Associate Editor of IEEE Trans. on Image Processing, Q1.
- 2013 -- today. Committee Chair of Data Compression Conference, CORE A\*.
- 2016 -- 2023. Associate Editor of IEEE Trans. on Geosciences & Remote Sensing, Q1.
- 2017 -- 2021. Main Researcher for Consolidated Research Group, Catalan Government.
- 2018 -- today. Head of Department of Information and Communications Engineering, UAB.
- 2018 -- today. Member of Institut Estudis Espacials Catalunya.
- 2022 – today. Senior Area Editor for IEEE Trans. on Image Processing, Q1.
- h-index: 17 (WebOfScience), 25 (GoogleScholar), 19 (Scopus); 23 (ResearchGate); i10-index: 62 (GS).
- Evaluation tasks (selection of):
  - 1) 2008 – today. Agència Gestió Ajuts Universitaris Recerca AGAUR, Generalitat Catalunya.
  - 2) 2010 – today. Agencia Nacional de Evaluación y Prospectiva (ANEP, Spain).
  - 3) 2014 – today. European Commission. Expert Number EX2013D133163.
  - 4) 2015 – today. Deutscher Akademischer Austausch Dienst (DAAD, Germany).
  - 5) 2018 – today. Foundation for Polish Science FNP, Poland).
  - 6) 2019 – today. Agencia Estatal de Investigación (AEI, Spain).

## Part C. RELEVANT MERITS

### C.1. Publications (selection of)

- 1) Sebastià Mijares Verdú, Marie Chabert, Thomas Oberlin, Joan Serra-Sagristà, 2024. "Fixed Quality Compression of Remote Sensing Images With Neural Networks," IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing 17: 12169-12180. DOI: [10.1109/JSTARS.2024.3422215](https://doi.org/10.1109/JSTARS.2024.3422215). IF: 5.5, Q1
- 2) Dion E. O. Tzamarías, Kevin Chow, Ian Blanes and Joan Serra-Sagristà, 2022, "Fast Run-Length Compression of Point Cloud Geometry," IEEE Trans. Image Processing 31: 4490-4501. DOI: [10.1109/TIP.2022.3185541](https://doi.org/10.1109/TIP.2022.3185541). IF: 10.856, Q1.
- 3) M.Hernández-Cabronero, A.Kiely, M.Klimesh, I.Blanes, J.Ligo, E.Magli, J.Serra-Sagristà, 2021, "The CCSDS 123.0-B-2 Low-Complexity Lossless and Near-Lossless Multispectral and Hyperspectral Image Compression Standard: A comprehensive review," IEEE



Geoscience Remote Sensing Magazine 9(4): 102-109. DOI:  
[10.1109/MGRS.2020.3048443](https://doi.org/10.1109/MGRS.2020.3048443). IF: 13.925, Q1.

- 4) I.Blanes, M.Hernández-Cabronero, J.Serra-Sagrìstà, M.Marcellin, 2021, "Redundancy and Optimization of tANS Entropy Encoders," IEEE Trans. Multimedia 23: 4341-4350. DOI: [10.1109/TMM.2020.3040547](https://doi.org/10.1109/TMM.2020.3040547). IF: 8.182, Q1.
- 5) S.Alvarez-Cortes, J.Serra-Sagrìstà, J.Bartrina-Rapesta, M.Marcellin, 2020, "Regression Wavelet Analysis for Near-lossless Remote Sensing Data Compression," IEEE Trans. Geoscience and Remote Sensing 58(2): 790-798. DOI: [10.1109/TGRS.2019.2940553](https://doi.org/10.1109/TGRS.2019.2940553). IF: 5.36, Q1.
- 6) J.García-Sobrino, V.Laparra, J.Serra-Sagrìstà, X.Calbet, G.Camps-Valls, 2019, "Improved Statistically Based Retrievals via Spatial-Spectral Data Compression for IASI data," IEEE TGRS 57(8):5651-5668, DOI: [10.1109/TGRS.2019.2901396](https://doi.org/10.1109/TGRS.2019.2901396). IF: 5.36, Q1.
- 7) J.Bartrina-Rapesta, I.Blanes, F.Auli-Llinas, J.Serra-Sagrìstà, V.Sanchez, M.Marcellin, 2017, "A Lightweight Contextual Arithmetic Coder for On-Board Remote Sensing Data Compression," IEEE TGRS 55:4835-4835. DOI [10.1109/TGRS.2017.2701837](https://doi.org/10.1109/TGRS.2017.2701837). IF: 5.6, Q1.
- 8) N.Amrani, J.Serra-Sagrìstà, V.Laparra, M.Marcellin, J.Malo, 2016, "Regression Wavelet Analysis for Lossless Coding of Remote-Sensing Data," IEEE TGRS 54: 5616-5627. DOI: [10.1109/TGRS.2016.2569485](https://doi.org/10.1109/TGRS.2016.2569485). IF: 4.9, Q1.

