

ΒΙΟΓΡΑΦΙΚΟ ΣΗΜΕΙΩΜΑ

Γιώργος Σφήκας

Επίκουρος Καθηγητής
Τμήμα Μηχανικών Τοπογραφίας και
Γεωπληροφορικής,
Σχολή Μηχανικών,
Πανεπιστήμιο Δυτικής Αττικής



ΓΕΝΙΚΕΣ ΠΛΗΡΟΦΟΡΙΕΣ

Ημερομηνία γέννησης: 19 Ιανουαρίου 1982
Τόπος γέννησης: Αθήνα, Ελλάδα
Υπηκοότητα: Ελληνική
Διεύθυνση κατοικίας: Αλαμάνας 80
TK10441
Αθήνα, Ελλάδα
Τηλέφωνο: +30 6949 47 26 35
E-mail: gsfikas@uniwa.gr

ΑΚΑΔΗΜΑΪΚΕΣ ΣΠΟΥΔΕΣ

PhD στην Πληροφορική / Επεξεργασία Σήματος και Εικόνας (Signal, Images et Vision)

Université de Strasbourg, Strasbourg, France, September 2012

Τίτλος διατριβής: “Non-linear statistical models for shape analysis : application to brain imaging” (“Modèles statistiques non linéaires pour l'analyse de formes : application à l'imagerie cérébrale”)

Msc στην Πληροφορική

Πανεπιστήμιο Ιωαννίνων, Ιωάννινα, Ελλάδα, Ιούνιος 2007

Τίτλος διατριβής: “Statistical methods for content-based image retrieval”

Πτυχίο στην Ιστορία και Αρχαιολογία

Πανεπιστήμιο Ιωαννίνων, Ιωάννινα, Ελλάδα, Δεκέμβριος 2014

Πτυχίο στην Πληροφορική

Πανεπιστήμιο Ιωαννίνων, Ιωάννινα, Ελλάδα, Οκτώβριος 2004

ΕΡΓΑΣΙΑΚΗ ΕΜΠΕΙΡΙΑ¹

Φεβ 2021 –

CIL/IIT laboratory, ΕΚΕΦΕ “Δημόκριτος” (Αθήνα, Ελλάδα)

¹ Εκτός διδακτικής εργασιακής εμπειρίας

	Research engineer
Ιαν 2020 –	Image processing and analysis laboratory, Τμήμα Μηχανικών Υπολογιστών και Πληροφορικής, Πανεπιστήμιο Ιωαννίνων (Ιωάννινα, Ελλάδα)
Νοε 2018 – Ιου 2020	Research engineer ITI laboratory, ΕΚΕΤΑ (Ιωάννινα, Ελλάδα)
Απρ 2014 – Οκτ 2018	Research engineer CIL/ΠΤ laboratory, ΕΚΕΦΕ “Δημόκριτος” (Αθήνα, Ελλάδα)
Μαρ 2013 – Δεκ 2013	Research engineer Ελληνικός Στρατός
Σεπ 2011 – Αυγ 2012	Ειδικότητα: Network administrator – IT professional Πανεπιστήμιο Στρασβούργου (Στρασβούργο, Γαλλία)
Οκτ 2008 – Σεπ 2011	Poste « ATER » LSIIT/MIV (iCube) Laboratory (Στρασβούργο, Γαλλία)
Σεπ 2005 – Σεπ 2008	Research Engineer IPAN Laboratory (Ιωάννινα, Ελλάδα)
Ιου 2003 – Σεπ 2003	Research Engineer / Βοηθός εργαστηρίου Aid engineering co. (Athens, Greece)
Σεπ 2000 – Αυγ 2001	Προγραμματιστής CS support team, Πανεπιστήμιο Ιωαννίνων (Ιωάννινα, Ελλάδα) Network administrator

