# CURRICULUM VITAE MAVROEIDI AIKATERINI-GEORGIA



Postdoctoral researcher Privacy Engineering and Social Informatics laboratory Department of Cultural Technology and Communication School of Social Sciences University of the Aegean

#### A. Curriculum Vitae

# 1. Identity elements

Full name Mavroeidi Aikaterini-Georgia

**Date of birth** June 1st, 1991

Work address University of the Aegean, Building of

Geography, University Hill, GR-811 00

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# 2. Studies

- Postdoctoral research, Department of Cultural Technology and Communication, University of the Aegean, Greece (02.2023-today)
- PhD Privacy Awareness through Gamification, Department of Cultural Technology and Communication, University of the Aegean, Greece (12.2017 09.2022)
   Scholarship from H.F.R.I. (16.10.2019 –15.03.2022)
   Title: Privacy Awareness through Gamification, Supervisor: Καθηγητής Καλλονιάτης Χοήστος
- Master of Science in Information Security, University of Brighton, United Kingdom (09.2016 11.2017)
- Master Cultural Informatics and Communication, Department of Cultural Technology and Communication, University of the Aegean, Greece (10.2014 – 02.2016)
- Bachelor Cultural Technology and Communication, Department of Cultural Technology and Communication, University of the Aegean, Greece (09.2010 – 09.2014)

# 3. Languages

• English

Michigan State University, Certificate of English Language Proficiency

German

Goethe Institut, Zeugnis: Zertifikat Deutsch

Italian

National Foreign Language Exam System (KPG)

# 4. Experience

#### 4.1 Work

- Contract staff, PRIVACT I.K.E.
   Universities & Partnerships for TECH Collaboration for High Impact Solutions (UPTECH) (04.2025-05.2027)
- Contract staff, University of the Aegean
   GDPrApp Teaching GDPR to students through a serious game, Erasmus + (11.2024-07.2026)
- Contract staff, University of the Aegean
   MSc Cultural Informatics and Communication of the Department Cultural Technology and
   Communication of the University of the Aegean
   Promotion Policy support and social media management of the MSc (06.2024-05.2025)
- Contract staff, University of the Aegean
   Design of cultural masterplan, cultural development policy and cultural identity (brand) for selected regions of the country (02.2024-09.2024)
- Contract staff, University of the Aegean
   An Integrated Socio-technical approach for Self Adaptive Privacy Requirements Identification within Cloud Computing Environments (01.2024-07.2025)
- Contract staff, University of the Aegean
   Intensive Program In Cyber Security: business and technical perspectives IPICS2023-IPICS2023, IPICS2023 (07.2023-09.2023)

Contract staff, University of the Aegean
 MSc Cultural Informatics and Communication of the Department Cultural Technology and
 Communication of the University of the Aegean
 Promotion Policy support and social media management of the MSc (04.2023-03.2024)

- Contract staff, University of the Aegean
   e- Aegean CulTour, Digital Transformation of the North Aegean in Culture and Tourism (01.2023-08.2023)
- Contract staff, University of the Aegean Implementation and maintenance of information systems and digital applications of egovernment and "smart city" of the Municipality of West Lesbos (01.2023-05.2023)
- Contract staff, University of the Aegean
   International Symposium on Human Aspects of Information Security & Assurance- HAISA»
   (07.2022 09.2022)
- Contract staff, University of the Aegean Research Unit (01.2022 – 03.2022)
- Contract staff, University of the Aegean
   «DigiArc Greece-Cyprus Digital Arch of Culture: Rescue and promotion of the medieval cultural heritage in the island region of the Aegean and Cyprus», (10.2020 12.2021)
- Contract staff, University of the Aegean
   "ManyLaws EU-Mining legal texts using big data infrastructures at the European level, (04.2020 – 9.2020)
- Contract staff, University of the Aegean Research Unit (06.2019 12.2019)
- Contract staff, University of the Aegean
   "ManyLaws EU-Mining legal texts using big data infrastructures at the European level, (04.2019 – 9.2019)
- Contract staff, University of the Aegean
   Mobility of Students based on the use of the eIDAS framework (04.2019 6.2019)

- Contract staff, University of the Aegean MSc Cultural Informatics and Communication of the Department Cultural Technology and Communication of the University of the Aegean (03.2018– 08.2018)
- Contract staff, University of the Aegean
   MSc Cultural Informatics and Communication of the Department Cultural Technology and Communication of the University of the Aegean (07.2017 – 12.2017)
- Contract staff, University of the Aegean
   Simplification of Administrative Procedures of the Municipality of Lesvos (08.2016 10-2016)

# 4.2 Teaching

- Postgraduate studies, *Emerging technologies in Culture*, Department of Cultural Technology and Communication, MSc Cultural Technology and Communication, University of the Aegean, Instructor (spring semester of the academic year 2024-2025)
- Undergraduate studies, *Applied Teaching*, Department of Cultural Technology and Communication, University of the Aegean, Instructor (spring semester of the academic year 2024-2025)
- Undergraduate studies, Basic principles of teaching, Department of Cultural Technology and Communication, University of the Aegean, Instructor (winter semester of the academic year 2024-2025)
- Undergraduate studies, *Applied Teaching*, Department of Cultural Technology and Communication, University of the Aegean, Instructor (spring semester of the academic year 2023-2024)
- Undergraduate studies, Introduction to programming, Department of Cultural Technology and Communication, University of the Aegean, Instructor (winter semester of the academic year 2024-2025)
- Undergraduate studies, *Applied Teaching*, Department of Cultural Technology and Communication, University of the Aegean, Instructor (spring semester of the academic year 2022-2023)
- Undergraduate studies, Laboratories teaching as a PhD, *Introduction to programming*, Department of Cultural Technology and Communication, University of the Aegean, Instructor (winter semester of the academic year 2018-2019)

