Grigorios Kalliatakis

Collaborating Researcher
Foundation for Research and Technology - Hellas (FORTH)

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RESEARCH INTERESTS

My research interests are in the areas of computer vision and deep learning, focusing on applications to healthcare.

EDUCATION

09/2015 - 11/2019	**University of Essex**, Colchester, UK PhD in Computer Science Thesis: Visual Recognition of Human Rights Violations
08/2014 - 06/2015	**University of Burgundy**, France MSc in Computer Vision Upper Second Class Dissertation: Towards an Automatic Intelligible Monitoring of Behavioral and Physiological Metrics of User Experience
09/2013 - 06/2015	**Technological Educational Institute of Crete**, Greece MSc in Informatics and Multimedia First Class
09/2007 - 06/2013	**Technological Educational Institute of Crete**, Greece BSc in Applied Informatics and Multimedia First Class

RESEARCH EXPERIENCE

05/2022 - Present	**Collaborating Researcher**, Foundation for Research and Technology Hellas (FORTH), Institute of Computer Science, Computational BioMedicine Lab.
10/2020 - 04/2022	**Senior Research Fellow**, University of Warwick UK, Warwick Manufacturing Group (WMG) Data Science Group.
09/2018 - 09/2020	**Senior Research Officer**, The Human Rights, Big Data and Technology (HRBDT) Project, Human Rights Centre, University of Essex, UK.
09/2012 - 04/2022	**Collaborating Researcher**, Natural interactive Learning Edification Games Laboratory (NiLE-lab), Hellenic Mediterranean University, Greece.
02/2015 - 06/2015	**Research Internship**, Interactive Software Technologies & System Engineering Laboratory (iSTLab), Hellenic Mediterranean University, Greece.
05/2012 - 10/2012	**Research Assistant**, Intelligent Systems Laboratory, Hellenic Mediterranean University, Greece.

AWARDS AND HONOURS

09/2018   Excellence in Education Award for the development of the Essex CSEE challenge week

09/2015 - 09/2018   Doctoral scholarship, Computer Science & Electronic Engineering, University of Essex

09/2013 - 09/2015   Postgraduate scholarship by the State Scholarships Foundation-IKY, Greece

PEER-REVIEWED PUBLICATIONS

JOURNAL
ARTICLES

J.3 Celeste Damiani, **Grigorios Kalliatakis**, Muthyala Sreenivas, Miaad Al-Attar, Janice Rose, Clare Pudney, Emily F Lane, Jack Cuzick, Giovanni Montana, Adam R Brentnall. Evaluation of an AI model to assess future breast cancer risk. **Radiology**, June 2023. IF 19.7

J.2 **Grigorios Kalliatakis**, Shoaib Ehsan, Aleš Leonardis, Maria Fasli, Klaus McDonald-Maier. Exploring Object-centric and Scene-centric CNN Features and their Complementarity for Human Rights Violation Recognition in Images. **IEEE Access**, January 2019. IF 4.098

J.1 Alexandros Stergiou, **Grigorios Kalliatakis**, Christos Chrysoulas. Traffic Sign Recognition based on Synthesised Training Data. **Big Data and Cognitive Computing**, July 2018. IF 3.7

CONFERENCE
PROCEEDINGS

C.12 Alexandros Stergiou, Ronald Poppe, **Grigorios Kalliatakis**. Refining activation downsampling with SoftPool, International Conference on Computer Vision (**ICCV**), 2021.

C.11 Alexandros Stergiou, Georgios Kapidis, **Grigorios Kalliatakis**, Christos Chrysoulas, Remco Veltkamp, Ronald Poppe. Class Feature Pyramids for Video Explanation, International Conference on Computer Vision (**ICCV**) Workshops, Seoul, Korea, October 2019.

C.10 **Grigorios Kalliatakis**, Shoaib Ehsan, Maria Fasli, Klaus McDonald-Maier. DisplaceNet: Recognising Displaced People from Images by Exploiting Dominance Level. Proceedings of IEEE Conference on Computer Vision and Pattern Recognition (**CVPR**) Workshops, Long Beach California, June 2019.

C.9 Alexandros Stergiou, Georgios Kapidis, **Grigorios Kalliatakis**, Christos Chrysoulas, Remco Veltkamp, Ronald Poppe. Saliency Tubes: Visual Explanations for Spatio-Temporal Convolutions. Proceedings of IEEE International Conference on Image Processing (**ICIP**), Taipei, Taiwan, September 2019.

C.8 Somdip Dey, **Grigorios Kalliatakis**, Sangeet Saha, Amit Kumar Singh, Shoaib Ehsan, Klaus McDonald-Maier. MAT-CNN-SOPC: Motionless Analysis of Traffic Using Convolutional Neural Networks on System-On-a-Programmable-Chip. Proceedings of NASA/ESA Conference on Adaptive Hardware and Systems (AHS), Edinburgh, UK, August 2018.

C.7 **Grigorios Kalliatakis**, Anca Sticlaru, George Stamatiadis, Shoaib Ehsan, Aleš Leonardis, Juergen Gall, Klaus McDonald-Maier. Material Classification in the Wild: Do Synthesized Training Data Generalise Better than Real-world Training Data? Proceedings of the 13th International Joint Conference on Computer Vision, Imaging and Computer Graphics Theory and Applications (**VISAPP**), Madeira, Portugal, January 2018.

C.6 **Grigorios Kalliatakis**, Shoaib Ehsan, Maria Fasli, Aleš Leonardis, Juergen Gall, Klaus McDonald-Maier. Detection of Human Rights Violations in Images: Can Convolutional Neural Networks Help? Proceedings of the 12th International Joint Conference on Computer Vision, Imaging and Computer Graphics Theory and Applications (**VISAPP**), Porto, Portugal, February 2017.