## C2. Conferences (selection of)

- 1) Oral Presentation. O.Maireles, J.Bartrina, M.Hernández, J.Serra-Sagrìstà, "Analysis of Lossless Compressors Applied to Integer and Floating-Point Astronomical Data," IEEE Data Compression Conf., March 2022. Snowbird, USA. DOI: [10.1109/DCC52660.2022.00047](https://doi.org/10.1109/DCC52660.2022.00047). CORE A\*.
- 2) Oral Presentation. D.Tzamarias, K.Chow, I.Blanes, J.Serra-Sagrìstà, "Compression of point cloud geometry through a single projection," IEEE Data Compression Conf., March 2021. Snowbird, USA. DOI: [10.1109/DCC50243.2021.00014](https://doi.org/10.1109/DCC50243.2021.00014). CORE A\*.
- 3) Oral Presentation. M.Martinez, J.Serra-Sagrìstà, "Rice-Marlin Codes: Tiny and Efficient Variable-to-Fixed Codes," IEEE Data Compression Conf., March 2019. Snowbird, USA. DOI: [10.1109/DCC.2019.00108](https://doi.org/10.1109/DCC.2019.00108). CORE A\*.

## C.3. Research projects (selection of)

- 1) H2020-SFS-2019-1 862919 Co-designed Welfare Monitoring Platform for Pig and Dairy Cattle European Commission, 10/2019-03/2024. Amount: 6.684.368,69 €. Main Researcher UAB School Engineering. Coordinator: UAB, Germany.
- 2) H2020-COMPET-2017 COMPET-3-776151 High-Speed Integrated Satellite Data Systems For Leading EU IndustrY (Hi-SIDE), European Commission, 01/2018-07/2022. Amount: 6.997.016,25 €. Main Researcher UAB. Coordinator: AIRBUS DS GMBH, Germany.
- 3) FP7-242390 *GMES and Earth Observation combined with Position based Image and sensor Communications Technology for Universal Rescue, Emergency and Surveillance (GEO-PICTURES)*, European Commission FP7, 03/2010 - 02/2012. Amount: 2.385.871 €, Main Researcher UAB. Coordinator: AnsuR Technologies, Norway.
- 4) FP7-PEOPLE-2009-IIF FP7-250420 *Multidimensional Image Coding. Applications to Remote Sensing and Telemedicine (MIC-RS-TM)*, European Commission FP7, 07/2010-12/2011. Amount: 155.390 €. Main Researcher.

## C.4. Contracts, technological or transfer merits (selection of)

- 1) *Improvements to the 123.0-B-2 standard Low-Complexity Lossless and Near-Lossless Multispectral and Hyper- spectral Image Compression*, Centre National d'Études Spatiales (CNES), France, 05/2024 – 12/2026. Amount: 59.973 €. Responsible UAB



- 2) *Framework for the evaluation of the quality of images for segmentation and classification with deep learning algorithms*, Satellogic Solutions SL, Fundació EURECAT, RTC2019-007434-7. 07/2020–12/2022. Amount: 607.552 €. Main Researcher UAB.
- 3) *Raw SAR Compression - Prototyping of the Recommended Standard*, Centre National Études Spatiales (CNES), France, 10/2020–12/2021. Amount: 69.185 €. Responsible UAB
- 4) *WhiteDwarf 2.0 Maintenance of Compression Implementations*, European Space Agency (ESA), 01/2021 – 12/2021. Amount: 34.993 €. Responsible UAB

