

Activitats de recerca 2020



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0. Resum Indicadors

PERSONAL INVESTIGADOR	
Investigadors postdoctorals	41
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PROJECTES COMPETITIVS	
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1. Personal Investigador

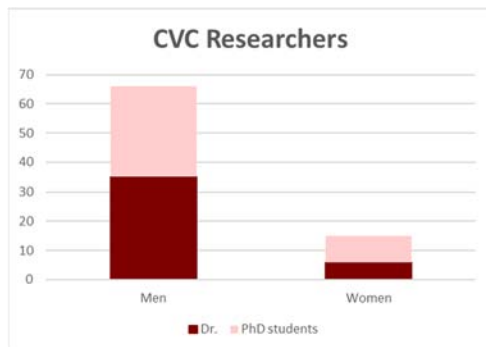
A data 31 de desembre de 2020, el personal del CVC que realitza activitats de recerca està format per:

INVESTIGADORS POST-DOC (41):

- Permanents (20): inclosos 4 investigadors sènior contractats pel CVC i també 16 professors universitaris de la UAB i la UB.
- Contractats Postdoc (21): inclosos investigadors Ramón y Cajal, Marie Curie i Tecniospring, així com aquell personal investigador contractat pel CVC, la UAB i la UB.

ESTUDIANTS DE DOCTORAT (40): s'inclou qualsevol estudiant de doctorat amb una beca (CVC, UAB, FPI, DI, FI o FPU) o amb un contracte com a personal investigador en formació a la UAB i la UB.

PERFIL INVESTIGADOR:



PhD Researcher Profile:

- Associate Professor
- 47 years old
- h-index: 20



1.1 Grups SGR

Tot el personal investigador del CVC forma part d'un grup de recerca reconegut (SGR) per la Generalitat de Catalunya:

NOM: *Learning and Machine Perception (LAMP)*

REFERÈNCIA: 2017 SGR 649

ENTITAT FINANÇADORA: AGAUR

PERÍODE: 01/01/2017 – 31/12/2020

IMPORT CONCEDIT: 15.000,00 €

IP RESPONSABLE: **Dr. Joost van de Weijer**

NOM: *Image Sequence Evaluation (ISE Lab)*

REFERÈNCIA: 2017 SGR 1669

ENTITAT FINANÇADORA: AGAUR

PERÍODE: 01/01/2017 – 31/12/2020

IMPORT CONCEDIT: 10.000,00 €

IP RESPONSABLE: **Dr. Jorge Bernal**

NOM: *Intelligent Reading Systems*

REFERÈNCIA: 2017 SGR 1783

ENTITAT FINANÇADORA: AGAUR

PERÍODE: 01/01/2017 – 31/12/2020

IMPORT CONCEDIT: 36.000,00 €

IP RESPONSABLE: **Dr. Josep Lladós**

NOM: *ACDC – Automated and Cooperative Driving in the City*

REFERÈNCIA: 2017 SGR 1597

ENTITAT FINANÇADORA: AGAUR

PERÍODE: 01/01/2017 – 31/12/2020

IP RESPONSABLE: **Dr. Antonio M. López**

NOM: *Multispectral Image Analysis and Understanding*

REFERÈNCIA: 2017 SGR 1183

ENTITAT FINANÇADORA: AGAUR

PERÍODE: 01/01/2017 – 31/12/2020

IP RESPONSABLE: **Dr. Daniel Ponsa**

NOM: *Microelectronic Technology Applied to Cyber-Physical Systems and Biomedical Image Processing*

REFERÈNCIA: 2017 SGR 1624

ENTITAT FINANÇADORA: AGAUR

PERÍODE: 01/01/2017 – 31/12/2020

IP RESPONSABLE: **Dr. Lluís Terés (CNM) / Dr. Debora Gil (CVC)**

2. Projectes Competitius

2.1 Concedits el 2020

Projectes àmbit nacional:

NOM: *Projecte de Visió per Computador imatges: fotografies i documents heterogenis*

REFERÈNCIA: Núm. Exp. CLT308/20/000001

ENTITAT FINANÇADORA: Departament de Cultura, Generalitat de Catalunya

PERÍODE: 2020

IMPORT CONCEDIT: 15.000,00 €

IP RESPONSABLE: **Dr. Josep Lladós**

NOM: *DeepTR - Knowledge Transfer for Deep Representations*

REFERÈNCIA: PID2019-104174GB-I00

ENTITAT FINANÇADORA: Ministerio de Ciencia e Innovación y Universidades

PERÍODE: 01/06/2020 – 31/05/2023

IMPORT CONCEDIT: 78.287,00 €

IP RESPONSABLE: **Dr. Joost van de Weijer / Dr. Bogdan Raducanu**

NOM: *CYBERLUNG: Guia de broncoscòpia cibernètica per a biòpsia de càncer de pulmó.*

REFERÈNCIA: 2019 PROD 00089

ENTITAT FINANÇADORA: AGAUR

PERÍODE: 23/07/2020 – 22/01/2022

IMPORT CONCEDIT: 63.937,50 €

IP RESPONSABLE: **Dra. Debora Gil**

NOM: *Bears: Més enllà dels sistemes de lectura automàtica*

REFERÈNCIA: 2019 PROD00090

ENTITAT FINANÇADORA: AGAUR

PERÍODE: 23/07/2020 – 22/01/2022

IMPORT CONCEDIT: 100.000,00 €

IP RESPONSABLE: **Dr. Dimosthenis Karatzas**

Altres ajuts:

NOM: *Palau Macaya: Impacte de la IA en la societat*

ENTITAT FINANÇADORA: FUNDACIÓ LA CAIXA

PERÍODE: 01/10/2020 – 20/03/2021

IMPORT CONCEDIT: 9.410,00 €

IP RESPONSABLE: **Alexandra Canet / Dr. Carlos Sierra**

NOM: *Game of Crowds*

REFERÈNCIA: FCT-19-15244

ENTITAT FINANÇADORA: FECYT

PERÍODE: 01/07/2020 – 30/06/2021

IMPORT CONCEDIT: 19.500 €

IP RESPONSABLES: **Dr. Josep Lladós**

NOM: *AI4ALL - Aprenentatge i predicció com a motors per la creació de nous models de negoci de base tecnològica*

REFERÈNCIA: SEC001/19/00002

ENTITAT FINANÇADORA: Departament d'Empresa i Coneixement

PERÍODE: 28/10/2020 – 28/03/2021

IMPORT CONCEDIT: 11.903,75 €

IP RESPONSABLES: **Meritxell Bassolas**

2.2 En execució durant 2020

Projectes àmbit nacional:

NOM: *Personality Computing from Audio-Visual Signals*

REFERÈNCIA: EIN2019-102990

ENTITAT FINANÇADORA: Ministerio de Ciencia e Innovación y Universidades

PERÍODE: 2019 – 2021

IMPORT CONCEDIT: 10.000,00 €

IP RESPONSABLE: **Dr. Sergio Escalera**

NOM: *SDME - Structured Deep Multimodal Embedding*

REFERÈNCIA: RTI2018-102285-A-I00

ENTITAT FINANÇADORA: Ministerio de Ciencia e Innovación y Universidades

PERÍODE: 2019 – 2021

IMPORT CONCEDIT: 27.588,00 €

IP RESPONSABLE: **Dr. Luis Herranz**

NOM: *MIRANDA - Massive and Interactive Recognition of our Ancestors' Natural and Digital Archives*

REFERÈNCIA: RTI2018-095645-B-C21

ENTITAT FINANÇADORA: Ministerio de Ciencia e Innovación y Universidades

PERÍODE: 2019 – 2021

IMPORT CONCEDIT: 126.566,00 €

IP RESPONSABLE: **Dr. Josep Lladós / Dra. Alicia Fornés**

NOM: *Up4Health - Uncertainty Prediction in Multi-View Cyber-Physical Systems for Personalized Health*

REFERÈNCIA: RTI2018-095209-B-C21

ENTITAT FINANÇADORA: Ministerio de Ciencia e Innovación y Universidades

PERÍODE: 2019 – 2021

IMPORT CONCEDIT: 126.566,00 €

IP RESPONSABLE: **Dra. Debora Gil / Dra. Aura Hernández**

NOM: *PERIPHAS - Cuando una imagen vale más que 140 caracteres: anotación automática de imágenes a partir del contenido visual compartido en redes sociales*

REFERÈNCIA: TIN2015-65464-R

ENTITAT FINANÇADORA: Ministerio de Economía y Competitividad

PERÍODE: 2016-2020

IMPORT CONCEDIT: 144.466,00 €

IP RESPONSABLE: **Dr. Jordi González / Dr. Xavier Roca**

NOM: *DANA - Developing Autonomous Navigation Agents*
REFERÈNCIA: TIN2017-88709-R
ENTITAT FINANÇADORA: Ministerio de Economía y Competitividad
PERÍODE: 2018-2021
IMPORT CONCEDIT: 117.370,00 €
IP RESPONSABLE: **Dr. Antonio M. López / Dr. José Antonio Iglesias**

NOM: *ViBra - Deep Networks in the Visual Brain: from Measurements to Algorithms*
REFERÈNCIA: DPI2017-89867-C2-1-R
ENTITAT FINANÇADORA: Ministerio de Economía y Competitividad
PERÍODE: 2018-2021
IMPORT CONCEDIT: 102.850,00 €
IP RESPONSABLE: **Dr. Xavier Otazu / Dr. C. Alejandro Párraga**

NOM: *READS - Reading the Scene: Integrating reading systems in holistic scene*
REFERÈNCIA: TIN2017-89779-P
ENTITAT FINANÇADORA: Ministerio de Ciencia e Innovación y Universidades
PERÍODE: 2018-2020
IMPORT CONCEDIT: 81.554,00 €
IP RESPONSABLE: **Dr. Dimosthenis Karatzas / Dr. Ernest Valveny**

NOM: *BOSSS - Building Optimized Spectro-Selective Systems: Generation of multispectral vision systems optimized through machine learning*
REFERÈNCIA: TIN2017-89723-P
ENTITAT FINANÇADORA: Ministerio de Ciencia, Innovación y Universidades
PERÍODE: 2018-2021
IMPORT CONCEDIT: 53.119,00 €
IP RESPONSABLE: **Dr. Felipe Lumbreras / Dr. Daniel Ponsa**

NOM: *SENIOR Mejorar la aSistencia y EnvejecimieNto mediante una casa Inteligente con sensOres infraRojos*
REFERÈNCIA: RTC-2017-6618-1
ENTITAT FINANÇADORA: Ministerio de Ciencia, Innovación y Universidades
PERÍODE: 2018-2020
IMPORT CONCEDIT CVC: 223.964,72 €
IP RESPONSABLE: **Dr. Sergio Escalera**

NOM: *ACTIV 4.0. Transformación hacia la gestión digital de activos/procesos en instalaciones proveedoras de servicio*
REFERÈNCIA: COMRDI16-1-0054
ENTITAT FINANÇADORA: ACCIÓ
PERÍODE: 2018-2020
IMPORT CONCEDIT: 89.667,71 €
IP RESPONSABLE: **Coen Antens**

NOM: *ViVIM - Computer Vision for Immersive Multi-platform Video*
REFERÈNCIA: COMRDI18-1-0008-03
ENTITAT FINANÇADORA: ACCIÓ
PERÍODE: 2020-2023
IMPORT CONCEDIT: 123.204,71 €
IP RESPONSABLE: **Coen Antens**

NOM: *ZINKCAT-MKT. Model of Innovation in Design Processes*

REFERÈNCIA: COMRDI18-1-0014-02

ENTITAT FINANÇADORA: ACCIÓ

PERÍODE: 2020-2021

IMPORT CONCEDIT: 56.113,54 €

IP RESPONSABLE: **Dr. Fernando Vilariño**

NOM: *LoomingFactory*

REFERÈNCIA: 001-P-001643

ENTITAT FINANÇADORA: Secretaria d'Universitats i Recerca, Generalitat de Catalunya

PERÍODE: 2019-2021

IMPORT CONCEDIT: 36.443,97 €

IP RESPONSABLE: **Coen Antens**

NOM: *FEMIoT*

REFERÈNCIA: 001-P-001662

ENTITAT FINANÇADORA: Secretaria d'Universitats i Recerca, Generalitat de Catalunya

PERÍODE: 2020-2021

IMPORT CONCEDIT: 142.756,90 €

IP RESPONSABLE: **Dr. Sergio Escalera**

Projectes àmbit Europeu:

NOM: *Topological radiomics: Early detection of genetic abnormalities in cancer treatment evolution (TOPiomics)*

REFERÈNCIA: 777222

ENTITAT FINANÇADORA: ATTRACT EU

PERÍODE: 2019-2020

IMPORT CONCEDIT CVC: 60.000,00 € (Import total concedit: 100.000,00 €)

IP RESPONSABLE: **Dra. Debora Gil**

NOM: *3D kinematics for remote patient monitoring (RPM3D)*

REFERÈNCIA: 777222

ENTITAT FINANÇADORA: ATTRACT EU

PERÍODE: 2019-2020

IMPORT CONCEDIT CVC: 40.625,00 € (Import total projecte: 100.000,00 €)

