Monday July 15th, 2019

Lecture: Multi-sensory Video Processing and Learning for Human-Robot Interaction

Hands on:

Abstract

In many human-robot interaction (HRI) application areas where multisensory processing and recognition is greatly needed, multimodality occurs naturally, and cross-modal integration increases performance. This tutorial addresses the multisensory spatio-temporal processing of visual information together with its fusion with the speech/audio modality as applied to two different HRI areas: assistive and social robotics. Our coverage will include theory, algorithms and a rich variety of integrated applications for specific groups like elderly users and children. There are many challenges in this area including the familiarity of these users with new technologies and the domain specific datasets, which are required for training user-oriented models. Nowadays, modern assistive and social HRI requires a multimodal communication with speech, gestures and human movements so as to enhance the classic interaction with only spoken commands. This tutorial will present state-of-the-art works for multisensory and visual processing and machine learning models that can be effectively trained with a relatively small amount of data, which is very important when we deal with elderly users and children. Moreover, in the present state of our information society, we are witnessing a very rapid expansion of multimodal and multisensory content, with huge volumes of multimedia content being continuously created. As a result, multimodal processing technologies have become increasingly relevant. Computer vision techniques, despite recent advances, still significantly lag behind the human ability in understanding real-life scenes and performing demanding robotic tasks. Motivated by the multimodal way humans perceive their environment, complementary information sources have been successfully used in many applications, such as human action recognition where the audio-visual cues pose many challenges at the level of features, information stream modeling and fusion. Afterwards, we will focus on the major application area, which is Human-Robot Interaction, for social, edutainment and healthcare applications, including audio-gestural commands recognition and multi-view human action recognition. Established results and recent advances from our research in the three EU projects MOBOT, I-SUPPORT and BABYROBOT will also be discussed. More information and related papers can be found in http://cvsp.cs.ntua.gr and http://robotics.ntua.gr.

About the lecturer:

Petros Maragos received the Diploma in E.E. from the National Technical University of Athens (NTUA) in 1980 and the M.Sc. and Ph.D. degrees from Georgia Tech, Atlanta,

in 1982 and 1985. In 1985, he joined the faculty of the Division of Applied Sciences at Harvard University, where he worked for eight years as professor of electrical engineering affiliated with the Harvard Robotics Lab. In 1993, he joined the faculty of the School of ECE at Georgia Tech, affiliated with its Center for Signal and Image Processing. During periods of 1996-98 he had a joint appointment as director of research at the Institute of Language and Speech Processing in Athens. Since 1999, he has been working as professor at the NTUA School of Electrical and Computer Engineering, where he is currently the director of the Intelligent Robotics and Automation Lab. He is also the coordinator of a robotics perception & interaction research unit at the Athena Research and Innovation Center. He has held visiting positions at MIT in 2012 and at UPenn in 2016. His research and teaching interests include signal processing, systems theory, machine learning, image processing and computer vision, audio-speech & language processing, and robotics. He has served as: member of IEEE SPS technical committees; associate editor for the IEEE Trans. on ASSP and IEEE Trans. on PAMI, editorial board member and guest editor for several journals on signal processing, image analysis and vision; co-organizer of several conferences and workshops on image processing, computer vision, multimedia and robotics (including recently EUSIPCO 2017 as general chair). He has also served on the Greek National Council for Research and Technology. His is the recipient or co-recipient of several awards for his academic work, including a 1987-1992 National Science Foundation Presidential Young Investigator Award, a 1988 IEEE SPS Young Author Best Paper Award, a 1994 IEEE SPS Senior Best Paper Award, the 1995 IEEE W.R.G. Baker Prize Award for the most outstanding original paper, the 1996 Pattern Recognition Society's Honorable Mention Award, the EURASIP 2007 Technical Achievement Award for contributions to nonlinear signal, image and speech processing, and the Best Paper Award of the IEEE CVPR-2011 Gesture Recognition Workshop. He was elected a Fellow of IEEE in 1995 and a Fellow of EURASIP in 2010 for his research contributions. He has been elected IEEE SPS Distinguished Lecturer for 2017-2018.