#### 4.3 Research

- Member of Privacy Engineering and Social Informatics laboratory Privacy Engineering and Social Informatics laboratory of the Department of Cultural Technology and Communication of the University of the Aegean (<a href="https://privasi.aegean.gr/">https://privasi.aegean.gr/</a>) (07.2017 – σήμερα)
- Organising committee member of the "16th International Conference on Information, Intelligence, Systems and Applications-IISA2025" (07.2025)
- Organising committee member of the "19th IFIP International Symposium on Human Aspects of Information Security & Assurance- HAISA2025" (07.2025)
- Organising committee member of the "International Conference on the Dialect of Lesbos-ICDL2025"(07.2025)
- Organising committee member of the "4th Annual Greek Conference Communication-CCLABS2025" (06.2025)
- Organising committee member of the "26th International Conference on Information and Communications Security- ICICS2024" (08.2024)
- Organising committee member of the "Intensive Program In Cyber Security: business and technical perspectives - IPICS2023", Μυτιλήνη (07.2023)
- Organising committee member of the "16th IFIP International Symposium on Human Aspects of Information Security & Assurance- HAISA2022", (07.2022)
- Organising committee member of the "15th IFIP International Symposium on Human Aspects of Information Security & Assurance- HAISA2021", (07.2021)
- Organising committee member of the "14th IFIP International Symposium on Human Aspects of Information Security & Assurance- HAISA2020", (06.2020)
- Organising committee member of the "2nd International Conference on Cultural Informatics, Communication and Media Studies – CICMS2019", Mytilene (06.2019)
- Organising committee member of the "Intensive Programme on Information and Communications Security IPICS2018", Mytilene (07.2018)
- Organising committee member of the "Intensive Programme on Information and Communications Security IPICS2015", Mytilene (07.2015)

- Organising committee member of the "10th International Conference on Risks and Security of Internet and Systems- CRISIS2015", Mytilene (07.2015)
- Organising committee member of the "9th International Symposium on Human Aspects of Information Security & Assurance- HAISA2015", Mytilene (07.2015)

# 4.4 Entrepreneurial

CEO, Co-founder, PRIVACT P.C. (<a href="https://privact.eu/">https://privact.eu/</a>), University of the Aegean Spin-off (07/2024–present)

# 5. Seminars/Certificates

- Project Management, PM2 Alliance Advanced Certification (February 2025)
- Hellenic Open University, Certificate of Pedagogical and Teaching Proficiency (July 2023)
- Institute of Information Technology and Communications of the National Center for Research and Technological Development, Training Certificate Training Program "Training of Adult Trainers" (13/09/2021-13/12/2021)
- Seminar: inHeritage 2015 Innovative Industrial Heritage», (Mytilene, Lesvos) (09.2015)
- Summer School "Intensive Programme on Information and Communications Security IPICS2015" (Mytilene, Lesvos) (07.2015)
- Seminar: Special Thematic Program: "Audiovisual Literacy and Local Societies" (Mytilene, Lesvos) (12.2013)
- Conference: "Online Socialization and Social Life", Faculty of Social Sciences, University of the Aegean (Mytilene, Lesvos) (03.2011)

# 6. Presentations in Conferences/Summer schools

- Presentation «Social gamification and privacy" at "Intensive Program In Cyber Security: business and technical perspectives IPICS2023", Mytilene (07.2023)
- Publication: Transdisciplinary Multispectral Modelling and Cooperation for the Preservation of Cultural Heritage (2023) – TMM\_CH 2023, 20-24 March 2023, Athens, Greece

- Publication: 16<sup>th</sup> International Conference on Trust, Privacy and Security in Digital Business -TrustBus 2019, 20-24 August 2019, Linz, Austria
- Publication: 5th International Workshop on Evolving Security & Privacy Requirements Engineering, 29 August 2018, Banff, Canada
- Publication: 1st International CICMS Conferece Cultural Informatics, Communication & Media Studies, 3-4 May, 2018. Kuşadası, Turkey