IP RESPONSABLE: **Dra. Alicia Fornés**

NOM: *SCORED: Super-Resolution Confocal Microscopy Enhanced by Deep-Learning*

REFERÈNCIA: 777222

ENTITAT FINANÇADORA: ATTRACT EU

PERÍODE: 2019-2020

IMPORT CONCEDIT CVC: 45.625,00 € (Import total projecte: 100.000,00 €)

IP RESPONSABLE CVC: **Dr. Felipe Lumbreras**

NOM: *CybSPEED: Cyber-Physical Systems for PEdagogical Rehabilitation in Special Education*

REFERÈNCIA: 777720

ENTITAT FINANÇADORA: European Commission

PERÍODE: 2017-2021

IMPORT CONCEDIT CVC: 18.000,00 € (Import total projecte: 1.296.000,00 €)

IP RESPONSABLE CVC: **Dr. Bogdan Raducanu**

NOM: *VALIDITHI: Validation of an Innovative Dietary Intake Tool for Healthcare Implementation*
REFERÈNCIA: 19178
ENTITAT FINANÇADORA: EIT Health
PERÍODE: 2019-2020
IMPORT CONCEDIT CVC: 139.547,00 € (Import total projecte: 2.274.940,00 €)
IP RESPONSABLE CVC: **Dra. Petia Radeva**

NOM: *Time Machine*
REFERÈNCIA: 820323
ENTITAT FINANÇADORA: European Commission
PERÍODE: 2019-2020
IMPORT CONCEDIT CVC: 14.016,00 € (Import total projecte: 997.930,00 €)
IP RESPONSABLE CVC: **Dr. Josep Lladós / Dra. Alicia Fornés**

NOM: *E-Pilots: Evolution of cockpit operations Levering on cOgnitive compuTing Services*
REFERÈNCIA: 831993
ENTITAT FINANÇADORA: European Commission
PERÍODE: 2018-2021
IMPORT CONCEDIT CVC: 96.500,00 € (Import total projecte: 796.056,25€)
IP RESPONSABLE CVC: **Dra. Debora Gil**

NOM: *DECRYPT: Decryption of historical manuscripts*
REFERÈNCIA: 19710521
ENTITAT FINANÇADORA: Swedish Research Council
PERÍODE: 2019-2024
IMPORT CONCEDIT CVC: 250.000,00 € (Import total projecte: 2.738.854,00 €)
IP RESPONSABLE CVC: **Dr. Alicia Fornés**

Participació en projectes externs:

NOM: *Red Temática en Vehículos Inteligentes (Retevi)*
REFERÈNCIA: TRA2017-90620-REDT
ENTITAT FINANÇADORA: Ministerio de Ciencia, Innovación y Universidades
PERÍODE: 01/07/2018-30/06/2020
IMPORT CONCEDIT: 9.000 €
IP RESPONSABLE: Dr. Felipe Jiménez (UPM)
MEMBRE EQUIP INVESTIGADOR: **Dr. Antonio M. López**

NOM: *Validación clínica del primer sistema in-vivo de predicción histológica automática de los pólipos de colon integrando la visión del endoscopista con la visión por computador (HISINVIA)*
REFERÈNCIA: PI17/00894
ENTITAT FINANÇADORA: Instituto de Salud Carlos III
PERÍODE: 01/01/2018-31/12/2020
IMPORT CONCEDIT: 117.370 €
IP RESPONSABLE: Dr. Maria Gloria Fernández Esparrach (IDIBAPS)
MEMBRES EQUIP INVESTIGADOR: **Dr. Jorge Bernal / Dr. F. Javier Sánchez**

NOM: *Red temática Iberoamericana sobre aplicaciones TICS para ciudades inteligentes (TICs4CI)*

REFERÈNCIA: P517RT0176

ENTITAT FINANÇADORA: CYTED – Ciencia y Tecnología para el Desarrollo

PERÍODE: 01/01/2018-31/12/2021

IMPORT CONCEDIT: 117.370 €

IP RESPONSABLE: **Dr. Angel Sappa**

MEMBRES EQUIP INVESTIGADOR: **Dr. Bogdan Raducanu (CVC IP), Dr. Joost van de Weijer, Dr. Luis Herranz, Dr. Alejandro Parraga**

3. Ajuts de Recursos Humans

3.1 Concedits el 2020

Ajuts Postdoctorals:

NOM: *Ramón y Cajal*

REFERÈNCIA: RYC2019-027020-I

ENTITAT FINANÇADORA: Ministerio de Ciencia, Innovación y Universidades

PERÍODE: 01/12/2020 – 30/11/2025

BENEFICIARI: **Dr. Luis Herranz**

NOM: *ARCANE: Adversarial Cases for Autonomous Vehicles*

REFERÈNCIA: TECSPR19-1-0084

ENTITAT FINANÇADORA: ACCIÓ

PERÍODE: 25/05/2021 – 24/05/2023

BENEFICIARI: **Dr. Maciej Wielgosz**

Ajuts Predoctorals:

NOM: *Intelligent reading systems for text in video*, Doctorat Industrial amb AllRead Machine Learning Technologies i la UAB

REFERÈNCIA: 2020 DI 058

ENTITAT FINANÇADORA: AGAUR

PERÍODE: 07/01/2021 – 06/01/2024

BENEFICIARI: **Sergi Garcia**

SUPERVISOR: **Dr. Dimosthenis Karatzas**

NOM: *Anomaly Detection in the Media: discovering complex behaviour patterns in multimedia data*, Doctorat Industrial amb Visual Tagging i la UAB

REFERÈNCIA: 2020 DI 062

ENTITAT FINANÇADORA: AGAUR

PERÍODE: 01/12/2020 – 30/11/2023

BENEFICIARI: **Diego Velázquez**

SUPERVISOR: **Dr. Jordi González**

3.2 En execució durant 2020

Ajuts Postdoctorals:

NOM: *P-Sphere Program*

ENTITAT FINANÇADORA: UAB- Programa Cofund

PERÍODE: 15/03/2017 – 30/11/2020

HOLDER: **Dr. Luis Herranz**

NOM: *DeepPhotoArchive: Deep Learning tech to enrich photo archives access*

REFERÈNCIA: TECSPR17-1-0026

ENTITAT FINANÇADORA: ACCIÓ

PERÍODE: 08/02/2018 – 07/02/2021

BENEFICIARI: **Dr. Lluís Gómez**

NOM: *iOr_LUNC: Intel Operating Room for in vivo lung cancer diagnosis*
REFERÈNCIA: TECSPR17-1-0045
ENTITAT FINANÇADORA: ACCIÓ
PERÍODE: 17/09/2018 – 16/12/2020
BENEFICIARI: **Dr. Carles Sánchez**

Ajuts Predoctorals:

NOM: *FI - Ajuts per a la contractació de personal investigador novell*
REFERÈNCIA: 2019FI_B2 00189
ENTITAT FINANÇADORA: AGAUR
PERÍODE: 01/05/2017 – 07/08/2020
BENEFICIARI: **Marc Masana**
SUPERVISOR: **Dr. Joost van de Weijer**

NOM: *FI - Ajuts per a la contractació de personal investigador novell*
REFERÈNCIA: 2019FI_B1 00196
ENTITAT FINANÇADORA: AGAUR
PERÍODE: 01/04/2018 – 08/07/2021
BENEFICIARI: **Arnau Baró**
SUPERVISOR: **Dra. Alicia Fornés**

NOM: *FPI - Ayudas para contratos predoctorales para la formación de doctores*
REFERÈNCIA: BES-2015-073722
ENTITAT FINANÇADORA: Ministerio de Economía y Competitividad
PERÍODE: 08/03/2016 – 02/10/2020
BENEFICIARI: **Hassan Ahmed Sial**
SUPERVISORS: **Dra. Maria Vanrell / Dr. Robert Benavente**

NOM: *FPI - Ayudas para contratos predoctorales para la formación de doctores*
REFERÈNCIA: BES-2016-078042
ENTITAT FINANÇADORA: Ministerio de Economía y Competitividad
PERÍODE: 05/06/2017 – 04/06/2021
BENEFICIARI: **Esmitt Ramírez**
SUPERVISORA: **Dra. Debora Gil**

NOM: *FPI - Ayudas para contratos predoctorales para la formación de doctores*
REFERÈNCIA: PRE2018-083417
ENTITAT FINANÇADORA: Ministerio de Ciencia, Innovación y Universidades
PERÍODE: 01/09/2019 – 31/08/2023
BENEFICIARI: **Diego Porres**
SUPERVISOR: **Dr. Antonio López**

NOM: *FPU – Ayudas para la formación de profesorado universitario*
REFERÈNCIA: FPU15/06264
ENTITAT FINANÇADORA: Ministerio de Educación, Cultura y Deporte - MECD
PERÍODE: 01/10/2016 – 30/09/2020
BENEFICIARI: **Pau Riba**
SUPERVISORS: **Dr. Josep Lladós / Dra. Alicia Fornés**

NOM: *FPU – Ayudas para la formación de profesorado universitario*
REFERÈNCIA: FPU16/04131
ENTITAT FINANÇADORA: Ministerio de Educación, Cultura y Deporte - MECD
PERÍODE: 30/10/2017 – 29/10/2021
BENEFICIARI: José Luis Gómez Zurita
SUPERVISOR: Dr. Antonio M. López

NOM: *Visual Search for Fashion Products*, Doctorat Industrial amb Wide Eyes i la UAB
REFERÈNCIA: 2016 DI 039
ENTITAT FINANÇADORA: AGAUR
PERÍODE: 06/03/2017 – 05/09/2020
BENEFICIARI: Vacit Oguz Yacizi
SUPERVISOR: Dr. Joost van de Weijer

NOM: *Exploiting the Interplay between Visual and Textual Image Content for Scene Interpretation*, Doctorat Industrial amb Fundació Eurecat i la UAB
REFERÈNCIA: 2016 DI 084
ENTITAT FINANÇADORA: AGAUR
PERÍODE: 03/03/2017 – 02/09/2020
BENEFICIARI: Raul Álamo Gómez
SUPERVISOR: Dr. Dimosthenis Karatzas

NOM: *Making historical archives searchable. Multiwriter word recognition and spotting using transfer learning models*, Doctorat Industrial amb Qidenus i la UAB
REFERÈNCIA: 2016 DI 095
ENTITAT FINANÇADORA: AGAUR
PERÍODE: 18/04/2017 – 17/10/2020
BENEFICIARI: Manuel Carbonell
SUPERVISORS: Dra. Alicia Fornés / Dr. Josep Lladós

NOM: *Making historical archives searchable. Semantic annotation of handwritten word images*, Doctorat Industrial amb Qidenus i la UAB
REFERÈNCIA: 2016 DI 087
ENTITAT FINANÇADORA: AGAUR
PERÍODE: 18/04/2017 – 17/10/2020
BENEFICIARI: Lei Kang
SUPERVISORS: Dr. Marçal Rusiñol / Dra. Alicia Fornés

NOM: *Object detection in multimodal data*, Doctorat Industrial amb Ficosa i la UAB
REFERÈNCIA: 2017 DI 096
ENTITAT FINANÇADORA: AGAUR
PERÍODE: 08/02/2018 – 31/10/2020
BENEFICIÀRIA: Yainuvis Socarras
SUPERVISORA: Dra. Aura Hernández

NOM: *Sistemes recomanadors per a la realització de càmeres en directe*, Doctorat Industrial amb LANG i la UAB

REFERÈNCIA: 2018 DI 106

ENTITAT FINANÇADORA: AGAUR

PERÍODE: 08/02/2018 – 07/04/2022

BENEFICIARI: **Arturo Fuentes**

SUPERVISOR: **Dr. Jorge Bernal**

NOM: *Development of AI drivers for level 4-5 autonomous driving*, Doctorat Industrial amb SEAT i la UAB

REFERÈNCIA: 2018 DI 104

ENTITAT FINANÇADORA: AGAUR

PERÍODE: 26/06/2019 – 30/06/2020

BENEFICIARI: **Ferran Carrasquer**

SUPERVISOR: **Dr. Antonio López**

4. Tesis Doctorals

Transferring and Learning Representations for Image Generation and Translation, **Yaxing Wang**
Supervisors: **Dr. Joost van de Weijer**, **Dr. Luis Herranz**, Dr. Abel González (Wrnch.ai)
Data: 17/02/2020

Model-based Segmentation of Images, **Margarita Torres**
Supervisora: **Dra. Petia Radeva**
Data: 22/07/2020

Distilling Structure from Imagery: Graph-based Models for the Interpretation of Document Images, **Pau Riba**
Supervisors: **Dr. Josep Lladós**, **Dra. Alicia Fornés**
Data: 07/09/2020

Exploiting the Interplay between Visual and Textual Data for Scene Interpretation, **Raúl Gómez**
Supervisors: **Dr. Dimosthenis Karatzas**, **Dr. Lluís Gómez**, Dr. Jaume Gibert (Fundació Eurecat)
Data: 8/10/ 2020