Petros Koutras is at the final year of his Ph.D. studies at the school of Electrical and Computer Engineering, National Technical University of Athens (NTUA), Greece, under the supervision of Prof. Petros Maragos, working in the general area of computer vision, image and video processing, machine learning and their applications. He received the Diploma degree in Electrical and Computer Engineering from National Technical University of Athens in 2012. His diploma thesis dealt with estimation of eye gaze and emotion classification based on Active Appearance Models, using geometrical and pattern recognition techniques. Since 2013 he has been a researcher at the Computer Vision, Speech Communication and Signal Processing Group (CVSP) at NTUA working in several projects, funded by the European Union and Greek Ministry of Research and Technology, in the areas of multimedia processing for automatic video understanding and computer vision for robotics. His research interests lie primary in the fields of face modeling, visual saliency and event recognition. His research contributions include the development of a perceptually inspired spatio-temporal saliency model with applications in eye fixation prediction,

human action recognition and video summarization as well as the development and integration of multisensory and multimodal robotic perception systems in several robotics applications.

Tuesday July 16th, 2019

Lecture: Computer Vision and Machine Learning for Drone Cinematography

Hands on: Computer Vision and Machine Learning for Drone Cinematography

Abstract

Drone cinematography deals with intelligent single- and multiple-drone platforms able to carry out audiovisual coverage of outdoor events (e.g., sports) that are typically distributed over large expanses, ranging from a stadium to an entire city. The drone or drone team, to be managed by the production director and his/her crew, shall have: a) increased multiple drone decisional autonomy, allowing event coverage in the time span of around one hour in an outdoor environment and b) improved multiple drone robustness and safety mechanisms (e.g., communication robustness/safety, embedded flight regulation compliance, enhanced crowd avoidance and emergency landing mechanisms), enabling it to carry out its mission against errors or crew inaction and to handle emergencies. Such robustness is particularly important, as the drones will operate close to crowds and/or may face environmental hazards (e.g., wind). Therefore, it must be contextually aware and adaptive, towards maximizing shooting creativity and productivity, while minimizing production costs. Computer vision and machine learning play an important role towards this end, tackling issues such as drone localization, drone video analysis for target/obstacle/crowd/point of interest detection, 2D/3D target tracking, privacy protection technologies in drones (e.g. face de-identification). This two-parts tutorial lecture will offer an overview of some of the above topics along with other related topics such as current state of the art on the use of drones in cinematography and media production, safety, security and ethics issues in drones. The lecture will be accompanied by a hands-on session where participants will have the chance to become accustomed to selected techniques.

About the lecturers:

Ioannis Pitas (IEEE fellow, IEEE Distinguished Lecturer, EURASIP fellow) received the Diploma and PhD degree in Electrical Engineering, both from the Aristotle University of Thessaloniki, Greece. Since 1994, he has been a Professor at the Department of Informatics of the same University. He served as a Visiting Professor at several Universities.His current interests are in the areas of image/video processing, machine learning, computer vision, intelligent digital media, human centered interfaces, affective computing, 3D imaging and biomedical imaging. He has published over 1090 papers, contributed in 50 books in his areas of interest and edited or (co-)authored another 11 books. He has also been member of the program committee of many scientific conferences and workshops. In the past he served as Associate Editor or co-Editor of 9 international journals and General or Technical Chair of 4 international conferences. He participated in 69 R&D projects, primarily funded by the European Union and is/was principal investigator/researcher in 41 such projects. He has 28400+ citations to his work and h-index 81+ (Google Scholar). Prof. Pitas leads

the big European H2020 R&D project MULTIDRONE: https://multidrone.eu/. He is chair of the Autonomous Systems initiative http://asi.politecnica.unige.it/.