ΔΙΔΑΚΤΙΚΗ ΕΜΠΕΙΡΙΑ

Σεπ 2020 – Αυγ 2022	Επισκέπτης Καθηγητής Μαθήματα: Γραφικά, Αναλυτική Γεωμετρία Τμήμα Μηχανικών Τοπογραφίας και Γεωπληροφορικής, Πανεπιστήμιο Δυτικής Αττικής, Αθήνα
Sep 2016 – Aug 2020	Επισκέπτης Καθηγητής Μαθήματα: Ψηφιακή Επεξεργασία Εικόνας, Υπολογιστική Όραση, Γραμμική Άλγεβρα Τμήμα Μηχανικών Η/Υ και Πληροφορικής, Πανεπιστήμιο Ιωαννίνων
Sep 2011 – Jun 2012	Βοηθός εργαστηρίου Μαθήματα: Ψηφιακή Επεξεργασία Εικόνας, Εισαγωγή στην C / C++ École Nationale Supérieure de Physique de Strasbourg (Στρασβούργο, Γαλλία)
Sep 2005 – Jan 2006	Βοηθός διδασκαλίας Μάθημα: Εισαγωγή στις Πιθανότητες Τμήμα Μηχανικών Η/Υ και Πληροφορικής, Πανεπιστήμιο Ιωαννίνων, Ιωάννινα, Ελλάδα
Sep 2004 – Jan 2005	Βοηθός εργαστηρίου Μάθημα : Εισαγωγή στον Προγραμματισμό Τμήμα Μηχανικών Η/Υ και Πληροφορικής, Πανεπιστήμιο Ιωαννίνων, Ιωάννινα, Ελλάδα

ΕΡΕΥΝΗΤΙΚΑ ΠΡΟΓΡΑΜΜΑΤΑ

Φεβ 2021 –	CULDILE (Research – Create – Innovate / NSRF funded) Cultural dimensions of deep learning.
Ιαν 2020 –	BESSARION (Open Innovation in Culture / NSRF funded - Authored the research project proposal) Byzantine Electronic Scholar on-the-Spot: Automatic inscription analysis, transcription and translation.
Μαρ 2019 – Ιου 2020	BIMERR (Horizon 2020 / European Commission funded) Aiming at enhanced Building Information Modelling (BIM) and the Architecture, Engineering & Construction (AEC) field: Research on employing novel computer vision and machine learning techniques to develop a new toolkit to support renovation stakeholders.
Νοε 2018 – Ιου 2020	eDREAM (Horizon 2020 / European Commission funded) Enabling new demand response advanced, market oriented and secure technologies, solutions and business models: Research on computer vision techniques for multimodal (RGB/IR) processing, captured by Unmanned Automated Vehicles in order to estimate Demand Response potential.

Ιου 2017 – Νοε 2017	COR-skills (Erasmus+ KA2 program / European Commission funded) Collaborative learning for patient-focused interventions in gait rehabilitation after orthopedic surgery.
Ιαν 2016 – Οκτ 2018	READ (Horizon 2020 / European Commission funded) Recognition and Enrichment of Archival Documents. Computer vision techniques for automatic handwriting recognition and keyword spotting.
Σεπ 2015 – Δεκ 2015	SYNAISTHISI (EPAN II / NSRF funded) Smart networks for collection and processing of data for energy management.
Απρ 2014 – Απρ 2015	OldDocPro (ARISTEIA / NSRF funded) Novel techniques for automatic recognition of historical greek manuscripts. Research on computer vision methods for document image processing.