Mapping between Images and Conceptual Spaces: Sketch-based Image Retrieval, **Sounak Dey**
Supervisors: **Dr. Josep Lladós**, Dr. Umapada Pal (Indian Statistical Institute)
Data: 23/11/2020

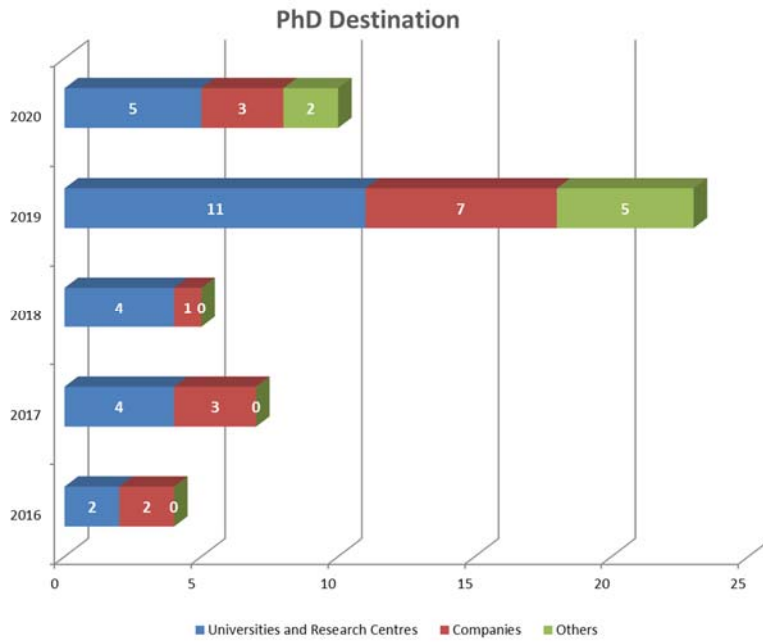
Texture analysis for robust reading systems, **Angelos Nicolaou**
Supervisor: **Dr. Dimosthenis Karatzas**
Data: 4/12/ 2020

Lifelong Learning of Neural Networks: Detecting Novelty and Adapting to New Domains without Forgetting, **Marc Masana**
Supervisors: **Dr. Joost van de Weijer**, Dr. Andrew D. Bagdanov (Università degli Studi di Firenze)
Data: 11/12/2020

Robust Handwritten Text Recognition in Scarce Labeling Scenarios: Disentanglement, Adaptation and Generation, **Lei Kang**
Supervisors: **Dra. Alicia Fornés**, Dr. Marçal Rossinyol (AllRead MLT), Dr. Mauricio Villegas (Omni:us)
Data: 21/12/2020

Neural Information Extraction from Semi-structured Documents, **Manuel Carbonell**
Supervisors: **Dra. Alicia Fornés**, **Dr. Josep Lladós**, Dr. Mauricio Villegas (Omni:us)
Data: 22/12/2020

Accuracy improvement of word sign language recognition using deep learning, Raziieh Rastgoo
Supervisors: Dr. Kiani (Semnan University), **Dr. Sergio Escalera**
Lloc: Semnan University
Data: 2020



5. Tesis de Màster

Interfaces for visualisation and interaction of multimodal data embeddings, Jacopo Bianchini, Master in Ingegneria Informatica (Università degli Studi di Firenze)
Supervisors: **Dr. Dimosthenis Karatzas**, Dr. Andrew D. Bagdanov
Data: Febrer 2020

Automatic reseed area estimation from aerial images, Agustina Pose, Master in Computer Vision (UAB)
Supervisors: **Dr. Felipe Lumbreras**, **Dr. Daniel Ponsa**
Data: 22/09/2020

Conditional GAN for Synthetic Text Dataset Generation, Roger Casals Vilardell, Master in Computer Vision (UAB)
Supervisor: **Dr. Dimosthenis Karatzas**
Data: 22/09/2020

Domain Adaptation for object detection and semantic segmentation in autonomous driving, Sergio Casas Pastor, Master in Computer Vision (UAB)
Supervisor: **Dr. Antonio M. López**
Data: 22/09/2020

Deep Single-Image Relighting Based on Intrinsic Decomposition, Yixiong Yang, Master in Computer Vision (UAB)
Supervisors: **Dra. Maria Vanrell**, **Hassan A. Sial**
Data: 22/09/2020

Solving a classification task by spiking neural networks, Keyao Li, Master in Computer Vision (UAB)
Supervisor: **Dr. Xavier Otazu**
Data: 22/09/2020

Unsupervised Shakespeare Style Captioning, Stanislaw Kajetan Morawski, Master in Computer Vision (UAB)
Supervisors: **Dr. Dimosthenis Karatzas**, **Ali Biten**
Data: 22/09/2020

Instance segmentation annotation on construction site images, Maria Vila Abad, Master in Computer Vision (UAB)
Supervisor: **Dr. Luis Herranz**
Data: 22/09/2020

A deep program learning model for code induction from screenshot images of GUIs, Sara Cela, Master in Computer Vision (UAB)
Supervisors: **Dr. Josep Lladós**, **Pau Riba**
Data: 22/09/2020

Use of Two-stage Object Detection Architectures for Real-time Polyp Detection and Classification in Colonoscopy Sequences, Yael Tudela, Master in Computer Vision (UAB)
Supervisor: **Dr. Jorge Bernal**
Data: 22/09/2020

SepNet: Managing dataset bias to reduce object hallucination in captioning, Marc Orós, Master in Computer Vision (UAB)

Supervisor: **Dr. Dimosthenis Karatzas**

Data: 22/09/2020

Automatic waste recycling using hyperspectral cameras and neural networks, Richard Segovia, Master in Computer Vision (UAB)

Supervisor: **Dr. Ramon Baldrich**

Data: 22/09/2020

Logo Detection with No Priors, Diego Alejandro Velázquez, Master in Computer Vision (UAB)

Supervisors: **Dr. Jordi González**

Data: 22/09/2020

6. Estades de Recerca

6.1 Estades de Recerca *Outgoing*

Postdoctoral:

- **Dr. Jordi González**, Graduate School of Engineering, University of Kobe (Japó). Del 23/02/2020 al 16/03/2020

Estudiants de Doctorat:

- **Andrés Mafla**, Naver Labs (França). Supervisor: Dra. Diane Larlus. Del 30/01/2020 al 27/02/2020
- **Raúl Gómez**, University of Trento (Itàlia). Supervisor: Prof. Nicu Sebe. Del 19/11/2020 al 20/02/2020

6.2 Estades de Recerca *Incoming i Internships*

Postdoctoral:

- Dr. Angel Sánchez Calle, Universidad Rey Juan Carlos, Madrid. Col·laboració amb el **Dr. Bogdan Raducanu** (Grup LAMP). Febrer 2020

Estudiants de Doctorat:

- Riccardo Del Chiaro, Università degli Studi di Firenze (Itàlia). Supervisor: **Dr. Joost van de Weijer** (Grup LAMP). Del 04/02/2020 al 04/08/2020
- Sagnik Das, Stony Brook University (Estats Units). Supervisora: **Dra. Maria Vanrell** (Grup CiC). Febrer 2020
- Arka U. Dey, Indian Institute of Technology Jodhpur (Índia). Supervisor: **Dr. Ernest Valveny** (Grup DAG). Des de febrer de 2020 a febrer de 2021
- Eddarda Ben Loussaief, University of Sousse (Tunísia). Supervisor: **Dr. Joost van de Weijer** (Grup LAMP). Del 02/03/2020 al 31/03/2020

A més, durant l'any acadèmic, s'han aollit, per períodes d'entre 1 a 6 mesos, a joves estudiants de màster, de grau i també estudiants de batxillerat per desenvolupar els seus projectes o fer estades en algun dels grups de recerca del CVC. D'aquestes persones, 8 eren de centres o universitats estrangeres, com Índia i França.

En alguns casos, aquestes estades han estat la entrada al món de la recerca.

Estudiants de Màster:

- Wafa Bouzouita, Paris-Saclay University (França). Supervisor: **Dr. Sergio Escalera, Dr. Meysam Madadi** (Grup HuPBA). Del 01/05/2020 al 31/08/2020
- Arturo del Cerro, Pràctiques empresa, Master Modelling for Science and Engineering (UAB), Supervisor: **Dr. Xavier Otazu** (Grup NeuroBit). Tardor 2020
- Juan Manuel Vicente, Pràctiques empresa, Master Modelling for Science and Engineering (UAB), Supervisor: **Dr. Xavier Otazu** (Grup NeuroBit). Tardor 2020

Estudiants de Grau:

- Siddhant Bhambri, Bharati Vidyapeeth's College of Engineering, New Delhi (Índia). Supervisor: **Dr. Bogdan Raducanu** (Grup LAMP). Del 08/07/2019 al 30/06/2020
- Sudeep Katakol, BITS Pilani, Goa (Índia). Supervisor: **Dr. Luis Herranz** (Grup LAMP). De setembre 2019 a març 2020
- Abhishek Tandon, Birla Institute of Technology and Science, Pilani (Índia). Supervisor: **Dr. Antonio López** (Grup ADAS). D'octubre 2019 a desembre 2020
- Alan Roldán, TFG Enginyeria Informàtica, UAB. Supervisora: **Dra. Aura Hernández** (Grup IAM). Del 22/10/2019 a 17/02/2020
- Arvind Sharma Krishnan, Bachelor Final Project (Computer Science), Sastra /University (Índia). Supervisor: **Dr. Daniel Ponsa** (Grup MSIAU). Del 10/02/2020 al 14/07/2020
- Rohit Kumar, Bachelor Final Project (Computer Science), Sastra University (Índia). Supervisor: **Dr. Daniel Ponsa** (Grup MSIAU). Del 10/02/2020 al 14/07/2020
- Monisha Ramalingam, Bachelor Final Project (Computer Science), Sastra University (Índia). Supervisor: **Dr. Ernest Valveny** (Grup DAG). Del 06/02/2020 al 30/06/2020
- Daniel Arco, TFG Bioinformàtica, Universitat Pompeu Fabra. Supervisor: **Dr. Alejandro Parraga** (Grup NeuroBit). De març a juny 2020
- Albert Suso, pràctiques Grau Enginyeria de Dades, UAB. Supervisors: **Dr. Josep Lladós, Dr. Pau Riba** (Grup DAG). De setembre 2020 a juny 2021
- Pau Torras, TFG Enginyeria Informàtica, UAB. Supervisors: **Dra. Alicia Fornés** (Grup DAG). De setembre 2020 a juny 2021
- Adrià Molina, pràctiques Grau Enginyeria de Dades, UAB. Supervisors: **Dr. Josep Lladós, Dr. Pau Riba** (Grup DAG). D'octubre 2020 a juny 2021
- Aditya Ketkar, Bachelor (Computer Science); BITS Pilani (Índia). Supervisor: **Dr. Luis Herranz** (Grup LAMP). From January 15 to May 30, 2020.

Programa Internship CVC:

Amb l'objectiu de promoure la ciència i la innovació i fomentar la recerca en joves estudiants amb talent, el Centre de Visió per Computador impulsa el Programa d'Internships. Aquest programa està adreçat a estudiants d'arreu del món, principalment durant l'últim any dels seus estudis de grau.

El CVC ofereix a aquest alumnat un entorn de recerca, que normalment constitueix la seva primera incursió a reptes de recerca, durant períodes de 3 mesos.