Nikos Nikolaidis received the Diploma of Electrical Engineering and the Ph.D. degree in Electrical Engineering from the Aristotle University of Thessaloniki, Thessaloniki, Greece, in 1991 and 1997, respectively. He is currently Associate Professor at the Department of Informatics, Aristotle University of Thessaloniki. He has co-authored 1 book, 15 book chapters, 61 journal papers and 189 conference papers and co-edited one book and two special issues in journals. Moreover he has co-organized 6 special sessions in international conferences. The number of citations to his work by third authors exceeds 6650 (h-index 32, Source: Google Scholar). He has participated into 25 research projects funded by mainly by EU but also national funds. His current areas of interest include computer/robot vision, image/video processing and analysis, analysis of motion capture data, computer graphics and visualization. Dr. Nikolaidis is currently serving as associate/area editor for Signal Processing: Image Communication, EURASIP Journal on Image and Video Processing and IET Image Processing. He served as Technical Program chair of IEEE IVMSP 2013 workshop, and Publicity co-chair of EUSIPCO 2015 and IEEE ICIP 2018. Dr Nikolaidis is a Senior Member of IEEE.

Anastasios Tefas received the B.Sc. in informatics in 1997 and the Ph.D. degree in informatics in 2002, both from the Aristotle University of Thessaloniki, Greece. Since 2017 he has been an Associate Professor at the Department of Informatics, Aristotle University of Thessaloniki. From 2008 to 2017, he was a Lecturer, Assistant Professor at the same University. From 2006 to 2008, he was an Assistant Professor at the Department of Information Management, Technological Institute of Kavala. From 2003 to 2004, he was a temporary lecturer in the Department of Informatics, University of Thessaloniki. From 1997 to 2002, he was a researcher and teaching assistant in the Department of Informatics, University of Thessaloniki. Dr. Tefas participated in 15 research projects financed by national and European funds. He is Area Editor in Signal Processing: Image Communications journal. He has co-authored 100 journal papers, 211 papers in international conferences and contributed 8 chapters to edited books in his area of expertise. Over 4800 citations have been recorded to his publications and his H-index is 35 according to Google scholar. His current research interests include computational intelligence, deep learning, pattern recognition, statistical machine learning, digital signal and image analysis and retrieval and computer vision.

Iason Karakostas received the Diploma of Electrical Engineering in 2017 and is currently a PhD Student at the Artificial Intelligence and Information Analysis Laboratory (AIIA) in the Department of Informatics of AUTH. He has co-authored 2 papers in international conferences and has participated in a European Union-funded R&D project. His current research interests include machine learning, computer vision,

autonomous robotics and intelligent cinematography. (Lecture: 2D target tracking. Programming workshop: OpenCV programming for object tracking.)

Paraskevi Nousi obtained her BsC in Informatics in 2014 from Aristotle University of Thessaloniki and is currently pursuing her PhD in Computational Intelligence at the Informatics Department of Aristotle University of Thessaloniki. Her research is focused on developing effective and efficient Deep Learning methods for visual analysis tasks, such as Visual Object Tracking, Object Detection and Recognition and has been influenced by the needs of the H2020 project MULTIDRONE. (Lecture: Deep learning for target detection. Programming workshop: PyTorch: Understand the core functionalities of an object detector. Training and deployment.)

Wednesday July 17th, 2019

Lecture: Modelling material degradation phenomena for cultural & industrial use-cases using AI Techniques

Hands-on: Experimentation with different DNN architectures on material degradation

Abstract

Deterioration modelling of ageing phenomena on materials is a complicated topic in computer graphics & vision, with a wide range of applications in domains like cultural heritage, game programming, virtual reality, material science & industry, that has long been in the focus of the research society.

As a result, significant progress has been accomplished and state-of-the art methods can produce visually pleasing results that appear realistic. In this regard, several approaches have utilized methods based on the Finite Element method and its variations, while promising results have also been produced by Particle-based methods. However, these methods are only poorly connected to actual measurements, and thus fail to realistically capture and represent the ageing process of a material.

As such, the challenge of effectively exploiting the enormous amounts of data collected by high-precision, multi-spectral sensors, through information processing & analysis, is still valid. In this context, this session will discuss on the applicability of modern Deep Learning approaches and their capacity to model the appearance and the surface geometry of materials, as they degrade over time.

In particular, the discussion will attempt to provide a link between physical measurements & deterioration modelling. Based on extensive measurements of texture & surface geometry of materials at different ageing stages, alternative Deep Learning (DL) models are proposed and investigated, in order to model spatio-temporal variations on the 3D surface geometry and the 2D color-image appearance. Initially, the problem of material degradation over time is formulated as a 2D/3D material-to-material translation problem, with the goal to generate and/or predict the appearance & shape of the degraded material at given time, provided a certain material and a target degradation time in the past or the future.