ΣΥΝΕΠΙΒΛΕΨΗ ΦΟΙΤΗΤΩΝ²

<i>Όνομα φοιτητών</i>	<i>Τίτλος εργασίας / διατριβής</i>
Παναγιώτης Κουζουγλίδης	Diploma Thesis, “Automatic Video Colorization using 3D conditional Generative Adversarial Networks”
Παναγιώτης Δημητρακόπουλος	Diploma Thesis, “Cell Classification and Nuclei Detection Using Deep Convolutional Neural Networks”
Γιώργος Κούκουζας	Diploma Thesis, “Image Segmentation in the context of autonomous driving using Mask R-Convolutional Neural Network”
Αλέξανδρος Γιοχάλας	Diploma Thesis, “Keyword Spotting using Variational Autoencoders and PHOC networks”
Γιώργος Τσίγκας	Diploma Thesis, “Automatic detection of prehistoric rock paintings using computer vision methods”
Βίκτωρ Μέγηρ	Diploma Thesis, “Using Gaussian Mixture Models with Deep Neural Network features for Image Segmentation”
Άγγελος Κατσαλήρος	Diploma Thesis, “Road crack segmentation and detection with quaternion neural networks”
Λεωνίδα Ζαφειρίου	Diploma Thesis, “Keyword Spotting using Quaternions”
Χριστίνα Κούρου	Diploma Thesis, “Image Retrieval for Byzantine Art using Deep Features and Mixture Models”
Ιωάννης Γεωρβασίλης	Diploma Thesis, “Inpainting text instances with Generative Adversarial Networks”
Αλέξανδρος Καλπαζίδης	Diploma Thesis, “Keyword Spotting for mobile devices” (in progress)
Γιώργος Σάμιος	Diploma Thesis, “Image colorization with deep learning” (in progress)
Χρήστος Μπατσίλας	Diploma Thesis, “Text detection with Quaternion Generative Adversarial Networks” (in progress)
Ανδρέας Κωνσταντινίδης	Diploma Thesis, “Deep learning for optical flow” (in progress)
Θοδωρής Τρανός	Diploma Thesis, “Evaluation of Generative Adversarial Networks based on multimodal inception feature distributions” (in progress)
Ειρηναίος Κυρίσης	Diploma Thesis, “A self-guided autonomous vehicle with a Convolutional Neural Network running on a Raspberry Pi” (in progress)
Παναγιώτης Δημητρακόπουλος	Msc Thesis, “Variational Bayesian Blind Color Deconvolution of Histopathological Images”
Γιώργος Τσίγκας	PhD Thesis, “Image understanding in the context of cultural heritage” (in progress)
Ιάσωνας Πανάγος	PhD Thesis, “Lip-reading using probabilistic inference and deep learning” (in progress)
Παναγιώτης Δημητρακόπουλος	PhD Thesis, “Variational methods for image understanding” (in progress)

ΓΝΩΣΕΙΣ ΠΡΟΓΡΑΜΜΑΤΙΣΜΟΥ

Languages	Python, C/C++, Matlab, Java, Ruby, Rust Tensorflow, Pytorch
-----------	--

² Όλοι οι φοιτητές επιβλέπονται / επιβλέφθηκαν σε συνεργασία με τον καθηγητή του Πανεπιστημίου Ιωαννίνων Δρ.Χριστόφορο Νίκου.

	Qt, Visual Studio
	Git
Web	Django, HTML5/CSS3, Javascript, Joomla
Operating systems	Ubuntu/Debian Linux, Raspbian, Windows, Windows server, Solaris

CODE SAMPLES @ GITHUB

Main page :
<https://github.com/sfikas/>

Ο διαθέσιμος κώδικας περιλαμβάνει:

- Full (front-end / back-end) implementation of a research competitions website, written in Django/Python.
- Code implementing co-authored models (see 'Research' section of this document), written in Matlab and Python.

Teaching Digital Image
processing and Computer
Vision page :
<https://github.com/dip-course/>

Ο διαθέσιμος κώδικας περιλαμβάνει :

- Code examples used in teaching, demonstrating use of Python libraries for data science and computer vision (numpy, scipy, tensorflow, opencv, etc.)
Available as Python executables and Jupyter notebooks.

ΓΛΩΣΣΕΣ

Greek (native), English (fluent), French (excellent)

ΕΡΕΥΝΑ

Ενδιαφέροντα

Pattern Recognition, Machine learning, Computer Vision, Shape analysis, Medical Imaging, Document Image Analysis, Image Segmentation, Computing and Cultural heritage.