### 7. Editorial activities

#### 7.A. Conference Reviewer

- I. DTGS 2018: Digital Transformation & Global Society 2017, (St. Petersburg, Russia), May 2018, Springer
- II. HAISA 2018: International Symposium on Human Aspects of Information Security & Assurance, (Dundee, United Kingdom), September 2018
- III. DPM2018:Data Privacy Management 2018, (Catalonia, Spain), September 2018, Springer
- IV. CRISIS 2018: The 13th International Conference on Risks and Security of Internet and Systems, (Arcachon, France), October 2018, Springer
- V. APF 2019: Annual Privacy Forum 2019, (Rome, Italy), June 2019, ENISA
- VI. CRiSIS 2019: International Conference on Risks and Security of Internet and Systems, (Hammamet, Tunisia), October 2019, Springer
- VII. ITNG-BC 2020: ITNG: Blockchain Technology, (Las Vegas, NV, United States), April 2020
- VIII. RCIS2020: The Fourteenth International Conference on Research Challenges in Information Science, (Limassol, Cyprus), May 2020
- IX. DPM2020:Data Privacy Management 2018, (Guildford, UK), September 2020
- X. CRISIS 2020: The 15th International Conference on Risks and Security of Internet and Systems, (Paris, France), November 2020, Springer
- XI. EGOSE 2020: Electronic Governance and Open Society: Challenges in Eurasia, (St. Petersburg, Russia), November 2020
- XII. RCIS2021: The 15th International Conference on Research Challenges in Information Science, (Limassol, Cyprus), May 2021
- XIII. EGOVIS2021: The 10th International Conference on Electronic Government and the Information Systems Perspective, (Linz, Austria), September 2021
- XIV. ESPRE21:The 8th International Workshop on Evolving Security & Privacy Requirements Engineering, (Notre Dame, South Bend, USA), September 2021

- XV. ISC 2021: The 24th Information Security Conference, (Denpasar, Indonesia) November 2021, Springer
- XVI. EGOSE 2021: Electronic Governance and Open Society: Challenges in Eurasia, (St. Petersburg, Russia), November 2021
- XVII. RCIS2022: The 16th International Conference on Research Challenges in Information Science, (Barcelona, Spain), May 2022
- XVIII. WISE 15: 15th World Conference on Information Security Education (Copenhagen, Denmark), June 2022
- XIX. RCIS2023: International Conference on Research Challenges in Information Science, (Corfu, Greece), May 2023
- XX. APF 2023: Annual Privacy Forum 2023, (Lyon, France), June 2023, ENISA
- XXI. HAISA 2023: International Symposium on Human Aspects of Information Security & Assurance, (Canterbury, United Kingdom), July 2023
- XXII. SACLA2023: The 52nd Annual Conference of the Southern African Computer Lecturers' Association (Gauteng, South Africa), July 2023
- XXIII. ARES2023: 18th International Conference on Availability, Reliability and Security (Benevento, Italy), September 2023
- XXIV. CCLABS: 4ο Ετήσιο Ελληνόφωνο Συνέδριο Εργαστηρίων Επικοινωνίας (Μυτιλήνη, Ελλάδα), Ιούλιος 2025

### 7.B. Journal Reviewer

- I. Requirements Engineering, Springer
- II. Human-centric Computing and Information Sciences, Springer
- III. IEEE Transactions on Industrial Informatics
- *IV. Information and Computer Security*
- V. International Journal of Information Security, Springer

#### 7.G. Program Committee member - Conferences

- I. RCIS International Conference on research Challenges in Information Science, Springer LNBIP RCIS 2023
- II. WISE World Conference on Information Security Education, IFIP Advances in Information and Communication Technology Series, Springer WISE16 2023
- III. 21st European Mediterranean & Middle Eastern Conference on Information Systems, Springer EMCIS 2024
- IV. IFIP International Symposium on Human Aspects of Information Security & Assurance HAISA 2025

# **B. PUBLICATIONS**

# Google scholar:

 $\underline{https://scholar.google.com/citations?user=hAWCZ4sAAAAJ\&hl=en}$ 

P.22	Christos Kalloniatis, <u>Aikaterini – Georgia Mavroeidi</u> , Panagiotis Psomos, Ioannis Basdekis. Designing Deep-Tech-Driven Circular Education: The Framework of the 3D-CIRCULAR Project. 20th annual International Technology, Education and Development Conference-INTED2026. (under review)
	Abstract: « As Europe moves towards a green and digital future, there is a growing need for education models that combine technological innovation with sustainable and circular practices. The project "Digital Deep tech Driven Circular Economy"-3D CIRCULAR advances this vision by playing a pivotal role in reskilling and upskilling young talents, professional experts, and the broader European workforce, with a vision that extends beyond EU borders, in enhancing their digital and circular economy skills towards closing the gap for a blooming digital circular economy in the EU. The mission of the 3D-CIRCULAR project is to build the next generation of the educational and certification ecosystem for exercising expert-level, interdisciplinary capabilities within the context of promoting a European, digitally native, circular economy.  It brings together higher education institutions, research organisations, and industry partners to co-design interdisciplinary Master's and Doctorate programmes, as well as flexible, self-standing learning modules for upskilling and lifelong learning. In addition to these degrees, 3D-CIRCULAR introduces micro-credentials that provide flexible learning opportunities, enabling the recognition of skills across academic and industrial contexts. This paper presents the framework that guides the development of the 3D-CIRCULAR educational ecosystem. Specifically, the paper outlines how academia and industry collaborate to identify emerging digital and green skills, design modular curricula, and integrate experiential learning components. Through this approach, 3D-CIRCULAR promotes a balance between academic depth and industry expertise, ensuring that learners acquire competences aligned with Europe's green and digital transition goals.»
P.21	<u>Aikaterini – Georgia Mavroeidi</u> , Christos Kalloniatis. Toward Digital Sustainability Education: Aligning the GreenComp and DigComp Frameworks. 20th annual International Technology, Education and Development Conference- INTED2026. (under review)
	Abstract: «The European transition toward a green and digital economy requires education systems that simultaneously develop sustainability awareness and digital competences.