At the core of the method lie conditional Generative Adversarial Network (cGAN) architectures, that map input materials to degraded materials over time. An alternative approach regards Convolutional Neural Network (CNN) that directly extrapolate the future state of a material based on previous measurements. Starting from a thorough introduction to the aforementioned technologies and their key characteristics that connect them to the nature of the degradation modelling problem, the discussion will explore various factors that affect model performance, such as changes on the training parameters, different network initialization techniques and variants of the employed loss functions.

About the lecturers:

Dimitrios Tzovaras is a Senior Researcher Grade A' (Professor) and the Director at CERTH/ITI (the Information Technologies Institute of the Centre for Research and Technology Hellas). He received the Diploma in Electrical Engineering and the Ph.D. in 2D and 3D Image Compression from the Aristotle University of Thessaloniki, Greece in 1992 and 1997, respectively. Prior to his current position, he was a Senior Researcher on the Information Processing Laboratory at the Electrical and Computer Engineering Department of the Aristotle University of Thessaloniki. His main research interests include visual analytics, computer vision, data fusion, machine learning and artificial intelligence, network and computer security, biometrics and virtual reality. He is author or co-author of over 130 articles in refereed journals and over 350 papers in international conferences.Since 2004, he has been Associate Editor in the following International journals: Journal of Applied Signal Processing (JASP) and Journal on Advances in Multimedia of EURASIP. Additionally, he was an Associate Editor in the IEEE Signal Processing Letters journal (2009-2012) and Senior Associate Editor in the IEEE Signal Processing Letters journal (2012-2014), while since 2012 he has been also Associate Editor in the IEEE Transactions on Image Processing journal. He is currently a Senior Associate Editor in the IEEE Transactions on Image Processing journal. Over the same period, Dr. Tzovaras acted as ad hoc reviewer for a large number of International Journals and Magazines such as IEEE, ACM, Elsevier and EURASIP, as well as International Scientific Conferences (ICIP, EUSIPCO, CVPR, etc.).
Since 1992, Dr. Tzovaras has been involved in more than 150 European projects, funded by the EC and the Greek Ministry of Research and Technology. Within these research projects, he has acted as the Scientific Responsible of the research group of CERTH/ITI, but also as the Coordinator and/or the Technical/Scientific Manager of many of them (coordinator of technical manager in 24 projects - 12 H2020, 1 FP7 ICT IP, 7 FP7 ICT STREP, 3 FP6 IST STREP and 1 Nationally funded project).

Anastasios Drosou is a post-doctoral research fellow at the ITI. He received his Diploma in Electrical and Computer Engineering, from Aristotle University of Thessaloniki, and his MSc. In Communication Electronics from the Technische Universität München in 2004 in 2007, respectively. He also holds a PhD in Signal and Image processing from the Imperial College London since 2013. He has been involved in

numerous European and National research projects, both in management but also in R&D activities. His research interests are in the field of biometric security, computer vision, stereoscopic image processing and signal analysis, pattern recognition, network security, visualization and visual analytics. He is the co-author of more than 35 scientific papers (journals, conferences and book chap-ters) and he is a member of the Technical Chamber of Greece. In the past, he has worked for Infineon Technologies AG Munich (2006-2007), as well as for the Chair for Electronic Design Automation (2007) & the Chair for Nanotech-nology (2006) in the Technische Universität München. Moreover, he has worked as a Research Associate for both CERTH-ITI (2005) and the Art Diagnosis Centre "ORMYLIA" (2004-2005).