Δημοσιεύσεις³

Peer-reviewed publications on international journals

[J1] G.Sfikas, C.Nikou, N.P.Galatsanos, C.Heinrich: "Spatially varying mixtures incorporating line processes for image segmentation", **Journal of Mathematical Imaging and Vision (JMIV)**, vol. 36(2), pp. 91-110, 2010

[J2] G.Sfikas, C.Heinrich, J.Zallat, C.Nikou, N.P.Galatsanos: "Recovery of polarimetric Stokes images by spatial mixture models", **Journal of the Optical Society of America A (JOSA A)**, vol. 28(3), pp. 465-474, 2011

[J3] N.Philippi, V.Noblet, A.Botzung, O.Desprès, F.Renard, G.Sfikas, B.Cretin, S.Kremer, L.Manning, F.Blanc: "MRI-based volumetry correlates of autobiographical memory in Alzheimer's disease", **PloS one** 7 (10), e46200, 2012

[J4] S.Faisan, C.Heinrich, G.Sfikas, J.Zallat: "Estimation of Mueller matrices using non-local means filtering", **Optics Express** 21 (4), pp. 4424-4438, 2013

³ Οι δημοσιεύσεις είναι διαθέσιμες στην σελίδα <https://www.cse.uoi.gr/~sfikas/publications.html> .

- [J5] A.P.Giotis, G.Sfikas, B.Gatos, C.Nikou: "A survey of document image word spotting techniques", **Pattern Recognition**, vol.68, pp. 310-332, 2017
- [J6] K.Papadimitriou, G.Sfikas, C.Nikou: "Tomographic Image Reconstruction with a Spatially Varying Gamma mixture prior", **Journal of Mathematical Imaging and Vision (JMIV)**, vol. 60(8), pp. 1355-1365, 2018
- [J7] G. Muehlberger, L.Seaward, M. Terras, S. Ares Oliveira, V. Bosch, B. Vicente, C. Maximilian, S. Colutto, H. Déjean, M. Diem, S. Fiel, B. Gatos, T. Grüning, A. Greinoecker, G. Hackl, V. Haukkovaara, G. Heyer, L. Hirvonen, T. Hodel, M. Jokinen, P. Kahle, M. Kallio, F. Kaplan, F. Kleber, R. Labahn, E.M. Lang, S. Laube, G. Leifert, G. Louloudis, R. McNicholl, JL Meunier, J. Michael, EP Mühlbauer, N. ElenaPhilipp, I. Pratikakis, J.P.Puigcerver H.Putz, G. Retsinas, V. Romero, R. Sablatnig, JA. Sánchez, P. Schofield, G. Sfikas, C. Sieber, N. Stamatopoulos, T. Strauss, T. Terbul, A. Toselli, B. Ulreich, M. Villegas, E. Vidal, JW. Walcher, M. Weidemann, H. Wurster, K. Zagoris, Konstantinos, "Transforming Scholarship in the Archives Through Handwritten Text Recognition: Transkribus as a Case Study", **Journal of Documentation**, vol. 75(5), pp. 954-976., January 2019
- [J8] G. Tsigkas, G. Sfikas, A. Pasialis, A. Vlachopoulos, C. Nikou: "Markerless detection of ancient rock carvings in the wild: rock art in Vathy, Astypalaia", **Pattern Recognition Letters**, vol. 135, pp. 337-345, 2020