### C.5. Patents / Software Registries (selection of)

- 1) FFLX. i-DEPOT Number: 145317, Benelux Office for Intellectual Property. Date: 01/02/2024. Rights holder: UAB, IEEC.
- 2) Prototype of an alternative pipeline for CCSDS 124.0. i-DEPOT Number: 120779, Benelux Office for Intellectual Property. Date: 10/12/2019. Rights holder: UAB.
- 3) LCNL. i-DEPOT Number: 112385, Benelux Office for Intellectual Property. Date: 13/07/2018. Rights holder: UAB.
- 4) UAB-CNES-2015-MHDC-SOFTWARE-PACKAGE-2. i-DEPOT Number: 069291, Benelux Office for Intellectual Property. Date: 13/12/2015. Rights holder: UAB.
- 5) UAB-CNES-2015-MHDC-SOFTWARE-PACKAGE. i-DEPOT Number: 064093, Benelux Office for Intellectual Property. Date: 08/05/2015. Rights holder: UAB.
- 6) UAB-CNES-2014-MHDC-SOFTWARE-PACKAGE. i-DEPOT Number: 058456, Benelux Office for Intellectual Property. Date: 13/09/2014. Rights holder: UAB.

### C.6 International bodies/committees/institutions participation (selection of)

- 1) Senior Area Editor *IEEE Transactions on Image Processing*, Q1. 2022 – today.
- 2) Associate Editor *IEEE Transactions on Geo. & Remote Sensing*, Q1. 2016 – 2023.
- 3) Associate Editor *IEEE Transactions on Image Processing*, Q1. 2011 – 2015.
- 4) Associate Editor *SPIE Journal of Electronic Imaging*, Q3. 2019 – 2023.
- 5) Editorial Board *Hindawi Mathematical Problems in Engineering*, Q2. 2014 – 2023.
- 6) Editorial Board *Electronic Letters on Computer Vision and Image Analysis*. 2006 – 2023.
- 7) Committee Chair *IEEE Data Compression Conference*, CORE: A\*. 2013 – today.
- 8) Special Session Organizer *IEEE International Conference on Image Processing*, 2014.
- 9) Conference Chair *SPIE Conf. on "Satellite Data Comp., Comm., and Proc. VI"*. 2008, 2010.
- 10) Technical Committee *IEEE Data Compression Conference*, CORE: A\*. 2009 – 2012.
- 11) Technical reviewer for publishers John Wiley & Sons, and SPIE Press.

### C.7 Prizes (selection of)

- 1) 2016. Capocelli Prize. Best paper at IEEE Data Compression Conference.
- 2) 2015. Idea Generation Program Award. 3 awards at UAB.
- 3) 2014. Deutscher Akademischer Austausch Dienst (DAAD, Germany) to participate in Science Tour 2014. 27 awards world-wide.
- 4) 2010. Best Reviewer Award. *IEEE Trans. Geoscience and Remote Sensing*, JCR: Q1.
- 5) 2007. Young Research Intensification Award. 10 awards at UAB.

### C.8 Other (selection of)

- 1) Supervisor of 24 Master Thesis.
- 2) Keynote/Invited Talks: IDI 2023 (Munich, Germany); OBPDC 2022 (Athens, Greece); RecPad 2016 (Aveiro, Portugal); .
- 3) Journal reviewer for multiple international journals. Selection: *Taylor & Francis Intl. Journal of Digital Earth*, *IEEE Trans. Signal Proc.*, *IEEE Trans. Image Proc.*, *IEEE Trans. Geoscience Remote Sensing*, *IEEE Trans. Circuits Systems Video Technology*, *IEEE Geoscience Remote Sensing Letters*, *IEEE Journal Selected Topics Signal Processing*, *IEEE Journal Selected Topics Applied Earth Observations Remote Sensing*, ....
- 4) Member of Program Committee of multiple international conferences. Selection: *IEEE Int. Conf. on "Img. Proc."*, *SPIE Conf. on "Satellite Data Compression, Comm., and Proc."*, *IASTED Int. Conf. on "Visualization, Imaging, and Image Proc."*, *SPIE Europe Conf. on "High-Performance Computing in Remote Sensing"*, *IASTED Int. Conf. on "Imaging and Signal Processing in Healthcare and Technology"*, ...