Nikolaos Dimitriou received the diploma in electrical and computer engineering from the Aristotle University of Thessaloniki (AUTh) in 2007. From the same institution he received his PhD degree in 2014. The topic of his dissertation was "Motion-based video segmentation using point trajectories". Since the July of 2014, he works a postdoctoral research associate for the Informatics and Telematics Institute of the Centre for Research and Technology Hellas in Thessaloniki (CERTH-ITI). He has participated in 7 research projects financed by the European Union and the Greek General Secretariat for Research and Technology. He has co-authored 24 papers in peer-reviewed journals and international conferences and is a reviewer for IEEE Transactions on Image Processing and IEEE Transactions on Industrial Informatics. In the past he has worked as a software developer for the private sector and he is a member of the Technical Chamber of Greece. His research focuses on the areas of machine vision and deep learning with a focus on industrial applications.

Thursday July 18th, 2019

Lecture: Image Processing and Machine Learning for Histopathology and Radiomics

Abstract

Due to the proliferation of whole-slide-imaging (WSI) digital scanners it is now possible to leverage color image processing, analysis, and machine learning techniques, such as deep learning to process the digital pathology images in hopes to derive diagnosis, prognosis, and theranosis markers. The convergence of digital image processing and pathology gave rise to a new research area known as computational pathology. Computational pathology greatly enhances diagnostic accuracy and allows a variety of pathology tasks to be completed with greater efficiency. This presentation will offer a general introduction to computational pathology, it will outline and discuss image processing tasks needed for the successful implementation of a computational pathology pipeline, and it will offer overview and insights on how data-driven solutions such as deep neural networks can be used to derive markers from digital pathology slides.
The lecture will demonstrate how image pre-processing can boost generalizability of pre-trained computational pathology solutions. An elegant normalization solution to

combat variability in color and noise levels among cross-institution pathology images will be discussed. The lecture will introduce an unsupervised solution to decompose stain mixing in pathology images. In this way, start-of-the-art grayscale image analysis techniques can be readily applied in computational pathology tasks. It will also be shown that a diagnostic system combining deep learning and prior histological knowledge can provide useful diagnostic/prognostic markers. For the important invasive breast cancer diagnosis, it will be shown that detection of histological abnormalities can be simplified to identification of common patterns in normal breast images.
Lastly, open research issues such as strategies to develop generalizable solutions in computational pathology with limited amount of training data, how to combine computational pathology and radiomics markers, and future trends will be briefly discussed.

Distinguished Lecturer Series "Leo the Mathematician" at the School of Informatics (open to public): Machine Learning in Engineering: Panacea or Deep Trouble?

Abstract

The recent rise of artificial intelligence can be attributed to the success of deep neural networks in tasks, such as image classification and natural language processing. The availability of curated, large scale, and diverse data sets, as well as the access to powerful computing infrastructure, and theoretical advances are the main driving factors behind the resurgence. Machine learning, deep neural networks, smart analytics are all trending tools promising disruptive contributions capable of solving real-world problems. Thus, it is not surprising to see a sustained push from industry, policy makers, and government bodies towards accelerating developments in machine learning. The purpose of this presentation is to provide an environmental scan of the research landscape, introduce, in a tutorial style, aspects of the research machinery, and discuss intuition, utility, and expectations.

About the lecturer:

Konstantinos N. Plataniotis, Bell Canada Chair in Multimedia, is a Professor with the ECE Department at the University of Toronto. His current research interests are: machine learning, adaptive systems & pattern recognition, image & signal processing, communications systems, and big data analytics. He is a registered professional engineer in Ontario, Fellow of the IEEE and Fellow of the Engineering Institute of Canada. Dr. Plataniotis was the IEEE Signal Processing Society Inaugural Vice President for Membership (2014-2016) and the General Co-Chair for the IEEE GlobalSIP 2017 (November 2017, Montreal, Q.C.). He co-chairs the 2018 IEEE International Conference on Image Processing (ICIP 2018), October 7-10, 2018, Athens Greece, and the 2021 IEEE International Conference in Acoustics, Speech and Signal Processing (ICASSP 2021), Toronto, ON, Canada.

Industrial Lecture

Lecture: Tracing Artificial Intelligence and Natural Language Processing Frontiers in Smartphone Industry: The Case of MLS Artificial Intelligence Center (MAIC).

Abstract

Innovation lies in the core DNA of MLS Innovation Inc. since the very first steps of the company. MLS demonstrates a strong record of innovative software and hardware product development, which ensures the best value for customers. MAIC is such a result of research and development over the past 15 years in speech recognition, artificial intelligence, and natural language processing. MAIC is becoming increasingly smarter with its ever-growing use.