Peer-reviewed publications on international conferences

- [C1] G.Sfikas, C.Constantinopoulos, A.Likas, N.P.Galatsanos: "An Analytic Distance Metric for Gaussian Mixture Models with Application in Image Retrieval", **International Conference on Artificial Neural Networks (ICANN)**, Warsaw, Poland, September 2005
- [C2] G.Sfikas, C.Nikou, N.P.Galatsanos: "Robust image segmentation with mixtures of student's t-distributions", **IEEE International Conference on Image Processing (ICIP)**, San Antonio, USA, September 2007
- [C3] G.Sfikas, C.Nikou, N.P.Galatsanos: "Edge-preserving spatially-varying mixtures for image segmentation", **IEEE Computer Vision and Pattern Recognition (CVPR)**, Anchorage, USA, June 2008
- [C4] G.Sfikas, C.Nikou, N.P.Galatsanos, C.Heinrich: "MR Brain Tissue classification using an edge-preserving spatially variant Bayesian mixture model", **International Conference on Medical Image Computing and Computer Assisted Intervention (MICCAI)**, New York, USA, September 2008
- [C5] G.Sfikas, C.Nikou, C.Heinrich, N.P.Galatsanos: "On optimization of probability vector random fields used for image segmentation", **IEEE International Workshop on Machine Learning for Signal Processing (MLSP)**, Grenoble, France, September 2009
- [C6] G.Sfikas, C.Heinrich, J.Zallat, C.Nikou, N.P.Galatsanos: "Joint recovery and segmentation of polarimetric images using a compound MRF and mixture modeling", **IEEE International Conference on Image Processing (ICIP)**, Cairo, Egypt, November 2009
- [C7] G.Sfikas, C.Heinrich, C.Nikou: "Multiple atlas inference and population analysis with spectral clustering", **IEEE International Conference on Pattern Recognition (ICPR)**, Istanbul, Turkey, August 2010
- [C8] G.Sfikas, C.Nikou, N.P.Galatsanos, C.Heinrich: "Majorization-Minimization mixture model determination in image segmentation", **IEEE Computer Vision and Pattern Recognition (CVPR)**, Colorado Springs, USA, June 2011
- [C9] G.Sfikas, A.P.Giotis, G.Louloudis, B.Gatos: "Using Attributes for Word Spotting and Recognition in Polytonic Greek documents", **International Conference on Document Analysis and Recognition (ICDAR)**, Nancy, France, August 2015
- [C10] B.Gatos, N.Stamatopoulos, G.Louloudis, G.Sfikas, G.Retsinas, F.Simistira, V.Papavassiliou, V.Katsouros: "GRPOLY-DB: An old Greek polytonic document image database", **International Conference on Document Analysis and Recognition (ICDAR)**, Nancy, France, August 2015
- [C11] A.P.Giotis, G.Sfikas, C.Nikou, B.Gatos: "Shape-based Word Spotting in Handwritten Document Images", **International Conference on Document Analysis and Recognition (ICDAR)**, Nancy, France, August 2015
- [C12] G.Louloudis, G.Sfikas, N.Stamatopoulos, B.Gatos: "Word Segmentation using the Student's-t distribution", **International Workshop on Document Analysis and Systems (DAS)**, Santorini, Greece, April 2016