Within this context, two reference frameworks have been introduced: the European Sustainability Competence Framework (GreenComp) and the Digital Competence Framework for Citizens (DigComp). While GreenComp defines the knowledge, skills, and attitudes needed to think and act for sustainability, DigComp specifies how citizens can use digital tools critically and creatively.

This paper proposes an integrated pedagogical approach that bridges these frameworks to support digital sustainability education. A competence-mapping demonstrates how each sustainability competence can be strengthened through digital skills. The integration is illustrated through the educational ecosystem developed in the EU-funded "Digital Deep tech Driven Circular Economy"-3D CIRCULAR project, which applies this dual-competence approach to advanced curricula for green and digital transformation. By aligning the GreenComp and DigComp frameworks, 3D-CIRCULAR introduces a holistic approach to "digital sustainability education", empowering learners to use digital innovation as a driver for environmental and social change.»

P.20 <u>Aikaterini – Georgia Mavroeidi</u>, Christos Kalloniatis. Gamification, AI, and Accessibility in education: Towards adaptive and inclusive learning systems. e-Society Conference 2026. (accepted)

Abstract: «Gamification, artificial intelligence (AI), and accessibility are three important areas for digital education. Gamification has been widely used to improve motivation and engagement, while AI enables personalization by adapting content and feedback to individual learners. In addition, accessibility remains a main concern, as learning environments must be designed to support students with diverse needs from the first phases of designing systems. Although these areas have been studied separately, their combination is less explored and remains an area that requires further analysis. This paper proposes a conceptual design that extends the traditional didactic triangle by including gamification and AI as mediating elements between teacher, learner, and knowledge, with accessibility embedded across all components. To illustrate how this model could be implemented, a reference architecture is presented, covering user interaction, shared services, application layer, content delivery, and infrastructure. Together, these elements provide an approach for building learning systems that are not only engaging but also adaptive by design. The contribution of this work concerns the connection of three topics of research offering a framework that can inform future efforts to create digital education environments that are effective and sustainable.»

P.19 Aikaterini – Georgia Mavroeidi, Vasiliki Diamantopoulou, Christos Kalloniatis, Stefanos Gritzalis. Enhancing User Privacy in Gamified Applications: Challenges and Design Strategies. Information. MDPI. 2025. (accepted)

Abstract: «Gamified applications are widely used across domains such as education, healthcare, and workplace, offering a way to improve user engagement and motivation. However, their use of personal data collection and processing introduces significant privacy challenges. This paper examines how gamified systems manage user data, identifies potential privacy risks, and presents possible strategies to safeguard users. To this end, we illustrate a gamified interaction diagram into its core modules and associated data elements, through a co-occurrence analysis matrix to highlight interdependencies and privacy critical areas. Building on this analysis, we explain how data elements connect to privacy risks and outline possible safeguards. The findings present that while gamification

successfully raises user motivation and engagement and increases participation, it synchronously creates more opportunities for privacy violations. The study concludes by highlighting the importance of integrating privacy-by-design principles when developing gamified systems.» Angeliki Kitsiou, Michail Pantelelis, Panagis-Angelos Mazarakis, Aikaterini - Georgia P.18 Mavroeidi, Stavros Simou, Eleni Tzortzaki, Stavros Stavridis, Giannis Koutzamanis, Christos Kalloniatis. Self-Adaptive Privacy in Cloud Computing Environments: Developing an Integrated Framework and a Beta Tool for Social Media Platforms. Electronics Journal, 14, 7 (2025). https://doi.org/10.3390/electronics14071412 Abstract: «This study addresses the growing complexity of privacy protection in cloud computing environments (CCEs) by introducing a comprehensive socio-technical framework for self-adaptive privacy, complemented by an AI-driven beta tool designed for social media platforms. The framework's three-stage structure—social, technical, and infrastructural—integrates context-aware privacy controls, dynamic risk assessments, and scalable implementation strategies. Key benefits include enhanced user-centric privacy management through customizable group settings and adaptive controls that respect diverse social identities. The beta tool operationalizes these features via a profile store for structured preference management and a recommendation engine that delivers real-time, AI-powered privacy suggestions tailored to individual contexts. Additionally, the tool's safety scoring system (0–100) empowers developers and guides them in designing effective privacy solutions and mitigating risks. By bridging social context awareness with technical and infrastructural innovation, this framework significantly improves privacy adaptability, regulatory compliance, and user empowerment in CCEs. It provides a robust foundation for developing scalable and responsive privacy solutions tailored to evolving user needs.» Angeliki Kitsiou, Maria Sideri, Michail Pantelelis, Stavros Simou, Aikaterini - Georgia P.17 Mavroeidi, Katerina Vgena, Eleni Tzortzaki, Christos Kalloniatis. Developers' mindset on self-adaptive privacy and its requirements for cloud computing environments. International Journal of Information Security, 24, 38 (2025). https://doi.org/10.1007/s10207-024-00943-8 Abstract: «Privacy design in cloud systems remains complex, with unclear processes and a mismatch between privacy engineering and cloud integration challenges. Developers play a pivotal yet underexplored role in this landscape. This study investigates developers' perspectives on privacy, focusing on self-adaptive privacy in cloud environments. Through six(6) qualitative interviews with developers from Greece, Spain, and the UK, the study uncovers valuable insights into their challenges and perspectives, contributing to the establishment of actionable privacy goals and a taxonomy of self-adaptive privacy requirements. The findings underscore the need for clearer guidance and actionable insights for developers to enhance privacy practices in cloud development.» Cao, Quang, Katerina Vgena, Aikaterini-Georgia Mavroeidi, Christos Kalloniatis, Xun Yi, P.16 and Son Hoang Dau. "Architecture for Protecting Data Privacy in Decentralized Social Networks." arXiv e-prints (2024): arXiv-2409. https://arxiv.org/abs/2409.18360