About the lecturer:

George Vakaros has joined MLS as Vice President of Business Development & Sales EMEA in May 2019, being responsible for MLS's penetration into international markets with the product MAIC (maic.ai).
Over the last 30 years, he has held several positions in information technology companies specialising in artificial intelligence, European funded IT research & development projects, marketing/sales for software development, and IT services companies in Greece and the US (Kodak Inc, Logicon Inc, Calspan Inc).
In Greece, he has been a member of the launch team and a key contributor in the establishment of WORKLOUD i.k.e., ARROW Technologies s.a., Thessaloniki Technology Park, and City College.
In his last job as General Manager of Workloud i.k.e in Athens (a US SaaS company for Workforce Management in the Cloud), he created and was responsible for the overall operation, including business development & sales in EMEA and R&D of software products.
He holds an M.B.A. University of La Verne CA, an M.S. in Computer Science – University of Buffalo NY, and a B.S. in Mathematics & Information Systems – Stockton University, NJ.

Monday July 15th – Wednesday July 17th, 2019

Hackathon I

Recommendation, Price Prediction, and Natural Language Processing Tools for Promoting Tourism Experience

Objectives:
To immerse the attendees in the development of tools for: a) Tourism recommendation driven by hypergraph ranking and hypergraph topology learning. Input to this tool will be a geo-tagged image and output will be similar places to visit accompanied with their location marked onto Google Maps.
b) Airfare price prediction/hotel star rating, using collaborative Kalman filters and their extensions.
c) Generation of a customized review rating for a product that the user is likely to give, as well as a customized review that the user would have written for this product, if the user had reviewed it.

About the organizers:

Constantine Kotropoulos received the Diploma degree with honors in Electrical Engineering in 1988 and the PhD degree in Electrical & Computer Engineering in 1993, both from the Aristotle University of Thessaloniki. He is currently a Full Professor in the Department of Informatics at the Aristotle University of Thessaloniki. From 1989 to 1993 he was a research and teaching assistant in the Department of Electrical & Computer Engineering at the same university. In 1995, he joined the Department of Informatics at the Aristotle University of Thessaloniki as a senior researcher and served then as a Lecturer from 1997 to 2001, an Assistant Professor from 2002 to 2007, and an Associate Professor from 2008-2015. He was a visiting research scholar in the Department of Electrical & Computer Engineering at the University of Delaware, USA during the academic year 2008-2009 and he conducted research in the Signal Processing Laboratory at Tampere University of Technology, Finland during the summer of 1993. He has coauthored 51 journal papers, 188 conference papers, and contributed 9 chapters to edited books in his areas of expertise. His current research interests include audio, speech, and language processing; signal processing; pattern recognition; multimedia information retrieval; biometric authentication techniques, and human-centered multimodal computer interaction. Prof. Kotropoulos was a scholar of the State Scholarship Foundation of Greece and the Bodossaki Foundation. He is a senior member of the IEEE and a member of EURASIP, IAPR, and the Technical Chamber of Greece. He has served as a Senior Area Editor of IEEE Signal Processing Letters and he has been a member of the editorial board of 5 journals: Advances in Multimedia, International Scholar Research Notices, Computer Methods in Biomechanics and Biomedical Engineering: Imaging and Visualization, Artificial Intelligence Review, and MDPI Journal of Imaging. He serves as a EURASIP local liaison officer for Greece.

Researchers affiliated to Artificial Intelligence and Information Analysis Laboratory, members of the research team in project Tools for Promoting Tourism Experience (PROMOTE)

Myrsini Ntemi recieved the B.Sc. in automation control engineering from the Alexander Technological Institute of Thessaloniki in 2013. She also received the M.Sc. in 'Digital-Media and Computational Intelligence' at the Department of Informatics at Aristotle University of Thessaloniki in 2017. Since 2018, she is a Ph.D. student at the Department of Informatics, Aristotle University of Thessaloniki, and the topic of her research is Time-series 'Prediction Methods' in the scientific field of Signal and Information processing. From 2013 to 2017 she was the general manager at KYPEM, a technical and merchantise company for energy saving and engeeniring in heating. In 2018 she started working as a researcher in Artificial Intelligence and Information Analysis research lab in Aristotle University of Thessaloniki.