- [C13] G.Sfikas, C.Akasiadis, E.Spyrou: "Creating a smart room using an IoT approach", **Workshop on Artificial Intelligence and Internet of Things (AI-IoT), in conjunction with the 9th Hellenic Conference on Artificial Intelligence (SETN)**, Thessaloniki, Greece, May 2016
- [C14] G.Sfikas, G.Louloudis, N.Stamatopoulos, B.Gatos: "Bayesian mixture models on connected components for Newspaper article segmentation", **ACM Symposium on Document Engineering (DocEng)**, Vienna, Austria, September 2016
- [C15] G.Sfikas, G.Retsinas, B.Gatos: "Zoning Aggregated Hypercolumns for Keyword Spotting", **International Conference on Frontiers in Handwriting Recognition (ICFHR)**, Shenzhen, China, October 2016
- [C16] G.Sfikas, C.Nikou: "Bayesian Multiview Manifold Learning applied to Hippocampus Shape and Clinical Score Data", **3rd workshop on Bayesian and Graphical Models in Biomedical Imaging, held in conjunction with the 19th International Conference on Medical Image Computing and Computer Assisted Intervention (MICCAI)**, Athens, Greece, October 2016
- [C17] G.Retsinas, G.Sfikas, B.Gatos: "Transferable Deep Features for Keyword Spotting", **International Workshop on Computational Intelligence for Multimedia Understanding, held in conjunction with the 25th European Signal Processing Conference (EUSIPCO)**, Kos, Greece, September 2017
- [C18] G.Sfikas, B.Gatos, C.Nikou: "SemiCCA: A New Semi-Supervised Probabilistic CCA Model for Keyword Spotting", **International Conference on Image processing (ICIP)**, China, September 2017
- [C19] G.Retsinas, G.Louloudis, N.Stamatopoulos, G.Sfikas, B.Gatos, "Nonlinear Manifold Embedding on Keyword Spotting using t-SNE", **International Conference on Document Analysis and Recognition (ICDAR)**, Kyoto, Japan, November 2017
- [C20] G.Sfikas, G.Retsinas, B.Gatos, "A PHOC Decoder for Lexicon-free Handwriting Word Recognition", **International Conference on Document Analysis and Recognition (ICDAR)**, Kyoto, Japan, November 2017
- [C21] G.Retsinas, G.Sfikas, N.Stamatopoulos, G.Louloudis, B.Gatos, "Exploring critical aspects of CNN-based keyword spotting. A PHOCNet study", **International Workshop on Document Analysis and Systems (DAS)**, Vienna, Austria, April 2018
- [C22] G.Retsinas, G.Sfikas, G.Louloudis, N.Stamatopoulos, B.Gatos, "Compact deep descriptors for keyword spotting", **International Conference on Frontiers in Handwriting Recognition (ICFHR)**, Niagara Falls, USA, August 2018
- [C23] M.Plissiti, P.Dimitrakopoulos, G.Sfikas, C.Nikou, O.Krikoni, A.Charchanti, "SIPAKMED: A new dataset for feature and image-based classification of normal and pathological cervical cells in Pap smear images", **IEEE International Conference on Image Processing (ICIP)**, Athens, Greece, October 2018
- [C24] G.Retsinas, G.Louloudis, N.Stamatopoulos, G.Sfikas, B.Gatos, "An Alternative Deep Feature Approach to Line Level Keyword Spotting", **IEEE Computer Vision and Pattern recognition (CVPR)**, Long Beach (CA), USA, June 2019
- [C25] G.Sfikas, A.Noula, J.Patacas, D.Ioannidis, D.Tzovaras, "Building thermal output determination using visible spectrum and infrared inputs", **International Conference on Energy and Sustainable Futures (ICESF)**, Nottingham, United Kingdom, September 2019
- [C26] P.Kouzougliadis, G.Sfikas, C.Nikou, "Automatic Video Colorization using 3D Conditional Generative Adversarial Networks", **International Symposium on Visual Computing (ISVC)**, Lake Tahoe (NV), USA, October 2019
- [C27] P.Dimitrakopoulos, G.Sfikas, C.Nikou, "Nuclei Detection Using Residual Attention Feature Pyramid Networks", **IEEE International Conference on Bioinformatics and Bioengineering (BIBE)**, Athens, Greece, October 2019
- [C28] G.Sfikas, J.Patacas, C.Psarros, A.Noula, D.Ioannidis, D.Tzovaras, "A Deep Neural Network-based method for the detection and accurate thermography statistics estimation of aerielly surveyed structures", **International Conference on Construction Applications of Virtual Reality (CONVR)**, Bangkok, Thailand, November 2019
- [C29] P.Dimitrakopoulos, G.Sfikas, C.Nikou, "Ising-GAN: Annotated Data Augmentation with a spatially constrained Generative Adversarial Network", **IEEE International Symposium on Biomedical Imaging (ISBI'20)**, Iowa City (IA), USA, April 2020
- [C30] P.Dimitrakopoulos, G.Sfikas, C.Nikou, "WInD: Wasserstein Inception Distance for Evaluating Generative Adversarial Network Performance", **IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP '20)**, May 2020
- [C31] G.Sfikas, D.Ioannidis, D.Tzovaras, "Quaternionic keypoint description for multispectral imaging", **Hellenic Conference on Artificial Intelligence (SETN)**, September 2020