Durant el 2020, el CVC ha acollit estudiants de les convocatòries de 2019 i 2020:

- Daniel Arco. Supervisor: **Dr. Alejandro Párraga** (Grup NeuroBit). De novembre 2019 a febrer 2020
- Ruben Ballester Bautista. Supervisor: **Dr. Sergio Escalera** (Grup HupBA). De novembre 2020 a febrer 2021

- Jonatan Poveda. Supervisor: **Dr. Ernest Valveny** (Grup DAG). De novembre 2020 a febrer 2021
- Mariona Bonàs. Supervisor: **Dr. Xavier Otazu** (Grup NeuroBit). De novembre 2020 a juliol 2021 (a temps parcial)
- Marc Graells: **Dr. Alejandro Párraga** (Grup NeuroBit). De juny 2020 a agost 2021

7. *Invited Talks del personal CVC*

En congressos i workshops científics:

Colour Perception in Computer Vision: Psychophysics and Biologically-Inspired Solutions for Image Understanding, Colour Vision Meeting and Palmer Lecture 2020

Ponent: **Dr. Alejandro Parraga**

Lloc: Londres

Data: 08/01/2020

<https://www.colour.org.uk/colour-vision-meeting-and-palmer-lecture-2020/>

Scene Text VQA: Modelling the interplay between visual and textual information, Visual Question Answering and Dialog Workshop (VQA - CVPRW 2020)

Ponent: **Dr. Dimosthenis Karatzas**

Data: 14/06/2020

<https://visualqa.org/workshop.html>

Reading of Population Records: A Digital Twin of the Past Societies, Text and Documents in the Deep Learning Era Workshop (CVPRW 2020)

Ponent: **Dr. Josep Lladós**

Data: 15/06/2020

<https://cvpr2020text.wordpress.com/>

Uncertainty Modeling within an End-to-end Framework for Food Image Analysis, 1st International Conference on Deep Learning Theory and Applications (DeLTA 2020)

Ponent: **Dra. Petia Radeva**

Lloc: Paris (França)

Data: 8-10/07/2020

<http://www.delta.scitevents.org/PreviousInvitedSpeakers.aspx>

Webinar Educar para Adoptar. 3D, IA y Machine Learning en salud, EIT Health Spain

Ponent: **Dra. Petia Radeva**

Data: 21/07/2020

<https://vimeo.com/440596776>

Minimizing Human Labeling Effort in On-board Vision-based Perception, Workshop on Perception for Autonomous Driving, conjuntament amb ECCV 2020

Ponent: **Dr. Antonio M. López**

Data: 23/08/2020

<https://sites.google.com/view/pad2020/speakers-and-talks>

How Deep Learning and Uncertainty Modeling can Help People get Aware how they Eat, IV Workshop on Data and Knowledge Engineering, conjuntament amb XI Conferencia Internacional de Computación e Informática del Norte de Chile (INFONOR 2020)

Ponent: **Dra. Petia Radeva**

Lloc: Copiapó (Xile)

Data: 04/09/2020

<http://www.infonor2020.uda.cl/index.html#home>

Recognition of Handwritten Textual and Graphical Documents in the Deep Learning Era, International Conference on Frontiers of Handwriting Recognition (ICFHR)

Ponent: **Dr. Alicia Fornés**

Lloc: Dortmund (Alemanya)

Data: 08/09/2020

<http://icfhr2020.tu-dortmund.de/program/>

The Deep Learning Era: Data is the Driver in Autonomous Driving, Workshop on Physical Agents, 2020

Ponent: **Dr. Antonio M. López**

Data: 19-20/11/2021

<http://waf2020.uah.es/#home>

Color Encoding in Convolutional Neural Networks, Color and Image Webinars CIC online

Ponent: **Dr. Maria Vanrell**

Data: 29/10/2020

https://www.imaging.org/site/IST/Conferences/Color_and_Imaging/CIC2020/IST/Conferences/CIC/CIC2020/CIC_Home.aspx?hkey=ff455d92-345d-4ba1-8843-c4bedd9dcead

Read and reason: the role of text in semantic image interpretation, 6th URV Doctoral Workshop in Computer Science and Mathematics

Ponent: **Dr. Ernest Valveny**

Lloc: Universitat Rovira i Virgili

Data: 19-20/11/ 2020

<https://deim.urv.cat/~dcsml/>

En cursos i tutorials:

Exploring Hate Speech Detection in Multimodal Publications, Bnc.ai Winter 2020

Ponent: **Dr. Lluís Gómez**

Lloc: Movistar Centre, Barcelona

Data: 24/01/2020

<https://www.meetup.com/es-ES/Bcn-ai/events/268141523/>

Xarxes Neuronals (3h), Mòdul "Mètodes d'Obtenció d'Informació Geogràfica", Master en Teledetecció i Sistemes d'Informació Geogràfica (UAB)

Ponent: **Dr. Robert Benavente**

Data: 20/02/2020

http://www.creaf.uab.es/master/intranet/MaterialsProfessors/MetodesEstadistics/TemariMetod esEstadistics_2019-20_v5.pdf

Food Image Analysis by Deep Learning, part del 5 days FDP programme on "Recent Advances of Machine Learning and its Applications"

Ponent: **Dr. Petia Radeva**

Lloc: Amity University Kolkata (Índia)

Data: 24/06/2020

Local Features: From SIFT to Differentiable Methods, CVPR 2020 Tutorial

Ponent: Vassileios Balntas, Dmytro Mishkin, **Edgar Riba**

Data: 15/06/2020

<https://local-features-tutorial.github.io/>

Food Recognition. Uncertainty modeling for food analysis within end-to-end framework, AI-DLDA SUMMER SCHOOL – 3rd edition

Ponent: **Dra. Petia Radeva**

Data: 29/06-03/07/2020

<https://www.ip4fvg.it/summer-school/past-years/>

Deep learning advances on human pose and shape estimation, Fourth IPM Advanced School on Computing: Artificial Intelligence

Ponent: **Dr. Meysam Madadi**

Lloc: Institute for Research in Fundamental Sciences (IPM), Iran

Data: 22-26/08/2020

Visión por computador para lectura inteligente de manuscritos: el caso de la construcción de redes sociales históricas, Patrimonio Cultural Digital: Retos y oportunidades

Ponent: **Dr. Josep Lladós**

Lloc: Santiago de Compostela

Data: 16/09/2020.

<http://wapps002.uimp.es/uxxiconsultas/ficheros/1/56105patrimonio.digital.64Q8.pdf>

Challenges on Perception for Autonomous Driving, curs AI4ALL

Ponent: **Dr. Antonio M. López**

Data: 17/11/2020

<https://www.ai4all.cat/>

Computer Vision and Deep Learning, curs AI4ALL

Ponent: **Dr. Jordi González**

Data: 24/11/2020

<https://www.ai4all.cat/>

Lectures on “Introduction to Python”, “Object Oriented Programming in Python” and “Python Data Structures for Deep Learning”, Introductory Course on Artificial Intelligence and Machine Learning, Arab Academy of Sciences

Ponent: **Dr. Robert Benavente**

Data: 29-30/11/2020, 02/12/2020 i 09/12/2020

Living Labs as Social Technologies for the Smart Cities and Communities, curs AI4ALL

Ponent: **Dr. Fernando Vilariño**

Data: 10/12/2020

<https://www.ai4all.cat/>

En altres actes i institucions:

El TDAH, ¿un trastorno neurobiológico o una manifestación de la brecha digital?, Espacio Psicoanalítico
Barcelona

Ponent: **Dr. Sergio Escalera**

Data: 29/01/2020

<https://www.epbcn.com/difusion/otras-actividades/2020/01/29/2000/>

Artificial Intelligence for Autonomous Driving, Catalonia.AI, Barcelona Tech Spirit (taula rodona)

Participant: **Dr. Antonio López**

Data: 25/02/2020

Differentiable Computer Vision: an introduction to Kornia, Charlas online de las Comunidades GDC

Ponent: **Edgar Riba**

Data: 21/04/2020

<https://youtu.be/zltoYKu4ct0>

The Social Impact of AI in a multi-stakeholder user-centric innovation framework, UNINPUBLICA
International Workshop

Ponent: **Dr. Fernando Vilariño**

Data: 21-22/05/2020

Kornia, Center on Mathematical studies at ENS Paris-Saclay

Ponent: **Edgar Riba**

Data: 15/05/2020

GANs in the Visual World, Tech Community Day 2020

Ponent: **Diego Porres**

Data: 13/06/2020

<https://techcommunityday.com/>

El projecte XARXES: Tecnologia i innovació ciutadana en la construcció de xarxes socials històriques, Intensiu Digital 2020

Ponent: **Dra. Alicia Fornés**, Dr. Joana Maria Pujades Mora

Lloc: Universitat de Barcelona

Data: 16/06/2020

<https://www.ub.edu/portal/web/informacio-mitjans-audiovisuals/intensiu-digital>

Tècniques de Visió per Computador per reconèixer documents històrics, TrobaHDes of Associació d'Humanitats Digitals Catalanes

Ponent: **Dra. Alicia Fornés**

Lloc: Barcelona

Data: 23/07/2020

<http://www.catedramariustorres.udl.cat/hudicat/index.php?op=ac21>

Activismo y Patrimonio: ¿Cómo involucrar a la ciudadanía en la preservación del patrimonio contemporáneo / futuro?, Sónar+D

Ponent: **Dra. Alicia Fornés**

Lloc: L'Hospitalet de Llobregat

Data: 18-19/09/2020

Bookworm continual learning: beyond zero-shot learning and continual learning, ContinualAI reading group

Speaker: **Dr. Luis Herranz**

Data: 7/10/2020.

Debat "Smart cities and digital citizenship", Dialogue series "Artificial Intelligence, ethics and citizen participation"

Participant: **Dr. Josep Lladós**

Lloc: Palau Macaya, Barcelona

Data: 11/11/2020

<http://iabcn.cvc.uab.es/team/>

"Videovigilancia y Seguridad: el ciudadano ante sus derechos digitales", Dialogue series "Artificial Intelligence, ethics and citizen participation"

Ponent: **Dr. Sergio Escalera**

Lloc: Palau Macaya, Barcelona

Data: 9/12/2020

<http://iabcn.cvc.uab.es/videovigilancia-seguretat/>

Debat "Videovigilancia y Seguridad: la ciudadanía ante sus derechos digitales", Dialogue series "Artificial Intelligence, ethics and citizen participation"

Participant: **Dr. Sergio Escalera**

Lloc: Palau Macaya, Barcelona

Data: 15/12/2020

<http://iabcn.cvc.uab.es/videovigilancia-seguretat/>

8. Publicacions

8.1 Llibres (11)

1. Giovanni Maria Farinella, Petia Radeva, and Jose Braz. *Proceedings of the 15th International Joint Conference on Computer Vision; Imaging and Computer Graphics Theory and Applications*. Vol. 4, 2020.
2. Giovanni Maria Farinella, Petia Radeva, and Jose Braz. *Proceedings of the 15th International Joint Conference on Computer Vision; Imaging and Computer Graphics Theory and Applications*. Vol. 5, 2020.
3. Jun Wan, Guodong Guo, Sergio Escalera, Hugo Jair Escalante, and Stan Z. Li. *Multi-modal Face Presentation Attack Detection*. Vol. 13, 2020.
4. Sergio Escalera, and Ralf Herbrich. *The NeurIPS'18 Competition: From Machine Learning to Intelligent Conversations*. Edited by Sergio Escalera, and Ralf Hebrich, 2020.
5. Lei Kang. *Robust Handwritten Text Recognition in Scarce Labeling Scenarios: Disentanglement, Adaptation and Generation*. Edited by Alicia Fornes, Marçal Rusiñol, and Mauricio Villegas. Ph.D. thesis, Ediciones Graficas Rey, 2020.
6. Manuel Carbonell. *Neural Information Extraction from Semi-structured Documents A*. Edited by Alicia Fornes, Mauricio Villegas, and Josep Lladós. Ph.D. thesis, Ediciones Graficas Rey, 2020.
7. Marc Masana. *Lifelong Learning of Neural Networks: Detecting Novelty and Adapting to New Domains without Forgetting*. Edited by Joost van de Weijer, and Andrew Bagdanov. Ph.D. thesis, Ediciones Graficas Rey, 2020.
8. Pau Riba. *Distilling Structure from Imagery: Graph-based Models for the Interpretation of Document Images*. Edited by Josep Lladós, and Alicia Fornes. Ph.D. thesis, Ediciones Graficas Rey, 2020.
9. Raul Gomez. *Exploiting the Interplay between Visual and Textual Data for Scene Interpretation*. Edited by Dimosthenis Karatzas, Lluís Gomez, and Jaume Gibert. Ph.D. thesis, Ediciones Graficas Rey, 2020.
10. Sounak Dey. *Mapping between Images and Conceptual Spaces: Sketch-based Image Retrieval*. Edited by Josep Lladós, and Umapada Pal. Ph.D. thesis, Ediciones Graficas Rey, 2020.
11. Yaxing Wang. *Transferring and Learning Representations for Image Generation and Translation*. Edited by Joost van de Weijer, Abel Gonzalez, and Luis Herranz. Ph.D. thesis, Ediciones Graficas Rey, 2020.

8.2 Capítols de Llibres (4)

1. Alicia Fornes, Josep Lladós, and Joana Maria Pujadas-Mora. "Browsing of the Social Network of the Past: Information Extraction from Population Manuscript Images." In *Handwritten Historical Document Analysis, Recognition, and Retrieval – State of the Art and Future Trends*. World Scientific, 2020.

2. Jon Almazan, Lluís Gomez, Suman Ghosh, Ernest Valveny, and Dimosthenis Karatzas. "WATTS: A common representation of word images and strings using embedded attributes for text recognition and retrieval." In *Visual Text Interpretation – Algorithms and Applications in Scene Understanding and Document Analysis*, edited by K. Alahari and C.V. Jawahar. Series on Advances in Computer Vision and Pattern Recognition. Springer, 2020.
3. Lluís Gomez, Angelos Nicolaou, Marçal Rusiñol, and Dimosthenis Karatzas. "12 years of ICDAR Robust Reading Competitions: The evolution of reading systems for unconstrained text understanding." In *Visual Text Interpretation – Algorithms and Applications in Scene Understanding and Document Analysis*, edited by K. Alahari and C.V. Jawahar. Series on Advances in Computer Vision and Pattern Recognition. Springer, 2020.
4. Lluís Gomez, Dena Bazazian, and Dimosthenis Karatzas. "Historical review of scene text detection research." In *Visual Text Interpretation – Algorithms and Applications in Scene Understanding and Document Analysis*, edited by K. Alahari and C.V. Jawahar. Series on Advances in Computer Vision and Pattern Recognition. Springer, 2020.