George Karantaidis received the Diploma degree in Rural and Surveying Engineering in 2013 and the M.Sc. degree in Geoinformatics in 2016, both from School of Engineering from the Aristotle University of Thessaloniki. The topics of his research were focused on Physical Geodesy. In 2017, he received the M.Sc. degree in Computational Intelligence and Digital Media from Computer Science Department of Aristotle University of Thessaloniki. The topic of his research was “Multimedia Authentication using Electric Network Frequency” in the field of Information Analysis and Digital Forensics. He is currently a Ph.D. candidate in Computer Science Department of Aristotle University of Thessaloniki. His research is focused on Information Analysis and Signal Processing. Since 2018 is working as a researcher at Artificial Intelligence and Information Analysis Laboratory of Aristotle University of Thessaloniki. His current interests include signal processing, information analysis, multimedia authentication, graph theory and multimedia information retrieval. He is also a Member of the Technical Chamber of Greece.

Ioannis Sarridis received the B.Sc. in informatics from the Aristotle University of Thessaloniki (AUTH) in 2018. Currently studying in the M.Sc. program ‘Digital-Media – Computational Intelligence’ at Department of Informatics at Aristotle University of Thessaloniki (AUTH). Since 2018, he has been working as a research in Artificial Intelligence and Information Analysis research lab in AUTH.

Manolis Gionanidis received the B.Sc. in Informatics from the Aristotle University of Thessaloniki in 2018. Currently studying as a master student in the M.Sc. program ‘Digital-Media – Computational Intelligence’ at Department of Informatics at Aristotle University of Thessaloniki. He has been working as a researcher since 2019 in Artificial Intelligence and Information Analysis research lab in Aristotle University of Thessaloniki.

Monday July 15th – Wednesday July 17th, 2019

Hackathon II
The Web Media Verification Challenge

Objectives:
Students will be provided with an annotated dataset of media cases, several of them debunked, others verified, and will be asked to develop their own methods for detecting previously unseen cases of misleading media content on the Web.

About the organizers:

Ioannis (Yiannis) Kompatsiaris is a Researcher Director at CERTH-ITI, the Head of Multimedia Knowledge and Social Media Analytics Laboratory and Deputy Director of the Institute. His research interests include multimedia, big data and social media analytics, semantics, human computer interfaces (AR and BCI), eHealth, security and culture applications. He is the co-author of 129 papers in refereed journals, 46 book chapters, 8 patents and more than 420 papers in international conferences. Since 2001, Dr. Kompatsiaris has participated in 59 National and European research programs including direct collaboration with industry, in 15 of which he has been the Project Coordinator and in 41 the Principal Investigator. He is co-editor of the books "Semantic Multimedia and Ontologies: Theory and Applications" and "TV Content Analysis: Techniques and Applications", the guest editor of eight special issues, including "Social Media as Sensors" in IEEE Transactions on Multimedia and he has served as a program committee member and regular reviewer for a number of international journals and conferences. He has been the co-organizer of various conferences and workshops, such as the MMM 2019, IEEE IVMSP 2018, ACM CIVR 2009, WIAMIS 2007 and SSMS 2012 and he was a program co-chair for ACM MM 2016. He is a Senior Member of IEEE and member of ACM.

Symeon Papadopoulos received the Diploma degree in Electrical and Computer Engineering from the Aristotle University of Thessaloniki (AUTH) in 2004. In 2006, he received the Professional Doctorate in Engineering (P.D.Eng.) from the Technical University of Eindhoven, the Netherlands. Since 2006, he has been working with CERTH as a Research Associate. In 2012, he defended his PhD dissertation on the topic of knowledge discovery from large-scale mining of social media content. His research interests include social network analysis, social media content mining and multimedia indexing and retrieval. He has participated in several EU-funded research projects (PATExpert, WeKnowIt, GLOCAL, SocialSensor) as technical leader.