- [C32] G.Sfikas, D.Ioannidis, D.Tzovaras, "Quaternion Harris for Multispectral Keypoint Detection", **IEEE International conference on Image Processing (ICIP)**, October 2020
- [C33] V.Megir, G.Sfikas, A.Mekras, C.Nikou, D.Ioannidis, D.Tzovaras, "Salient object detection with pretrained Deeplab and k-means: Application to UAV-captured building imagery", **1st workshop on Pattern Recognition and Automation in Construction and the Built Environment (PRAConBE 2020), held in conjunction with the 25th International Conference on Pattern Recognition (ICPR)**, January 2021
- [C34] G.Sfikas, A.P.Giotis, G.Retsinas, C.Nikou, "Quaternion Generative Adversarial Networks for Inscription Detection in Byzantine Monuments", **2nd workshop on Pattern Recognition for Cultural Heritage (PatReCH 2020)**, held in conjunction with the 25th International Conference on Pattern Recognition (ICPR), January 2021
- [C35] G.Retsinas, G.Sfikas, C.Nikou, "Iterative Weighted Transductive Learning for Handwriting Recognition", **International Conference on Document Analysis and Recognition (ICDAR)**, Lausanne, Switzerland, September 2021
- [C36] G.Retsinas, G.Sfikas, C.Nikou, P.Maragos, "Deformation-invariant Networks for Handwritten Text Recognition", **IEEE International Conference on Image processing (ICIP)**, Anchorage, USA, September 2021
- [C37] G.Retsinas, G.Sfikas, C.Nikou, P.Maragos, "From Seq2Seq Recognition to Handwritten Word Embeddings", **British Machine Vision Conference (BMVC)**, held online, November 2021
- [C38] B.Gatos, G.Sfikas, P.Kaddas, G.Retsinas, "CULDILE: Cultural Dimensions of Deep Learning, A Document Analysis System for Historical Documents", **International Workshop on Document Analysis and Systems (DAS)**, La Rochelle, France, May 2022
- [C39] G.Sfikas, G.Retsinas, B.Gatos, "Exploring uses of Normalizing Flows for Document Image Processing: Text Super-resolution and Binarization", **International Workshop on Document Analysis and Systems (DAS)**, La Rochelle, France, May 2022
- [C40] G.Sfikas, G.Retsinas, A.P.Giotis, B.Gatos, C.Nikou, "Keyword Spotting with Quaternionic ResNet: Application to Spotting in Greek Manuscripts", **International Workshop on Document Analysis and Systems (DAS)**, La Rochelle, France, May 2022
- [C41] G.Retsinas, G.Sfikas, B.Gatos, C.Nikou, "Best Practices for a Handwritten Text Recognition system", **International Workshop on Document Analysis and Systems (DAS)**, La Rochelle, France, May 2022
- [C42] G.Retsinas, G.Sfikas, B.Gatos, C.Nikou, "On-The-Fly Deformations for Keyword Spotting", **International Workshop on Document Analysis and Systems (DAS)**, La Rochelle, France, May 2022
- [C43] G.Sfikas, G.Retsinas, B.Gatos, C.Nikou, "Hypercomplex Generative Adversarial Networks for Lightweight Semantic Labeling", **International Conference on Pattern Recognition and Artificial Intelligence (ICPRAI)**, Paris, France, June 2022
- [C44] A.P.Giotis, G.Sfikas, C.Nikou, "Adversarial deep features for weakly supervised document image keyword spotting", **IEEE Image, Video, and Multidimensional Signal Processing Workshop (IVMSP)**, Nafplio, Greece, June 2022
- [C45] A.Katsalirros, I.Panagos, G.Sfikas, C.Nikou, "Road Crack Detection Using Quaternion Neural Networks", **IEEE Image, Video, and Multidimensional Signal Processing Workshop (IVMSP)**, Nafplio, Greece, June 2022
- [C46] P.Dimitrakopoulos, G.Sfikas, C.Nikou, "Variational Feature Pyramid Networks", **International Conference on Machine Learning (ICML)**, Baltimore, USA, July 2022
- [C47] I.Panagos, G.Sfikas, C.Nikou, "Compressing Audio Visual Speech Recognition Models With Parameterized Hypercomplex Layers", **Hellenic Conference on Artificial Intelligence (SETN)**, September 2022