Abstract: «Centralized social networks have experienced a transformative impact on our digital era communication, connection, and information-sharing information. However, it has also raised significant concerns regarding users' privacy and individual rights. In response to these concerns, this paper proposes a novel Decentralized Social Network employing Blockchain technology and Decentralized Storage Networks completed by Access Control Smart Contracts. The initial phase comprises a comprehensive literature review, delving into decentralized social networks, explaining the review methodology, and presenting the resulting findings. Building upon these findings and an analysis of previous research gaps, we propose a novel architecture for decentralized social networks. In conclusion, the principal results highlight the benefit of our decentralized social network to protect user privacy. Moreover, the users have all rights to their posted information following the General Data Protection Regulation (GDPR).»

P.15 Angeliki Kitsiou, Maria Sideri, Michail Pantelelis, Stavros Simou, <u>Aikaterini – Georgia Mavroeidi</u>, Katerina Vgena, Eleni Tzortzaki, Christos Kalloniatis. Specification of SelfAdaptive Privacy-Related Requirements within Cloud Computing Environments (CCE).

Sensors, 24(10), 3227. 2024. https://doi.org/10.3390/s24103227

Abstract: «This paper presents a novel approach to address the challenges of self-adaptive privacy in cloud computing environments (CCE). Under the Cloud-InSPiRe project, the aim is to provide an interdisciplinary framework and a beta-version tool for self-adaptive privacy design, effectively focusing on the integration of technical measures with social needs. To address that, a pilot taxonomy that aligns technical, infrastructural, and social requirements is proposed after two supplementary surveys that have been conducted, focusing on users' privacy needs and developers' perspectives on self-adaptive privacy. Through the integration of users' social identity-based practices and developers' insights, the taxonomy aims to provide clear guidance for developers, ensuring compliance with regulatory standards and fostering a user-centric approach to self-adaptive privacy design tailored to diverse user groups, ultimately enhancing satisfaction and confidence in cloud services.

P.14 Stavros Simou, <u>Aikaterini – Georgia Mavroeidi</u>, Christos Kalloniatis. "Review on Privacy and Trust Methodologies in Cloud Computing", In: Katsikas, S., et al. Computer Security. ESORICS 2023 International Workshops. ESORICS 2023. Lecture Notes in Computer Science, vol 14398. Springer, Cham. <a href="https://doi.org/10.1007/978-3-031-54204-6">https://doi.org/10.1007/978-3-031-54204-6</a> 29

Abstract: «The vast adoption of cloud computing has led to a new content in relation to privacy and security. Personal information is no longer as safe as we think and can be altered. In addition, Cloud Service Providers (CSPs) are still looking for new ways to raise the level of trust in order to gain popularity and increase their number of users. In this paper, a systematic literature review was carried out to identify the different methodologies, models and frameworks regarding privacy engineering and trust in cloud computing. A detailed review is produced on the specific area to bring forward all the work that has been carried out the recent years using a methodology with a number of different steps and criteria. Based on the findings from the literature review, we present the state-of-the-art on privacy and trust methodologies in cloud computing and we discuss the existing conventional tools that can assist software designers and developers.»

P.13 Angeliki Kitsiou, Maria Sideri, <u>Aikaterini – Georgia Mavroeidi</u>, Katerina Vgena, Eleni Tzortzaki, Michail Pantelelis, Stavros Simou, Christos Kalloniatis. "Social Requirements for designing Self-Adaptive Privacy Schemes in Cloud", IARIA Annual Congress on Frontiers in Science, Technology, Services, and Applications (IARIA2023), ISBN: 978-168558-089-6

Abstract: «This paper examines the self-presentation and self-disclosure practices of cloud services' users that are related to the social group they belong to, through a quantitative survey addressed to the student population of three Universities in Greece, England and Spain. Findings provide valuable insights regarding social identity-based users' practices and indicate important information for the design of self-adaptive privacy schemes within cloud services, setting specific social requirements based on users' social groups belonging.»

P.12 Katerina Mavroeidi, Dora Chatzi Rodopoulou, Athanasia Kadrefi, Christos Kalloniatis, Angeliki Kitsiou, Maria Koltsaki, Anna Kyriakaki, Mania Mavri, Evangelia Proiou, Maria Sideri, Stavros Simou, Stavros Stavridis, and Katerina Vgena, "Aegean Digital Tourism Tank and 3D printing realities for the advancement of the Cultural Organizations of the North Aegean. Posthuman Perspectives", 13th Beyond Humanism Conference (BHC), July 2023, Mytilene, Greece, <a href="https://ct.aegean.gr/data/13th-BHC-2ndMFF-PROGRAMME-FINAL-2.pdf">https://ct.aegean.gr/data/13th-BHC-2ndMFF-PROGRAMME-FINAL-2.pdf</a>

Abstract: «This work aims to present the outcomes of a creative initiative the AegeanDigital Tourism Tank, a research project under the "Regional Excellence" Action of the Operational Program "Competitiveness, Entrepreneurship and Innovation". This focused on the digitization and creation of 3D models for the cultural organizations of the North Aegean under unified procedures, so as to provide a transformative framework within these organizations that supports new openings for digital Heritage.