C.5 **Grigorios Kalliatakis**, George Stamatiadis, Shoaib Ehsan, Aleš Leonardis, Juergen Gall, Anca Sticlaru, Klaus McDonald-Maier. Evaluating Deep Convolutional Neural Networks for Material Classification. Proceedings of the 12th International Joint Conference on Computer Vision, Imaging and Computer Graphics Theory and Applications (**VISAPP**), Porto, Portugal, February 2017.

C.4 **Grigorios Kalliatakis**, Nikolaos Vidakis, Georgios Triantafyllidis.Web-based visualisation of head pose and facial expressions changes: Monitoring human activity using depth data. Proceedings of 8th Computer Science and Electronic Engineering Conference (CEEC), University of Essex, September 2016.

C.3 **Grigorios Kalliatakis**, Georgios Triantafyllidis, Nikolaos Vidakis. Head Pose 3D Data Web-based Visualization. Proceedings of the 20th International Conference on 3D Web Technology, Heraklion, Crete, Greece, June 2015.

C.2 Nikolas Vidakis, Anastasios Vlasopoulos, Tsampikos Kounalakis, Petros Varchalamas, Michalis Dimitriou, **Grigorios Kalliatakis**, Efthimios Syntychakis, John Christofakis, Georgios Triantafyllidis. Multimodal Desktop Interaction: The Face – Object - Gesture – Voice Example. Proceedings of the 18th International Conference on Digital Signal Processing (DSP), Santorini, Greece, Jule 2013.

C.1 **Grigorios Kalliatakis**, Tsampikos Kounalakis, Georgios Papadourakis, Georgios Triantafyllidis. Image-based touristic monument classification using graph based visual saliency and scale-invariant feature transform. Proceedings of the 13th IASTED International Conference on Computer Graphics and Imaging, Crete, Greece, June 2012.

| WORKSHOP PAPERS | W.1 **Grigorios Kalliatakis**, Shoaib Ehsan, Klaus D McDonald-Maier. A Paradigm Shift: Detecting Human Rights Violations Through Web Images. *Human Rights Practice in the Digital Age Workshop*, University of Cambridge, March 2017. |

INVITED PUBLICATIONS

| BOOK CHAPTERS | B.1 Christos Chrysoulas, **Grigorios Kalliatakis**, Georgios Stamatiadis. Hadoop and what it is good for. *Machine Learning: Advances in Research and Applications*, Nova Science Publishers, (pp. 177-194), October 2017. |

| INVITED ARTICLES | IP.2 **Grigorios Kalliatakis**, Alexandros Stergiou, Nikolas Vidakis. Conceiving Human Interaction by Visualising Depth Data of Head Pose Changes and Emotion Recognition via Facial Expressions. **Computers**, July 2017. IF 2.8 |

IP.1 **Grigorios Kalliatakis**, Georgios Triantafyllidis. Image based Monument Recognition using Graph based Visual Saliency. **ELCVIA: Electronic Letters on Computer Vision and Image Analysis**, 2013.

INVITED TALKS	• Leveraging Computer Vision for Visual Recognition of Human Rights Abuses. *International Conference on Digital Image and Signal Processing (DISP)*, Oxford, UK, April 2019.
	• Image Representations for Visual Recognition of Human Rights Violations. *Experts' Meeting on Digital Image Authentication and Classification*, organized by OHCHR, Geneva, Switzerland, December 2017. Experts advice to UNHCR and OHCHR.
	• Visual Recognition of Human Rights Violations. *Workshop on Finding the nexus between climate change, conflict and forced displacement*, University of Essex, UK, March 2019.

SERVICE

ORGANIZING COMMITTEE	• Special Issue "Transfer Learning Applications for Real-World Imaging Problems", Journal of Imaging, 2021. IF 3.2
	• Humanitarian Mapping, ACM SIGKDD Conference on Knowledge Discovery and Data Mining, 2020
	• EAI International Conference on Design, Learning & Innovation, 2017
	• 9th Computer Science & Electronic Engineering Conference (CEEC), 2017
REVIEWER	• IEEE Journal of Biomedical and Health Informatics, 2023, 2024 IF 7.7
	• IEEE Transactions on Image Processing, 2019, 2020 IF 10.6
	• IEEE Transactions on Cognitive and Developmental Systems, 2019 IF 5
	• IEEE Access, 2019 IF 4.098
	• Sensors (MDPI), 2019 IF 3.9
	• Applied Sciences (MDPI), 2019 IF 2.7
	• ICLR Workshop on Computer Vision for Agriculture (CV4A), 2020
	• IEEE International Workshop on Multimedia Signal Processing (MMSP 2020)
	• Multimodal Technologies and Interaction (MDPI), 2017 IF 2.5
	• ArtsIT & DLI, 2017
	• 3DTV Conference, 2017-2018
	• 6th EAI International Conference: ArtsIT, Interactivity & Game Creation

TEACHING EXPERIENCE

TEACHING ASSISTANT	• Technological Educational Institute (TEI) of Crete – Digital Image Processing (Winter 2012)
GRADUATE LAB ASSISTANT	• University of Essex CE101 – Team Project Challenge [formerly known as Professional Development] (Full Academic Year 2016-17, 2017-18)

MEDIA COVERAGE

June 26, 2017	Human rights violations could be identified by computer vision system, E&T News
June 22, 2017	World's first computer-vision system to identify human rights abuse *featured in University of Essex News*
March 25, 2017	Detection of Human Rights Violations in Images: Can Convolutional Neural Networks help? [C6] was highlighted as one of the most thought-provoking papers from the Physics arXiv, *featured in MIT Technology review*