8.3 Revistes amb IF (52)

1. Ajian Liu, Xuan Li, Jun Wan, Yanyan Liang, Sergio Escalera, Hugo Jair Escalante, Meysam Madadi, Yi Jin, Zhuoyuan Wu, Xiaogang Yu et al. "Cross-ethnicity Face Anti-spoofing Recognition Challenge: A Review." *IET Biometrics* 10, no. 1 (2020): 24–43.
2. Akhil Gurram, Onay Urfalioglu, Ibrahim Halfaoui, Fahd Bouzaraa, and Antonio Lopez. "Semantic Monocular Depth Estimation Based on Artificial Intelligence." *IEEE Intelligent Transportation Systems Magazine* (2020).
3. Alejandro Cartas, Petia Radeva, and Mariella Dimiccoli. "Activities of Daily Living Monitoring via a Wearable Camera: Toward Real-World Applications." *IEEE Access* 8 (2020): 77344–77363.
4. Ana Garcia-Rodriguez, Jorge Bernal, F. Javier Sanchez, Henry Cordova, Rodrigo Garces Duran, Cristina Rodriguez de Miguel, and Gloria Fernandez-Esparrach. "Polyp fingerprint: automatic recognition of colorectal polyps' unique features." *Surgical Endoscopy* 34, no. 4 (2020): 1887–1889.
5. Angel Morera, Angel Sanchez, A. Belen Moreno, Angel Sappa, and Jose F. Velez. "SSD vs. YOLO for Detection of Outdoor Urban Advertising Panels under Multiple Variabilities." *Sensors* 20, no. 16 (2020): 4587.
6. Angels Barbera, Ruth Marginet Flinch, Montserrat Martin, Jose L Mate, Albert Oriol, Fina Martinez-Soler, Tomas Santalucia, and Pedro L. Fernandez. "The Immunohistochemical Expression of Programmed Death Ligand 1." *Applied Immunohistochemistry & Molecular Morphology* (2020).
7. Anjan Dutta, Pau Riba, Josep Lladós, and Alicia Fornes. "Hierarchical Stochastic Graphlet Embedding for Graph-based Pattern Recognition." *Neural Computing and Applications* 32 (2020): 11579–11596.
8. Aymen Azaza, Joost van de Weijer, Ali Douik, Javad Zolfaghari Bengar, and Marc Masana. "Saliency from High-Level Semantic Image Features." *SN Computer Science* 1, no. 4 (2020): 1–12.

9. B. Gautam, Oriol Ramos Terrades, Joana Maria Pujadas-Mora, and Miquel Valls-Figols. "Knowledge graph based methods for record linkage." *Pattern Recognition Letters* 136 (2020): 127–133.
10. Beata Megyesi, Bernhard Esslinger, Alicia Fornes, Nils Kopal, Benedek Lang, George Lasry, Karl de Leeuw, Eva Pettersson, Arno Wacker, and Michelle Waldispuhl. "Decryption of historical manuscripts: the DECRYPT project." *Cryptologia* 44, no. 6 (2020): 545–559.
11. Cristhian A. Aguilera-Carrasco, Cristhian Aguilera, Cristobal A. Navarro, and Angel Sappa. "Fast CNN Stereo Depth Estimation through Embedded GPU Devices." *Sensors* 20, no. 11 (2020): 3249.
12. Cristina Sanchez-Montes, Jorge Bernal, Ana Garcia-Rodriguez, Henry Cordova, and Gloria Fernandez-Esparrach. "Revisión de métodos computacionales de detección y clasificación de pólipos en imagen de colonoscopia." *Gastroenterología y Hepatología* 43, no. 4 (2020): 222–232.
13. David Berga, and Xavier Otazu. "A Neurodynamic model of Saliency prediction in V1." *Cognitive Computation* (2020).
14. David Berga, and Xavier Otazu. "Modeling Bottom-Up and Top-Down Attention with a Neurodynamic Model of V1." *Neurocomputing* 417 (2020): 270–289.
15. Debora Gil, Antonio Esteban Lansaque, Agnes Borrás, Esmitt Ramirez, and Carles Sanchez. "Intraoperative Extraction of Airways Anatomy in VideoBronchoscopy." *IEEE Access* 8 (2020): 159696–159704.
16. Diana Ramirez Cifuentes, Ana Freire, Ricardo Baeza Yates, Joaquim Punti Vidal, Pilar Medina Bravo, Diego Velazquez Dorta, Josep M. Gonfaus, and Jordi Gonzalez. "Detection of Suicidal Ideation on Social Media: Multimodal, Relational, and Behavioral Analysis." *Journal of Medical Internet Research* 22, no. 7 (2020).
17. Eduardo Aguilar, and Petia Radeva. "Uncertainty-aware integration of local and flat classifiers for food recognition." *Pattern Recognition Letters* 136 (2020): 237–243.
18. Estefania Talavera, Carolin Wuerich, Nicolai Petkov, and Petia Radeva. "Topic modelling for routine discovery from egocentric photo-streams." *Pattern Recognition* 104 (2020).
19. Estefania Talavera, Maria Leyva-Vallina, Md. Mostafa Kamal Sarker, Domenec Puig, Nicolai Petkov, and Petia Radeva. "Hierarchical approach to classify food scenes in egocentric photo-streams." *IEEE Journal of Biomedical and Health Informatics* 24, no. 3 (2020): 866–877.
20. Fei Yang, Luis Herranz, Joost van de Weijer, Jose Antonio Iglesias, Antonio Lopez, and Mikhail Mozerov. "Variable Rate Deep Image Compression with Modulated Autoencoder." *IEEE Signal Processing Letters* 27 (2020): 331–335.
21. Fei Yang, Yongmei Cheng, Joost van de Weijer, and Mikhail Mozerov. "Improved Discrete Optical Flow Estimation with Triple Image Matching Cost." *IEEE Access* 8 (2020): 17093–17102.
22. Gabriel Villalonga, and Antonio Lopez. "Co-Training for On-Board Deep Object Detection." *IEEE Access* (2020): 194441–194456.
23. Gabriel Villalonga, Joost van de Weijer, and Antonio Lopez. "Recognizing new classes with synthetic data in the loop: application to traffic sign recognition." *Sensors* 20, no. 3 (2020): 583.

24. Hassan Ahmed Sial, Ramon Baldrich, and Maria Vanrell. "Deep intrinsic decomposition trained on surreal scenes yet with realistic light effects." *Journal of the Optical Society of America A* 37, no. 1 (2020): 1–15.
25. Hugo Jair Escalante, Heysem Kaya, Albert Ali Salah, Sergio Escalera, Yagmur Gucluturk, Umut Guçlu, Xavier Baro, Isabelle Guyon, Julio C.S. Jacques Junior, Meysam Madadi et al. "Modeling, Recognizing, and Explaining Apparent Personality from Videos." *IEEE Transactions on Affective Computing* (2020).
26. Idoia Ruiz, Bogdan Raducanu, Rakesh Mehta, and Jaume Amores. "Optimizing speed/accuracy trade-off for person re-identification via knowledge distillation." *Engineering Applications of Artificial Intelligence* 87 (2020): 103309.
27. Ivet Rafegas, Maria Vanrell, Luis A Alexandre, and G. Arias. "Understanding trained CNNs by indexing neuron selectivity." *Pattern Recognition Letters* 136 (2020): 318–325.
28. Jun Wan, Chi Lin, Longyin Wen, Yunan Li, Qiguang Miao, Sergio Escalera, Gholamreza Anbarjafari, Isabelle Guyon, Guodong Guo, and Stan Z. Li. "ChaLearn Looking at People: IsoGD and ConGD Large-scale RGB-D Gesture Recognition." *IEEE Transactions on Cybernetics* (2020).
29. Khalid El Asnaoui, and Petia Radeva. "Automatically Assess Day Similarity Using Visual Lifelogs." *International Journal of Intelligent Systems* 29 (2020): 298–310.
30. Manuel Carbonell, Alicia Fornes, Mauricio Villegas, and Josep Lladós. "A Neural Model for Text Localization, Transcription and Named Entity Recognition in Full Pages." *Pattern Recognition Letters* 136 (2020): 219–227.
31. Margarita Torre, Beatriz Remeseiro, Petia Radeva, and Fernando Martinez. "DeepNEM: Deep Network Energy-Minimization for Agricultural Field Segmentation." *IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing* 13 (2020): 726–737.
32. Meysam Madadi, Hugo Bertiche, and Sergio Escalera. "SMPLR: Deep learning based SMPL reverse for 3D human pose and shape recovery." *Pattern Recognition* 106 (2020).
33. Meysam Madadi, Hugo Bertiche, and Sergio Escalera. "SMPLR: Deep SMPL reverse for 3D human pose and shape recovery." *Pattern Recognition* 106 (2020): 107472.
34. Mohamed Ali Souibgui, and Y.Kessentini. "DE-GAN: A Conditional Generative Adversarial Network for Document Enhancement." *IEEE Transactions on Pattern Analysis and Machine Intelligence* (2020).
35. Pau Riba, Josep Lladós, and Alicia Fornes. "Hierarchical graphs for coarse-to-fine error tolerant matching." *Pattern Recognition Letters* 134 (2020): 116–124.
36. Pau Rodriguez, Diego Velazquez, Guillem Cucurull, Josep M. Gonfaus, Xavier Roca, and Jordi Gonzalez. "Pay attention to the activations: a modular attention mechanism for fine-grained image recognition." *IEEE Transactions on Multimedia* 22, no. 2 (2020): 502–514.
37. Pau Rodriguez Lopez, Diego Velazquez Dorta, Guillem Cucurull, Josep M. Gonfaus, Xavier Roca, Seiichi Ozawa, and Jordi Gonzalez. "Personality Trait Analysis in Social Networks Based on Weakly Supervised Learning of Shared Images." *Applied Sciences* 10, no. 22 (2020): 8170.
38. Rahma Kalboussi, Aymen Azaza, Joost van de Weijer, Mehrez Abdellaoui, and Ali Douik. "Object proposals for salient object segmentation in videos." *Multimedia Tools and Applications* 79, no. 13 (2020): 8677–8693.

39. Raquel Justo, Leila Ben Letaifa, Cristina Palmero, Eduardo Gonzalez-Fraile, Anna Torp Johansen, Alain Vazquez, Gennaro Cordasco, Stephan Schlogl, Begoña Fernandez-Ruanova, Micaela Silva, Sergio Escalera et al. "Analysis of the Interaction between Elderly People and a Simulated Virtual Coach, Journal of Ambient Intelligence and Humanized Computing." *Journal of Ambient Intelligence and Humanized Computing* 11, no. 12 (2020): 6125–6140.
40. Razieh Rastgoo, Kouros Kiani, and Sergio Escalera. "Hand pose aware multimodal isolated sign language recognition." *Multimedia Tools and Applications* 80 (2020): 127–163.
41. Razieh Rastgoo, Kouros Kiani, and Sergio Escalera. "Hand sign language recognition using multi-view hand skeleton." *Expert Systems With Applications* 150 (2020): 113336.
42. Razieh Rastgoo, Kouros Kiani, and Sergio Escalera. "Video-based Isolated Hand Sign Language Recognition Using a Deep Cascaded Model." *Multimedia Tools and Applications* (2020).
43. Saad Minhas, Aura Hernandez-Sabate, Shoaib Ehsan, and Klaus McDonald Maier. "Effects of Non-Driving Related Tasks during Self-Driving mode." *IEEE Transactions on Intelligent Transportation Systems* (2020).
44. Sergio Escalera, Hugo Jair Escalante, Xavier Baro, Isabelle Guyon, Meysam Madadi, Jun Wan, Stephane Ayache, Yagmur Gucluturk, and Umut Guclu. "Guest Editorial: Image and Video Inpainting and Denoising." *IEEE Transactions on Pattern Analysis and Machine Intelligence* 42, no. 5 (2020): 1021–1024.
45. Sudeep Katakol, Basem Elbarashy, Luis Herranz, Joost van de Weijer, and Antonio Lopez. "Distributed Learning and Inference with Compressed Images." *IEEE Transactions on Image Processing* 30 (2020): 3069–3083.
46. Thomas B. Moeslund, Sergio Escalera, Gholamreza Anbarjafari, Kamal Nasrollahi, and Jun Wan. "Statistical Machine Learning for Human Behaviour Analysis." *Entropy* 25, no. 5 (2020): 530.
47. Wenlong Deng, Yongli Mou, Takahiro Kashiwa, Sergio Escalera, Kohei Nagai, Kotaro Nakayama, Yutaka Matsuo, and Helmut Prendinger. "Vision based Pixel-level Bridge Structural Damage Detection Using a Link ASPP Network." *Automation in Construction* 110 (2020).
48. Xiangyang Li, Luis Herranz, and Shuqiang Jiang. "Multifaceted Analysis of Fine-Tuning in Deep Model for Visual Recognition." *ACM Transactions on Data Science* (2020).
49. Yaxing Wang, Luis Herranz, and Joost van de Weijer. "Mix and match networks: multi-domain alignment for unpaired image-to-image translation." *International Journal of Computer Vision* (2020).
50. Yi Xiao, Felipe Codevilla, Akhil Gurram, Onay Urfalioglu, and Antonio Lopez. "Multimodal end-to-end autonomous driving." *IEEE Transactions on Intelligent Transportation Systems* (2020).
51. Yunan Li, Jun Wan, Qiguang Miao, Sergio Escalera, Huijuan Fang, Huizhou Chen, Xiangda Qi, and Guodong Guo. "CR-Net: A Deep Classification-Regression Network for Multimodal Apparent Personality Analysis." *International Journal of Computer Vision* 128 (2020): 2763–2780.