The outcomes, besides fostering new forms of creativity, indicate that cultural organizations are enabled to amplify their potential by offering new avenues for preservation, research and education. The results extend the reach of the cultural organizations of the North Aegean by enhancing accessibility and facilitating conservation efforts. Furthermore, the transformative potential of technology is highlighted, in enriching human experiences, promoting inclusivity, fostering collaboration by allowing wider audiences to engage with digital heritage. This engagement fosters a sense of agency and

empowers individuals to navigate and shape the evolving relationship between humans and technology. In this regard, the outcomes of the AegeanDigital Tourism Tank encourage the cultural organizations to harness technology as a tool for enhancing human potential, advancing creativity, and cultivating meaningful connections between individuals, communities, and digital heritage in a Posthumanist context.» Dora Chatzi Rodopoulou, Athanasia Kadrefi, Christos Kalloniatis, Angeliki Kitsiou, Maria P.11 Koltsaki, Anna Kyriakaki, Katerina Mavroeidi, Evangelia Proiou, Maria Sideri, Stavros Simou, Stavros Stavridis, Katerina Vgena, and Mania Mavri. " AegeanDigital Tourism Tank: Experiences and Products for enhancing the sustainable preservation of Digital Heritage of Cultural Organizations of North Aegean", In: Moropoulou, A., Georgopoulos, A., Ioannides, M., Doulamis, A., Lampropoulos, K., Ronchi, A. (eds) Transdisciplinary Multispectral Modeling and Cooperation for the Preservation Cultural Heritage. TMM\_CH 2023. Communications in Computer and Information Science, vol 1889. March 2023, Springer, Cham. (pp. 401-410). https://doi.org/10.1007/978-3-031-42300-0\_33 Abstract: « Aiming at achieving cultural heritage digitization, 3D scanning, modelling and printing for cultural organizations are considered as innovative and ef-fective practices for the restoration, presentation, and production of cultural goods, while offering a robust foundation for preserving the cultural herit-age assets. Many approaches have been introduced in 3D area regarding in-tangible heritage, thus a lack of standards and proven methodologies has been indicated. In this regard, the AegeanDigital Tourism Tank research ac-tion intends to establish an expert-driven methodology for managing holis-tic and user-oriented 3D scanning, modelling and printing. The contribution of this holistic approach not only enhances the preservation of digital Her-itage in the North Aegean, but also increases the scientific, economic and social impact of advanced services to the potential audiences of the cultural organizations of North Aegean.» P.10 Angeliki Kitsiou, Michail Pantelelis, Aikaterini-Georgia Mavroeidi, Maria Sideri, Stavros Simou, Aikaterini Vgena, Eleni Tzortzaki and Christos Kalloniatis,. 2023. Self-Adaptive Privacy in Cloud Computing: An overview under an interdisciplinary spectrum. In Proceedings of the 26th Pan-Hellenic Conference on Informatics (PCI '22). Association for Computing Machinery, New York. NY, USA. 64-69. https://doi.org/10.1145/3575879.3575968 Abstract: « The rapid development of cloud computing environments has resulted in various advances and personalized services for users, raising thus several privacy issues. Towards this, research focused on privacy safeguard in the cloud, indicating solutions on the area of self-adaptive privacy. A detailed review is produced to bring forward the carried out work and to analyze it in terms of privacy interdisciplinary standards. In this regard, our work presents the existing self-adaptive privacy approaches and identifies the context for which they have been developed. Moreover, a corresponding classification scheme is provided. The findings give also insights on the proposed tools, which were critically analyzed. This review aims at indicating the developments and limitations of the area, providing potentials of future work in less discussed aspects of the self-adaptive privacy in cloud under an interdisciplinary point of view.» Ruggiu, Daniele, Vincent Blok, Christopher Coenen, Christos Kalloniatis, Angeliki Kitsiou, P.9 Aikaterini-Georgia Mavroeidi, Simone Milani, and Andrea Sitzia. Responsible innovation

at work: gamification, public engagement, and privacy by design. Journal of Responsible Innovation, 9(3), 315–343. https://doi.org/10.1080/23299460.2022.2076985

Abstract: «Public engagement is crucial to strengthen responsibility frameworks in highly innovative contexts, including as part of business organisations. One particular innovation that calls for public engagement is gamification. Gamification fosters changes in working practices to improve the organisation, efficiency and productivity of a business by introducing gratification and engagement mechanisms in non-gaming contexts. Gamification modifies the workforce's perception of constraints and stimulates the voluntary assumption of best practices to the benefit of employees and enterprises alike. Here, we broadly discuss the use of gamification at work. Indeed, gamification raises several concerns about privacy, due to the massive collection, storage and processing of data, and about the freedom of employees: as the level of data protection decreases, so too does workers' self-determination. We argue that the implementation of privacy by design can not only strengthen autonomy via data protection but also develop more viable instances of RRI in accordance with human rights.»