Ενότητες βιβλίων (book chapters)

- [BC1] B. Gatos, G. Louloudis, N. Stamatopoulos, G. Sfikas, "Historical Document Processing", in **Handwriting: Recognition, Development and Analysis**, Editors: Byron Leite, Dantas Bezerra, Cleber Zanchettin, Alejandro H. Toselli and Giuseppe Pirlo, Chapter 3. Nova science publishers, 2017
- [BC2] B. Gatos, G. Louloudis, N. Stamatopoulos, G. Retsinas, G. Sfikas, A. P. Giotis, F. Simistira-Liwicki, Vassilis Papavassiliou and Vassilis Katsouros, "OldDocPro: Old Greek Document Recognition", in **Handwritten Historical Document Analysis, Recognition, and Retrieval – State of the Art and future trends**, Editors:

Andreas Fischer, Marcus Liwicki, Rolf Ingold, Series in Machine Perception and Artificial Intelligence (Volume 89), November 2020

Reviewer για

- IEEE Transactions on Image Processing
- Computer Vision and Image Understanding
- Pattern Recognition
- Pattern Recognition Letters
- EURASIP Journal on Advances in Signal Processing
- Artificial Intelligence review
- Medical Image Computing and Computer Assisted Intervention (MICCAI)
- International Conference in Pattern Recognition (ICIP)
- International Conference in Pattern Recognition (ICPR)
- Hellenic Conference on Artificial Intelligence (SETN)
- European Signal Processing Conference (EUSIPCO)
- International Conference on Frontiers in Handwriting Recognition (ICFHR)
- International Conference on Document Analysis and Recognition (ICDAR)
- Digital Signal Processing
- MDPI Journal of Imaging
- Data Mining and Knowledge Discovery (DAMI)
- Journal of the Institution of Engineers (India): Series B

Σεμινάρια / Θερινά σχολεία

- ICVSS (International Computer Vision summer school: Machine learning for Computer Vision). Baia Samuele, Italy, 2009
- The Grifhos project. Santorini, Greece, 2011

ΣΥΜΜΕΤΟΧΗ ΣΕ ΟΡΓΑΝΩΤΙΚΕΣ ΕΠΙΤΡΟΠΕΣ

- Co-chair of the ICPR2020 workshop “PRAConBE: Pattern Recognition and Automation in Construction & the Built Environment”

ΜΕΤΑΦΡΑΣΕΙΣ ΒΙΒΛΙΩΝ

- Συνεπιμελητής της μετάφρασης του βιβλίου των H. Anton-C.Rorres, “Elementary Linear Algebra”. Η διαδικασία της μετάφρασης οργανώθηκε από τις εκδόσεις Gutenberg. Εκδόθηκε τον Δεκέμβριο του 2021.

ΔΙΑΚΡΙΣΕΙΣ ΚΑΙ ΒΡΑΒΕΥΣΕΙΣ

- Επιλογή paper για προφορική παρουσίαση στο IEEE CVPR 2008 (top 3% των papers)
- Best paper award στο MICCAI 2016 workshop “Bayesian and Graphical Models in Biomedical Imaging”
- Best student paper award στο IEEE BIBE 2019