52. Zhengying Liu, Zhen Xu, Sergio Escalera, Isabelle Guyon, Julio C.S. Jacques Junior, Meysam Madadi, Adrien Pavao, Sebastien Treguer, and Wei Wei Tu. "Towards automated computer vision: analysis of the AutoCV challenges 2019." *Pattern Recognition Letters* 135 (2020): 196–203.

8.4 Altres Revistes (1)

1. Shifeng Zhang, Ajian Liu, Jun Wan, Yanyan Liang, Guogong Guo, Sergio Escalera, Hugo Jair Escalante, and Stan Z. Li. "CASIA-SURF: A Dataset and Benchmark for Large-scale Multi-modal Face Anti-spoofing". *IEEE Transactions on Biometrics, Behavior, and Identity Science*, Vol. 2, 2020.

8.5 Conference Proceedings (61)

1. Albert Clapes, Julio C.S. Jacques Junior, Carla Morral, and Sergio Escalera. "ChaLearn LAP 2020 Challenge on Identity-preserved Human Detection: Dataset and Results." In *15th IEEE International Conference on Automatic Face and Gesture Recognition*, 801–808, 2020.
2. Andres Mafla, Sounak Dey, Ali Furkan Biten, Lluís Gomez, and Dimosthenis Karatzas. "Fine-grained Image Classification and Retrieval by Combining Visual and Locally Pooled Textual Features." In *IEEE Winter Conference on Applications of Computer Vision*, 2020.
3. Anna Esposito, Italia Cirillo, Antonietta Esposito, Leopoldina Fortunati, Gian Luca Foresti, Sergio Escalera, and Nikolaos Bourbakis. "Impairments in decoding facial and vocal emotional expressions in high functioning autistic adults and adolescents." In *Faces and Gestures in E-health and welfare workshop*, 667–674, 2020.
4. Anna Esposito, Terry Amorese, Nelson Maldonado, Alessandro Vinciarelli, Maria Ines Torres, Sergio Escalera, and Gennaro Cordasco. "Seniors' ability to decode differently aged facial emotional expressions." In *Faces and Gestures in E-health and welfare workshop*, 716–722, 2020.
5. Arnau Baro, Alicia Fornes, and Carles Badal. "Handwritten Historical Music Recognition by Sequence-to-Sequence with Attention Mechanism." In *17th International Conference on Frontiers in Handwriting Recognition*, 2020.
6. Asma Bensalah, Jialuo Chen, Alicia Fornes, Cristina Carmona_Duarte, Josep Lladós, and Miguel A. Ferrer. "Towards Stroke Patients' Upper-limb Automatic Motor Assessment Using Smartwatches." In *International Workshop on Artificial Intelligence for Healthcare Applications*, 2020.
7. Carlos Martín-Isla, Maryam Asadi-Aghbolaghi, Polyxeni Gkontra, Victor M. Campello, Sergio Escalera, and Karim Lekadir. "Stacked BCDU-net with semantic CMR synthesis: application to Myocardial Pathology Segmentation challenge." In *MYOPS challenge and workshop*, 2020.
8. Ciprian Corneanu, Meysam Madadi, Sergio Escalera, and Aleix Martínez. "Explainable Early Stopping for Action Unit Recognition." In *Faces and Gestures in E-health and welfare workshop*, 693–699, 2020.
9. Ciprian Corneanu, Sergio Escalera, and Aleix M. Martínez. "Computing the Testing Error Without a Testing Set." In *33rd IEEE Conference on Computer Vision and Pattern Recognition*, 2020.

10. David Berga, and Xavier Otazu. "Computations of top-down attention by modulating V1 dynamics." In *Computational and Mathematical Models in Vision*, 2020.
11. David Berga, Marc Masana, and Joost van de Weijer. "Disentanglement of Color and Shape Representations for Continual Learning." In *ICML Workshop on Continual Learning*, 2020.
12. Debora Gil, and Guillermo Torres. "A multi-shape loss function with adaptive class balancing for the segmentation of lung structures." In *34th International Congress and Exhibition on Computer Assisted Radiology & Surgery*, 2020.
13. Debora Gil, Oriol Ramos Terrades, and Raquel Perez. "Topological Radiomics (TOPiomics): Early Detection of Genetic Abnormalities in Cancer Treatment Evolution." In *Women in Geometry and Topology*, 2020.
14. Edgar Riba, D. Mishkin, Daniel Ponsa, E. Rublee, and G. Bradski. "Kornia: an Open Source Differentiable Computer Vision Library for PyTorch." In *IEEE Winter Conference on Applications of Computer Vision*, 2020.
15. Eduardo Aguilar, Bhalaji Nagarajan, Rupali Khatun, Marc Bolaños, and Petia Radeva. "Uncertainty Modeling and Deep Learning Applied to Food Image Analysis." In *13th International Joint Conference on Biomedical Engineering Systems and Technologies*, 2020.
16. Fernando Vilariño. "Unveiling the Social Impact of AI." In *Workshop at Digital Living Lab Days Conference*, 2020.
17. Hassan Ahmed Sial, Ramon Baldrich, Maria Vanrell, and Dimitris Samaras. "Light Direction and Color Estimation from Single Image with Deep Regression." In *London Imaging Conference*, 2020.
18. Henry Velesaca, Raul Mira, Patricia L. Suarez, Christian X. Larrea, and Angel Sappa. "Deep Learning Based Corn Kernel Classification." In *1st International Workshop and Prize Challenge on Agriculture-Vision: Challenges & Opportunities for Computer Vision in Agriculture*, 2020.
19. Henry Velesaca, Steven Araujo, Patricia Suarez, Angel Sanchez, and Angel Sappa. "Off-the-Shelf Based System for Urban Environment Video Analytics." In *27th International Conference on Systems, Signals and Image Processing*, 2020.
20. Hugo Bertiche, Meysam Madadi, and Sergio Escalera. "CLOTH3D: Clothed 3D Humans." In *16th European Conference on Computer Vision*, 2020.
21. Idoia Ruiz, and Joan Serrat. "Rank-based ordinal classification." In *25th International Conference on Pattern Recognition*, 2020.
22. Jialuo Chen, M.A.Souibgui, Alicia Fornes, and Beata Megyesi. "A Web-based Interactive Transcription Tool for Encrypted Manuscripts." In *3rd International Conference on Historical Cryptology*, 52–59, 2020.
23. Jorge Charco, Angel Sappa, Boris Vintimilla, and Henry Velesaca. "Transfer Learning from Synthetic Data in the Camera Pose Estimation Problem." In *15th International Conference on Computer Vision Theory and Applications*, 2020.
24. Josep Famadas, Meysam Madadi, Cristina Palmero, and Sergio Escalera. "Generative Video Face Reenactment by AUs and Gaze Regularization." In *15th IEEE International Conference on Automatic Face and Gesture Recognition*, 444–451, 2020.

25. Kai Wang, Luis Herranz, Anjan Dutta, and Joost van de Weijer. "Bookworm continual learning: beyond zero-shot learning and continual learning." In *Workshop TASK-CV 2020*, 2020.
26. Klara Janouskova, Jiri Matas, Lluís Gomez, and Dimosthenis Karatzas. "Text Recognition – Real World Data and Where to Find Them." In *25th International Conference on Pattern Recognition*, 2020.
27. Lei Kang, Marçal Rusiñol, Alicia Fornes, Pau Riba, and Mauricio Villegas. "Unsupervised Adaptation for Synthetic-to-Real Handwritten Word Recognition." In *IEEE Winter Conference on Applications of Computer Vision*, 2020.
28. Lei Kang, Pau Riba, Marçal Rusiñol, Alicia Fornes, and Mauricio Villegas. "Distilling Content from Style for Handwritten Word Recognition." In *17th International Conference on Frontiers in Handwriting Recognition*, 2020.
29. Lei Kang, Pau Riba, Yaxing Wang, Marçal Rusiñol, Alicia Fornes, and Mauricio Villegas. "GANwriting: Content-Conditioned Generation of Styled Handwritten Word Images." In *16th European Conference on Computer Vision*, 2020.
30. Lorenzo Porzi, Markus Hofinger, Idoia Ruiz, Joan Serrat, Samuel Rota Bulo, and Peter Kotschieder. "Learning Multi-Object Tracking and Segmentation from Automatic Annotations." In *33rd IEEE Conference on Computer Vision and Pattern Recognition*, 6845–6854, 2020.
31. Lu Yu, Bartłomiej Twardowski, Xialei Liu, Luis Herranz, Kai Wang, Yongmai Cheng, Shangling Jui, and Joost van de Weijer. "Semantic Drift Compensation for Class-Incremental Learning of Embeddings." In *33rd IEEE Conference on Computer Vision and Pattern Recognition*, 2020.
32. M. Li, Xialei Liu, Joost van de Weijer, and Bogdan Raducanu. "Learning to Rank for Active Learning: A Listwise Approach." In *25th International Conference on Pattern Recognition*, 5587–5594, 2020.
33. Manuel Carbonell, Pau Riba, Mauricio Villegas, Alicia Fornes, and Josep Lladós. "Named Entity Recognition and Relation Extraction with Graph Neural Networks in Semi Structured Documents." In *25th International Conference on Pattern Recognition*, 2020.
34. Marc Masana, Bartłomiej Twardowski, and Joost van de Weijer. "On Class Orderings for Incremental Learning." In *ICML Workshop on Continual Learning*, 2020.
35. Mariona Caros, Maite Garolera, Petia Radeva, and Xavier Giro. "Automatic Reminiscence Therapy for Dementia." In *10th ACM International Conference on Multimedia Retrieval*, 383–387, 2020.
36. Martin Menchon, Estefanía Talavera, Jose M. Massa, and Petia Radeva. "Behavioural Pattern Discovery from Collections of Egocentric Photo-Streams." In *ECCV Workshops*, 469–484. Vol. 12538. LNCS, 2020.
37. Minesh Mathew, Ruben Tito, Dimosthenis Karatzas, R.Manmatha, and C.V. Jawahar. "Document Visual Question Answering Challenge 2020." In *33rd IEEE Conference on Computer Vision and Pattern Recognition*, 2020.
38. Mohamed Ali Souibgui, Alicia Fornes, Yousri Kessentini, and Crina Tudor. "A Few-shot Learning Approach for Historical Ciphered Manuscript Recognition." In *25th International Conference on Pattern Recognition*, 2020.

39. Mohamed Ali Souibgui, Y.Kessentini, and Alicia Fornes. "A conditional GAN based approach for distorted camera captured documents recovery." In *4th Mediterranean Conference on Pattern Recognition and Artificial Intelligence*, 2020.
40. Petia Radeva. "Uncertainty Modeling within an End-to-end Framework for Food Image Analysis." In *1st DELTA*, 2020.
41. Rafael E. Rivadeneira, Boris Vintimilla Angel Sappa, Lin Guo, Jiankun Hou, Armin Mehri, Parichehr Behjati Ardakani, Heena Patel, Vishal Chudasama, Kalpesh Prajapati, Kishor P. Upla et al. "Thermal Image Super-Resolution Challenge – PBVS 2020." In *16h IEEE Workshop on Perception Beyond the Visible Spectrum*, 2020.
42. Rafael E. Rivadeneira, Angel Sappa, and Boris Vintimilla. "Thermal Image Super-resolution: A Novel Architecture and Dataset." In *15th International Conference on Computer Vision Theory and Applications*, 111–119, 2020.
43. Raul Gomez, Jaume Gibert, Lluís Gomez, and Dimosthenis Karatzas. "Exploring Hate Speech Detection in Multimodal Publications." In *IEEE Winter Conference on Applications of Computer Vision*, 2020.
44. Raul Gomez, Jaume Gibert, Lluís Gomez, and Dimosthenis Karatzas. "Location Sensitive Image Retrieval and Tagging." In *16th European Conference on Computer Vision*, 2020.
45. Raul Gomez, Yahui Liu, Marco de Nadai, Dimosthenis Karatzas, Bruno Lepri, and Nicu Sebe. "Retrieval Guided Unsupervised Multi-domain Image to Image Translation." In *28th ACM International Conference on Multimedia*, 2020.
46. Reza Azad, Maryam Asadi-Aghbolaghi, Mahmood Fathy, and Sergio Escalera. "Attention Deeplabv3+: Multi-level Context Attention Mechanism for Skin Lesion Segmentation." In *Bioimage computation workshop*, 2020.
47. Riccardo Del Chiaro, Bartłomiej Twardowski, Andrew Bagdanov, and Joost van de Weijer. "Recurrent attention to transient tasks for continual image captioning." In *34th Conference on Neural Information Processing Systems*, 2020.
48. Sagnik Das, Hassan Ahmed Sial, Ke Ma, Ramon Baldrich, Maria Vanrell, and Dimitris Samaras. "Intrinsic Decomposition of Document Images In-the-Wild." In *31st British Machine Vision Conference*, 2020.
49. Sangeeth Reddy, Minesh Mathew, Lluís Gomez, Marçal Rusiñol, Dimosthenis Karatzas, and C.V. Jawahar. "RoadText-1K: Text Detection and Recognition Dataset for Driving Videos." In *IEEE International Conference on Robotics and Automation*, 2020.
50. Swathikiran Sudhakaran, Sergio Escalera, and Oswald Lanz. "Gate-Shift Networks for Video Action Recognition." In *33rd IEEE Conference on Computer Vision and Pattern Recognition*, 2020.
51. Tomas Sixta, Julio C.S. Jacques Junior, Pau Buch Cardona, Eduard Vazquez, and Sergio Escalera. "FairFace Challenge at ECCV 2020: Analyzing Bias in Face Recognition." In *ECCV Workshops*, 463–481. Vol. 12540. LNCS, 2020.
52. Vacit Oguz Yazici, Abel Gonzalez-Garcia, Arnau Ramisa, Bartłomiej Twardowski, and Joost van de Weijer. "Orderless Recurrent Models for Multi-label Classification." In *33rd IEEE Conference on Computer Vision and Pattern Recognition*, 2020.
53. Xavier Soria, Edgar Riba, and Angel Sappa. "Dense Extreme Inception Network: Towards a Robust CNN Model for Edge Detection." In *IEEE Winter Conference on Applications of Computer Vision*, 2020.