P.8 Vgena, Katerina, <u>Aikaterini Georgia Mavroeidi</u>, Angeliki Kitsiou, and Christos Kalloniatis. Can social gamification and privacy co-exist? Identifying the major concerns. In Proceedings of the 25th Pan-Hellenic Conference on Informatics (PCI '21). Association for Computing Machinery, New York, NY, USA, 178–183. <a href="https://doi.org/10.1145/3503823.3503857">https://doi.org/10.1145/3503823.3503857</a>

Abstract: «The provision of attractive online services in various socio-economical domains offers several benefits in users' activities. Gamification is an acknowledged method for designing such services, as with the implementation of game elements, a gameful interactive environment can be developed. Its implementation has been recorded in sectors, such as education, health, and social media. Specifically, the interrelation of social media and gamification, which increases users' engagement, has been indicated in the new notion of social gamification. Under this engagement, users' information is collected, stored and processed, often leading to their privacy violation. The protection of users' privacy is an important aspect to be considered while using gamification in social media. Considering the increasing use of social media, Social Gamification should focus not only on users' engagement but also on their privacy protection. In this work, the interdependencies among game elements and users' social attributes are identified, as principles of social gamification. Taking under consideration that the recorded privacy violations occur individually by these principles, the aim is to examine if social gamification creates more implications on privacy, by analyzing these two areas by one common interrelation.»

P.7 <u>Mavroeidi Aikaterini – Georgia</u>, Kitsiou Aggeliki, Kalloniatis Christos. Gamification: A Necessary Element for Designing Privacy Training Programs, Chapter in Book, The Role of Gamification in Software Development Lifecycle, IntechOpen, April 2021, doi: 10.5772/intechopen.97420

Abstract: «The benefits, deriving from utilizing new Information and Communication Technologies (ICTs), such as Internet of Things or cloud computing, raise at the same time several privacy risks and concerns for users. Despite the fact that users' inability to protect their privacy has been recognized, hence users do not get involved in processes for enhancing their awareness on such issues. However, in order to protect their fundamental

right of privacy and to manage it in a practical way when using ICT, privacy literacy is crucial. Users should be trained on privacy issues through appropriate educational programs. Specifically, the development of instructional simulation programs could be of great importance. Relevant methodologies for the development of such services have been recorded in previous literature. Since the concept of training is advanced by creating attractive interaction environments, the educational privacy process could be also more efficient. Towards this, the implementation of game elements serves that purpose, contributing to the design of gameful educational programs. However, despite its benefits, gamification has been noticed to be used more as a tool rather than a concept which could be included in instructional methods. Thus, in this work, gamification features are explained to highlight their importance along with the recorded in the literature educational methods and privacy awareness issues.»

P.6 Mavroeidi Aikaterini – Georgia, Kitsiou Aggeliki, Kalloniatis Christos. The Role of Gamification in Privacy Protection and User Engagement, Chapter in Book "Ethics, Laws, and Policies for Privacy, Security, and Liability", IntechOpen, February 2020, doi: 10.5772/intechopen.91159

Abstract: «The interaction between users and several technologies has rapidly increased. In people's daily habits, the use of several applications for different reasons has been introduced. The provision of attractive services is an important aspect that it should be considered during their design. The implementation of gamification supports this, while game elements create a more entertaining and appealing environment. At the same time, due to the collection and record of users' information within them, security and privacy are needed to be considered as well, in order for these technologies to ensure a minimum level of security and protection of users' information. Users, on the other hand, should be aware of their security and privacy, so as to recognize how they can be protected, while using gamified services. In this work, the relation between privacy and gamified applications, regarding both the software developers and the users, is discussed, leading to the necessity not only of designing privacy-friendly systems but also of educating users through gamification on privacy issues.»

P.5 Aikaterini-Georgia Mavroeidi, Angeliki Kitsiou and Christos Kalloniatis. The Interrelation of Game Elements and Privacy Requirements for the Design of a System: A Metamodel. In: Gritzalis, S., Weippl, E., Katsikas, S., Anderst-Kotsis, G., Tjoa, A., Khalil, I. (eds) Trust, Privacy and Security in Digital Business. TrustBus 2019. Lecture Notes in Computer Science(), vol 11711. Springer, Cham. <a href="https://doi.org/10.1007/978-3-030-27813-7">https://doi.org/10.1007/978-3-030-27813-7</a> 8

Abstract: « Due to the increased use of Information and Communication Technologies (ICTs), several methods have been developed in order to create more attractive interaction environments, so that users' interest on using services to be maintained. Gamification consists a method, aiming to increase users' engagement by implementing game design elements in services that are not games. While using all these services, users' information is recorded and monitored. Except the importance of increasing the use of ICTs, it is crucial to ensure that users' personal information will be protected. To achieve it, privacy issues should be considered by software developers during the design phase of a service, in parallel with the game design elements. Based on our previous research, it was identified that the relation between gamification and privacy has not been examined sufficiently. As

a result, a detailed analysis was conducted. In this work, in order to examine this relation in existent services, a detailed description of gamified services in several sectors has been conducted. Afterwards, based on the results of the conducted research and the examination of existent gamified services, a metamodel is presented, which describes how each game element conflicts with privacy requirements. By using this metamodel, software developers will be able to identify which mechanisms should be implemented in such services, so that users' privacy to be protected in parallel. The development of such services ensures the trust between users and them and consequently, users' engagements will be increased.»

P.4 Dionisios Lampropoulos, Christoforos Tsagaridis, Elisavet Psoni, Christos Kakalekos,

<u>Aikaterini-Georgia Mavroeidi</u> and Angeliki Kitsiou. *Gamification in Cultural Industries: The Museum of Industrial Olive-Oil Production of Lesvos case*, CICMS2019-Cultural Informatics,

Communication & Media Studies Mytilene, Lesvos, 13-15 June, 2019,

(<a href="http://cicms2019.aegean.gr/">http://cicms2019.aegean.gr/</a>)

Abstract: « The cultural and creative industries are major drivers of the economies of developed as well as developing countries. In addition to their economic benefits, the cultural and creative industries generate nonmonetary value that contribute significantly to achieving people-centered, inclusive and sustainable development. Especially, cultural tourism deriving from cultural industries has become strategic asset for local economies. In this respect, our work focuses on the Museum of Industrial Olive-Oil Production of Lesvos, which presents the industrial phase of olive-oil production in Greece, highlighting Lesvos industrial heritage in this sector and incorporating it into the broader architectural, social and cultural context of the period. This cultural organization provides a wide range of cultural and creative activities combining the creation, production and distribution of cultural content, while it is a driving force for local economic growth, especially after the refugee crisis in 2015. Some of these activities concern educational programmes with games for schools and group visits. To enhance these activities, our work suggests the use of gamification method, which has been implemented in Cultural Informatics and can increase users' motivation and engagement with culture and cultural activities. Towards this, our work presents a gamified application that can be utilized by the Museum in order for its cultural products to be disseminated through a more entertaining and educational way.»

P.3 Mavroeidi Aikaterini – Georgia, Kitsiou Angeliki, Kalloniatis Christos, Gritzalis Stefanos.
 Gamification vs. Privacy: Identifying and Analysing the Major Concerns, Future Internet 2019, 11, 67.MDPI <a href="https://doi.org/10.3390/fi11030067">https://doi.org/10.3390/fi11030067</a>

Abstract: « Gamification, the use of game design elements in applications that are not games, has been developed to provide attractive environments and maintain user interest in several domains. In domains such as education, marketing and health, where gamification techniques are applied, user engagement in applications has increased. In these applications the protection of users' privacy is an important aspect to consider, due to the applications obtaining a record of the personal information of their users. Thus, the purpose of this paper is to identify if applications where gamification is applied do respect users' privacy. For the accomplishment of this aim, two main steps have been implemented.

Since the main principle of gamification is the existence of game elements, the first step was to identify the set of game elements recorded in the literature that are commonly applied in various applications. Afterwards, an examination of the relationship between these elements and privacy requirements was implemented in order to identify which elements conflict with the privacy requirements leading to potential privacy violations and which elements do not. A conceptual model according to the results of this examination was designed, which presents how elements conflict with requirements. Based on the results, there are indeed game elements which can lead to privacy violations. The results of this work provide valuable guidance to software developers, especially during the design stages of gamified applications since it helps them to consider the protection of users' privacy in parallel from the early stages of the application development onwards.»

P.2 Pattakou Argyri, <u>Mavroeidi Aikaterini – Georgia</u>, Diamantopoulou Vasiliki, Kalloniatis Christos, Gritzalis Stefanos. *Towards the Design of Usable Privacy by Design Methodologies*, 2018 IEEE 5th International Workshop on Evolving Security & Privacy Requirements Engineering (ESPRE), Banff, AB, Canada, 2018, pp. 1-8, doi: 10.1109/ESPRE.2018.00007.

Abstract: «As privacy engineering gains much attention, recently literature records a number of methodologies that support software de-signers to model privacy – aware systems starting from the early stages of the software lifecycle until the late design stages prior to implementation. However, in order for these methodologies to be used and applied successfully from system engineers, it is important to be developed following a number of existing usabil-ity criteria for increasing designers' acceptance and performance. In this paper, we, initially, identify the set of usability criteria presented in the respective literature and examine how the existing privacy requirement engineering methodologies con-form with these usability criteria. The results show that most methodologies conform with a number of criteria but still there are opportunities for further improvements.»

P.1 <u>Mavroeidi Aikaterini – Georgia</u>, Kitsiou Aggeliki, Kalloniatis Christos, Gritzalis Stefanos.

The role of Gamification in Cultural Informatics, CICMS2018-Cultural Informatics,
Communication & Media Studies Kuşadası, TURKEY, 3-4 May, 2018,

(<a href="http://cicms2018.com/">http://cicms2018.com/</a>)

Abstract: «The prevalence of Information and Communication Technologies (ICTs) has intensified information and communication broadcast, both in digital and real life, while it raises several risks and concerns. In this respect, several types of research have shown that users' awareness increase is of major importance, focusing on the crucial role of educational and compelling interaction environments. Towards this, respective literature highlights the role of gamification- the use of game design elements in applications that are not games- in several domains such as education, marketing, health, showing that users' engagement in applications, where gamification techniques are applied, has been increased. Gamified applications aim to motivate users to use technology and to increase the quantity and quality of the given activities' output. This paper examines existing implications regarding gamification, focusing on the field of Cultural Informatics, since gamified applications are already utilised so as culture to be disseminated. The paper aims to enhance literature, by presenting gamification utilisation more methodically within Cultural Informatics.»