54. Xialei Liu, Chenshen Wu, Mikel Menta, Luis Herranz, Bogdan Raducanu, Andrew Bagdanov, Shangling Jui, and Joost van de Weijer. "Generative Feature Replay for Class-Incremental Learning." In *CLVISION – Workshop on Continual Learning in Computer Vision*, 2020.
55. Xinhang Song, Haitao Zeng, Sixian Zhang, Luis Herranz, and Shuqiang Jiang. "Generalized Zero-shot Learning with Multi-source Semantic Embeddings for Scene Recognition." In *28th ACM International Conference on Multimedia*, 2020.
56. Yaxing Wang, Abel Gonzalez-Garcia, David Berga, Luis Herranz, Fahad Shahbaz Khan, and Joost van de Weijer. "MineGAN: effective knowledge transfer from GANs to target domains with few images." In *33rd IEEE Conference on Computer Vision and Pattern Recognition*, 2020.
57. Yaxing Wang, Lu Yu, and Joost van de Weijer. "DeepI2I: Enabling Deep Hierarchical Image-to-Image Translation by Transferring from GANs." In *34th Conference on Neural Information Processing Systems*, 2020.
58. Yaxing Wang, Salman Khan, Abel Gonzalez-Garcia, Joost van de Weijer, and Fahad Shahbaz Khan. "Semi-supervised Learning for Few-shot Image-to-Image Translation." In *33rd IEEE Conference on Computer Vision and Pattern Recognition*, 2020.
59. Yi Xiao, Felipe Codevilla, Christopher Pal, and Antonio Lopez. "Action-Based Representation Learning for Autonomous Driving." In *Conference on Robot Learning*, 2020.
60. Zhengying Liu, Adrien Pavao, Zhen Xu, Sergio Escalera, Isabelle Guyon, Julio C.S. Jacques Junior, Meysam Madadi, and Sebastien Treguer. "How far are we from true AutoML: reflection from winning solutions and results of AutoDL challenge." In *7th ICML Workshop on Automated Machine Learning*, 2020.
61. Zhengying Liu, Zhen Xu, Shangeth Rajaa, Meysam Madadi, Julio C.S. Jacques Junior, Sergio Escalera, Adrien Pavao, Sebastien Treguer, Wei-Wei Tu, and Isabelle Guyon. "Towards Automated Deep Learning: Analysis of the AutoDL challenge series 2019." In *Proceedings of Machine Learning Research*, 242–252. Vol. 123, 2020.

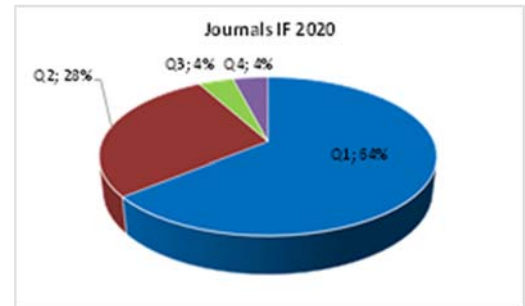
8.6 Miscel·lània – Open Access (13)

1. Debora Gil, Katerine Diaz, Carles Sanchez, and Aura Hernandez-Sabate. "Early Screening of SARS-CoV-2 by Intelligent Analysis of X-Ray Images". *ArXiv*, 2020.
2. Estefania Talavera, Andreea Glavan, Alina Matei, and Petia Radeva. "Eating Habits Discovery in Egocentric Photo-streams". *ArXiv*, 2020.
3. Hannes Mueller, Andre Groger, Jonathan Hersh, Andrea Matrangola, and Joan Serrat. "Monitoring War Destruction from Space: A Machine Learning Approach". *ArXiv*, 2020.
4. Lei Kang, Pau Riba, Marçal Rusiñol, Alicia Fornes, and Mauricio Villegas. "Pay Attention to What You Read: Non-recurrent Handwritten Text-Line Recognition". *ArXiv*, 2020.
5. Lu Yu, Xialei Liu, and Joost van de Weijer. "Self-Training for Class-Incremental Semantic Segmentation". *ArXiv*, 2020.
6. Marc Masana, Tinne Tuytelaars, and Joost van de Weijer. "Ternary feature masks: continual learning without any forgetting". *ArXiv*, 2020.

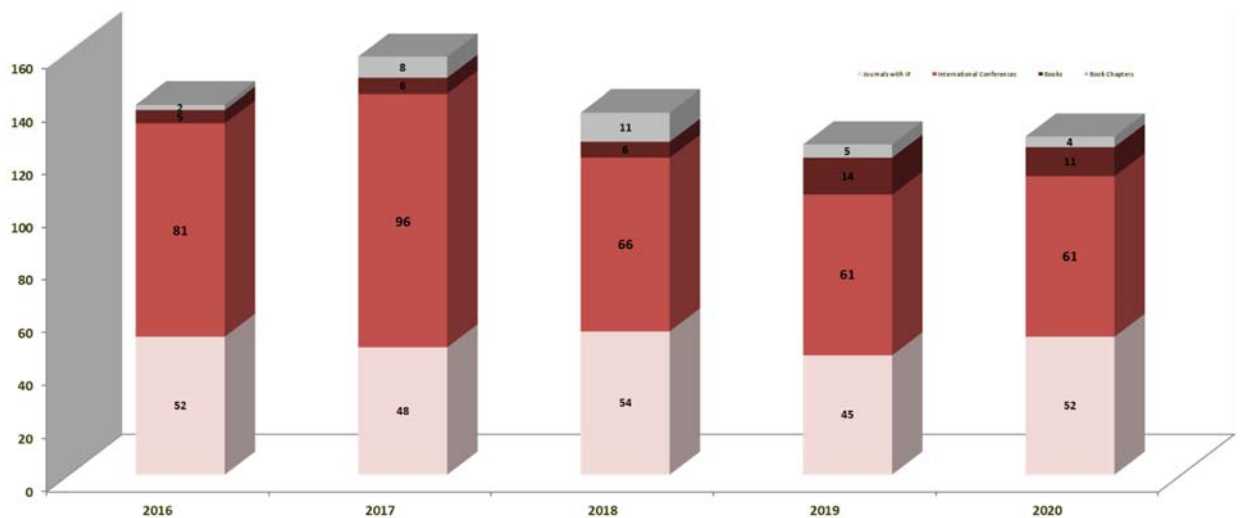
7. Marc Masana, Xialei Liu, Bartłomiej Twardowski, Mikel Menta, Andrew Bagdanov, and Joost van de Weijer. "Class-incremental learning: survey and performance evaluation". *ArXiv*, 2020.
8. Mikel Menta, Adriana Romero, and Joost van de Weijer. "Learning to adapt class-specific features across domains for semantic segmentation". *ArXiv*, 2020.
9. Oriol Ramos Terrades, Albert Berenguel, and Debora Gil. "A flexible outlier detector based on a topology given by graph communities". *ArXiv*, 2020.
10. Pau Riba, Andreas Fischer, Josep Lladós, and Alicia Fornes. "Learning Graph Edit Distance by Graph Neural Networks". *ArXiv*, 2020.
11. Shiqi Yang, Kai Wang, Luis Herranz, and Joost van de Weijer. "Simple and effective localized attribute representations for zero-shot learning". *ArXiv*, 2020.
12. Shiqi Yang, Yaxing Wang, Joost van de Weijer, and Luis Herranz. "Unsupervised Domain Adaptation without Source Data by Casting a BAIT". *ArXiv*, 2020.
13. Soumick Chatterjee, Fatima Saad, Chompunuch Sarasaen, Suhita Ghosh, Rupali Khatun, Petia Radeva, Georg Rose, Sebastian Stober, Oliver Speck, and Andreas Nürnberger. "Exploration of Interpretability Techniques for Deep COVID-19 Classification using Chest X-ray Images". *ArXiv*, 2020.

Indicadors evolució publicacions

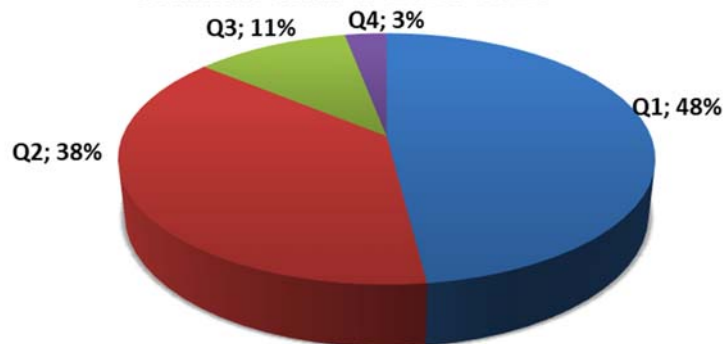
Publicacions 2020	Nombre
Revistes amb IF	52
Altres revistes	1
Congressos Internacionals	61
Llibres	14
Capítols de Llibre	4
Miscel·lània – open access	13



Producció científica 2016-2020



Journals with IF 2016-2020



9. Chairships, Organització de Congressos, Workshops i altres activitats de Recerca i Disseminació

2020 Looking at People Challenge FG Identity-preserved human detection

Organitzadors: **Dr. Albert Clapés, Dr. Julio C. S. Jacques Junior, Dr. Sergio Escalera**

Data: Del 19/11/2019 al 2/04/2020

<http://chalearnlap.cvc.uab.es/challenge/34/description/>

2020 Looking at People Fair Face Recognition challenge ECCV2020

Organitzadors: **Dr. Julio C. S. Jacques Junior, Dr. Sergio Escalera**

Data: Del 04/04/2020 al 01/07/2020

<http://chalearnlap.cvc.uab.es/challenge/38/description/>

Face Anti-spoofing Challenge CVPR2020

Organitzador: **Dr. Sergio Escalera**

Data: De. 13/12/2019 al 01/03/2020

<https://sites.google.com/qq.com/face-anti-spoofing/welcome/challengecvpr2020>

IEEE Intl. Conference on Automatic Face and Gesture Recognition (FG2020)

General Chair: **Dr. Sergio Escalera**

Sponsoring Chair: **Dr. Jordi González**

Lloc: Buenos Aires (Argentina)

Data: 18-22/05/2020

<https://fg2020.org/>

2020 NeurIPS competition: 3D+Texture garment reconstruction

Organitzadors: **Dr. Sergio Escalera, Dr. Meysam Madadi, Dr. Hugo Bertiche**

Data: 2020

<http://chalearnlap.cvc.uab.es/challenge/40/description/>

<https://neurips.cc/Conferences/2020/CompetitionTrack>

16th IEEE Workshop on Perception Beyond the Visible Spectrum, conjuntament amb CVPR 2020

Challenge Chair: **Dr. Angel Sappa**

Lloc: Long Beach, California (USA)

Data: 14/06/2020

<http://vcipl-okstate.org/pbvs/20/>

CVPR2020 Workshop on Embodied AI

Organitzador: **Dr. Antonio M. López**

Data: 14-15/06/2020

<https://embodied-ai.org/#overview>

Text and Documents in the Deep Learning Era, CVPR2020 Workshop

Organitzador: **Dr. Dimosthenis Karatzas**

Program Chair: **Dr. Alicia Fornés**

Challenge Chair: **Rubén Pérez**

Data: 15/06/2020

<https://cvpr2020text.wordpress.com/>

Challenges and promises to inferring emotion from images and video, CVPR2020 Workshop

Organitzador: **Dr. Sergio Escalera**

Data: 15/06/2020

<http://cbcs1.ece.ohio-state.edu/cvpr-2020/index.html>

4th Workshop on Media Forensics, CVPR2020 Workshop

Organitzador: **Dr. Sergio Escalera**

Data: 15/06/2020

<https://sites.google.com/view/wmediaforensics2020/home>

Local Features: From SIFT to Differentiable Method, CVPR 2020 Tutorial

Organitzador: **Edgar Riba**

Data: 15/06/2020

<https://local-features-tutorial.github.io/>

Jornada Living Labs Innovació Oberta i Universitats

Organitzadors: ENoLL, UAB i CVC

Data: 16/06/2020

<https://www.uab.cat/web/detall-de-noticia/arriba-la-ii-jornada-de-living-labs-innovacio-oberta-i-universitat-1345737380866.html?noticiaid=1345812745988>

Special Session on Machine Learning and Deep Learning Methods applied to Vision and Robotics

(MLDLMVR), International Joint Conference on Neural Networks (IJCNN) WCCI/IJCNN 2020

Organitzador: **Dr. Sergio Escalera**

Lloc: Glasgow (UK)

Data: 19-24/07/2020

<https://www.dtic.ua.es/~jgarcia/IJCNN2020/index.html>

4th IAPR International Workshop on Document Analysis Systems (DAS 2020)

Program Chair: **Dr. Dimosthenis Karatzas**

Discussion Group Chair: **Dra. Alicia Fornés**

Lloc: Wuhan (Xina)

Data: 26-29/07/2020

<https://www.vlrlab.net/das2020/>

TASK-CV 2020 Transferring and Adapting Source Knowledge in Computer Vision and VisDA Challenge, conjuntament amb ECCV 2020

Chair: **Dr. Antonio M. López**

Data: 23/08/2020

<https://sites.google.com/view/task-cv2020/home?authuser=0>

2020 ChaLearn Looking at People workshop ECCV: Fair Face Recognition and Analysis

Organitzadors: **Dr. Julio C. S. Jacques Junior**, **Dr. Sergio Escalera**

Data: 28/05/2020

4rd Workshop on Digital Image Processing for Medical and Automotive Industry (DIPMAI 2020)

Scientific Chair: **Dr. Debora Gil**

Lloc: Timisoara, Romania

Data: 1-4/09/2020

<https://synasc.ro/2020/workshops/dipmai-2020/>

31st British Machine Vision Virtual Conference (BMVC 2020)

Area Chair: **Dr. Joost van de Weijer**

Data: 7-10/09/2020

<https://www.bmvc2020-conference.com/>

BEHAVING coGNitive Systems: Believable, Autonomous, Adaptive, Context Aware (BEINGS) Track, 1st IEEE International Conference on Human-Machine Systems (ICHMS 2020)

Chair: **Dr. Sergio Escalera**

Data: 7-9/09/2020

<http://www.sensyscal.it/ichms2020/stBEINGS.html>

17th International Conference on Frontiers of Handwriting Recognition (ICFHR 2020)

Competitions Chair: **Dr. Dimosthenis Karatzas**

Data: 18-10/09/2020

<http://icfhr2020.tu-dortmund.de/>

ACMCMV 2020, 7th Annual Catalan Meeting on Computer Vision

Organitzadors: CVC, UAB, UB, UPC, UPF, URV, UdG, UdL

Data: 22/09/2020

<http://acmcmv.cat/>

ACM Multimedia Conference (MM 2020)

Area Chair Deep Learning for Multimedia: **Dra. Petia Radeva**

Lloc: Seattle (USA)

Data: 2-14/10/2020

<https://dl.acm.org/action/showFmPdf?doi=10.1145%2F3394171>

ACM ICMR 2020

Demonstration Chair and Session Chair (Retrieval): **Dra. Petia Radeva**

Lloc: Dublin (Irlanda)

Data: 26-29/10/2020

<http://icmr2020.org/organisation.html#who>

Dialogue series "Artificial Intelligence, ethics and citizen participation"

Organitzadors: CVC / La Caixa – Palau Macaya

Data: De novembre 2020 a maig 2021

<http://iabcn.cvc.uab.es/>

13th International Conference on Machine Vision (ICMV 2020)

Chapter Chair: **Dra. Petia Radeva**

Lloc: Rome (Itàlia)

Data: 2-6/11/2020

<http://icmv.org/ICMV%202020-Program.pdf>

CIC 28 Twenty-eight Color and Imaging Conference

General Chair: **Dra. Maria Vanrell**

Data: 4-19/11/2020

https://www.imaging.org/site/IST/Conferences/Color_and_Imaging/CIC2020/IST/Conferences/CIC/CIC2020/CIC_Home.aspx?hkey=ff455d92-345d-4ba1-8843-c4bedd9dcead

IEEE International Conference on Automatic Face and Gesture Recognition (FG2020)

General Chair: **Dr. Sergio Escalera**

Sponsoring Chair: **Dr. Jordi González**

Data: 16-20/11/2020

<https://ieeexplore.ieee.org/stamp/stamp.jsp?arnumber=9320232>

1st Workshop Face and Gestures in E-health and welfare Workshop (FaGEW), conjuntament amb IEEE International Conference on Automatic Face and Gesture Recognition 2020

Organitzador: **Dr. Sergio Escalera**

Data: 16/11/2020

<https://chalearnlap.cvc.uab.cat/workshop/36/description/#>

2020 Chalearn Looking at People Workshop FG Privacy-aware Computer Vision

Organitzadors: **Dr. Albert Clapés, Dr. Julio C. S. Jacques Junior, Dr. Sergio Escalera**

Data: 16/11/2020

<http://chalearnlap.cvc.uab.es/workshop/35/description/>

10. Premis

3rd and 5th Award in the action recognition EPICs Challenge, CVPR 2020

Swathikiran Sudhakaran, **Dr. Sergio Escalera**, Dr. Oswald Lanz

Data: 15/06/2020

Best Thesis Award academic year 2017-2018, Escola d'Enginyeria (UAB)

Arash Akbarinia, per la tesi doctoral "Computational Model of Visual Perception"

Supervisor: **Dr. Alejandro Parraga**

Data: 22/06/2020

Paper award nominee, CVPR 2020

Ciprian A. Corneanu, **Dr. Sergio Escalera**, Dr. Aleix M. Martinez, per l'article "Computing the Testing Error without a Testing Set"

<http://cvpr2020.thecvf.com/node/817>

Best paper award, International Conference on Frontiers in Handwriting Recognition (ICFHR) 2020

Lei Kang, Dr. Pau Riba, Dr. Marçal Rusiñol, Dra. Alicia Fornés, Dr. Mauricio Villegas, per l'article "Distilling Content from Style for Handwritten Word Recognition"

CSIG Natural Sciences award, 2nd prize, Chinese Society of Image and Graphics 2020

Guardonat: **Dr. Luis Herranz**

11. Serveis a la Comunitat Científica

- **Dr. Sergio Escalera**
 - Chair del IAPR Technical Committee 12 “Multimedia and visual information systems”, (2016-2020)

- **Dra. Alicia Fornés**
 - Chair del IAPR Technical Committee 10 “Graphics Recognition”, (2018-2020)
 - Membre del Governing Board de l’Associació d’Humanitats Digitals Catalanes (AHDC), (2020-)

- **Dr. Dimosthenis Karatzas**
 - Chair del IAPR Technical Committee 11 “Reading Systems”, (2016 - 2020)
 - Membre del IAPR Education Committee (2018 – 2020)

- **Dr. Josep Lladós**
 - Chair del IAPR Education Committee (2018-2020)
 - Membre del IAPR Industrial Liaison Committee (2018-2020)

- **Dra. Petia Radeva**
 - Membre del IAPR Fellow Committee (2018-2020)

- **Dra. Maria Vanrell,**
 - Vicepresidenta de la Society for Imaging Science and Technology, 2019-2023

12. Comitès Editorials

Dr. Sergio Escalera, Guest Editor, "Image and Video Inpainting and Denoising", *IEEE Transactions on Pattern Analysis and Machine Intelligence*, Volume: 42, n^o 5, maig 2020
[10.1109/TPAMI.2020.2971291](https://doi.org/10.1109/TPAMI.2020.2971291)

Dr. Sergio Escalera, Guest Editor Special Issue on Face Presentation Attack Detection, *IEEE Transactions on Biometrics, Behavior, and Identity Science*
<http://tbiom.ieee-biometrics.org/>

Dr. Sergio Escalera, Special Issue Editor "Statistical Machine Learning for Human Behaviour Analysis", *Entropy*

Dra. Alicia Fornés, Associate Editor, *Pattern Recognition*
<https://www.journals.elsevier.com/pattern-recognition/editorial-board>

Dra. Alicia Fornés, Review Editor Cultural Heritage Digitization, *Frontiers in Digital Humanities, FDH*
<https://www.frontiersin.org/journals/digital-humanities#editorial-board>

Dr. Jordi González, Area Editor of *Computer Vision and Image Understanding*
<https://www.journals.elsevier.com/computer-vision-and-image-understanding/editorial-board>

Dr. Jordi González, Associate Editor of *Computer Vision (IET)*
<https://digital-library.theiet.org/journals/iet-cvi/editorial-board>

Dr. Josep Lladós, Editorial Board, *International Journal on Document Analysis and Recognition (IJ DAR)*
<https://www.springer.com/journal/10032/editors>

Dr. Dimosthenis Karatzas, Associate Editor, *IP SJ Transactions on Computer Vision and Applications*
<https://ipsjcv.a.springeropen.com/about/editorial-board>

Dr. Dimosthenis Karatzas, Editorial Board, *International Journal on Document Analysis and Recognition (IJ DAR)*
<https://www.springer.com/journal/10032/editors>

Dr. Jordi González, Area Editor, *Computer Vision and Image Understanding (CVIU)*
<https://www.sciencedirect.com/journal/computer-vision-and-image-understanding/about/editorial-board>

Dr. Josep Lladós, Associate Editor, *Pattern Recognition*
<https://www.journals.elsevier.com/pattern-recognition/editorial-board>

Dr. Josep Lladós, Chief Editor of *ELCVIA – Electronic Letters on Computer Vision and Image Analysis*
<https://elcvia.cvc.uab.es/>

Dr. Meysam Madadi, Guest Editor, "Image and Video Inpainting and Denoising", *IEEE Transactions on Pattern Analysis and Machine Intelligence*, Volume: 42, n° 5, maig 2020
[10.1109/TPAMI.2020.2971291](https://doi.org/10.1109/TPAMI.2020.2971291)

Dr. Xavier Otazu, Editor Special issue: "Integrating Visual System Mechanisms, Computational Models and Algorithms/Technologies", *Frontiers in Bioengineering and Biotechnology*, 22/01/2020
<https://www.frontiersin.org/articles/10.3389/fbioe.2019.00483/full>

Dr. Xavier Otazu, Guest Associate Editor for Perceptions Science, *Frontiers in Neuroscience*
<https://www.frontiersin.org/journals/neuroscience#editorial-board>

Dr. Xavier Otazu, Guest Associate Editor for Perception Science, *Frontiers in Psychology*
<https://www.frontiersin.org/journals/psychology#editorial-board>

Dr. Xavier Otazu, Executive Director, *ELCVIA – Electronic Letters on Computer Vision and Image Analysis*
<https://elcvia.cvc.uab.es/>

Dr. Alejandro Párraga, Review Editor for Perception Science, *Frontiers in Neuroscience*
<https://www.frontiersin.org/journals/neuroscience#editorial-board>

Dr. Alejandro Párraga, Review Editor for Perception Science, *Frontiers in Psychology*
<https://www.frontiersin.org/journals/psychology#editorial-board>

Dra. Petia Radeva, Associate Editor, *Pattern Recognition*
<https://www.journals.elsevier.com/pattern-recognition/editorial-board>

Dr. Xavier Roca, Associate Editor of *Image and Vision Computing*
<https://www.journals.elsevier.com/image-and-vision-computing/editorial-board>

Dr. Angel Sappa, Section Board, Remote sensing and Image Processing, MDPI
https://www.mdpi.com/journal/remotesensing/sectioneditors/rs_image_processing

Dr. Angel Sappa, Special Issue Editor, "Image Sensors: Systems and Applications", *Sensors*
https://www.mdpi.com/journal/sensors/special_issues/image_sensors_systems

Dr. Angel Sappa, Guest Editor, Special Issue "Autonomous Driving and Driver Assistance Systems", *Robotics and Autonomous Systems*, August 2020
<https://www.sciencedirect.com/journal/robotics-and-autonomous-systems/collection/10ZGX0WJR1T>

Dr. Angel Sappa, Executive Director, *ELCVIA – Electronic Letters on Computer Vision and Image Analysis*
<https://elcvia.cvc.uab.es/>

Dr. Ernest Valveny, Editorial Board, *International Journal on Document Analysis and Recognition (IJ DAR)*
<https://www.springer.com/journal/10032/editors>

Dr. Joost van de Weijer, Area Editor, *Computer Vision and Image Understanding (CVIU)*

<https://www.sciencedirect.com/journal/computer-vision-and-image-understanding/about/editorial-board>

Dr. Joost van de Weijer, Special Issue Editor, "Intelligent Sensors and Computer Vision", *Sensors*, June 2020

https://www.mdpi.com/journal/sensors/special_issues/intelligent_sensors_computer_vision