CALL FOR PAPERS

Mark your calendars for **Eclipse SAAM on Cloud 2022 on October 25**. The conference will bring together industry experts and researchers working on innovative software and systems solutions for the next generation of edge-cloud computing continuum, specifically focusing on Security and privacy, Artificial Intelligence, Architecture, Modelling and related challenges. This year, the event is co-located with EclipseCon 2022. This will be a great opportunity to meet our dynamic open source community.

BACKGROUND

The rapid growth of global data volume creates an increasing demand for autonomous, intelligent, secure, sustainable, energy-efficient and interoperable cloud infrastructures and services for new businesses. These businesses require drastic innovations that cross several research and innovation domains. Current scenarios are characterized by efficient development of edge/cloud applications and services through autonomous, AI-based management and control of the underlying infrastructure. This is done to tackle the constantly increasing demand for the optimization of runtime resources in the edge-to-cloud continuum against critical runtime objectives, such as performance, throughput, security, and energy, while preserving the scalability of existing IoT-edge applications and services, as well as security and reliability of data and software.

A multitude of novel technologies – such as edge computing, artificial intelligence, big data analytics, and security, privacy, and trust schemes – are being investigated in order to be adopted in the current ecosystem-wide arrangements, standards, and tool chains. Anyone working in these research areas is invited to present their work to the community – industry, standardisation and open-source bodies – on **October 25th** at the **Eclipse SAAM on Cloud** conference.

IMPORTANT DATES

~~Monday September 5~~	Thursday September 15	Monday October 3	Tuesday October 18	Tuesday October 25
~~Paper Submission Initial Deadline~~	Paper Submission Extended Deadline	Acceptance Notification	Camera-Ready Paper Submission	Conference Date

TECHNICAL TOPICS

We encourage submissions that report on constructive, design-oriented research on innovative artefacts, such as software, models, and methods related to the conference theme. The conference is focused on, but not limited to the following topics of interest.

Cloud Computing Security and Privacy	Cloud Computing Architecture	Artificial Intelligence in Cloud Computing	Modelling for Cloud Systems and Services
• Security practices, and architectures • Secure discovery and authentication • Cloud-centric threat models • Cloud cryptography • Cloud access control and key management • Secure computation outsourcing • Integrity and verifiable computation • Computation of encrypted data • Secure cloud resource virtualization mechanisms • Trusted computing technology • Failure and vulnerability detection and prediction • Energy/cost/efficiency of security in clouds • Availability, recovery and auditing • Network security mechanisms (e.g., IDS etc.) for the cloud • Security and privacy of federated clouds and edge/fog computing	• Cloud-oriented architecture: frameworks and methodologies • Cloud and edge computing architectures for smart applications • Microservices, monitoring and scalability of smart applications • Service oriented architectures for smart applications • Enterprise cloud computing ecosystem: technology, architecture and applications • SaaS and cloud computing • PaaS and IaaS cloud computing service models • Serverless cloud computing architecture and FaaS model • Building cloud computing solutions at scale • The Cloud-to-Thing continuum: opportunities and challenges • Green cloud computing architecture • Containerization and cloud deployment model	• Intelligent distributed architectures and infrastructures • Context-awareness and location- awareness • Machine learning and deep learning approaches • AI, deep learning for predictive security • Challenges, use cases, and solutions for industry and society • Federated learning in the cloud-edge continuum • AI-powered resource allocation and energy optimization in the cloud • Deploying AI models in the clouds: tools, techniques and approaches • Distributed training of deep learning models • Large language models in the cloud • Real-time processing with AI on the cloud • AI-powered data management in the cloud • Leveraging cloud for advancing transparency and explainability of AI models • AI accelerators on the cloud (e.g., TPUs)	• Modelling languages and tools • Verification & validation approaches • Modelling for smart solutions • Security & privacy modelling • Statistical models checking • Modelling adaptive IoT systems • Runtime models • Cloud programming and deployment models • Power-aware profiling, modelling, and optimization for clouds • Consistency, fault tolerance, and reliability models for clouds • Cloud traffic characterization and measurements • On-demand cloud computing models • Challenges, use cases, and solutions for industry and society • Service-level agreements, business models, and pricing policies for cloud computing • Open API and service orchestration on cloud platforms

SUBMISSION GUIDELINES

You are invited to submit papers for presentation to participants from the research community, industry and standardization bodies and to exchange ideas for future joint research activities. We welcome all submissions and do not require projects to be associated with the Eclipse Foundation or its projects. Final date for submissions is **September 15, 2022**. The papers will be peer reviewed. Selected papers will be published under the Creative Commons License 4.0 on ceur-ws.org.

We encourage submissions of two types of papers: short papers (maximum of 6 pages) and full research papers (maximum of 12 pages) in accordance with the format recommendations below. A short paper can represent research-in-progress with initial or expected results, while a full research paper should report on results and discuss them in relation to the state-of-the-art. We encourage, regardless, a concise writing style. Papers must be written in a two-column format. It is strongly recommended to use the IEEE A4 templates that are available from the IEEE site.

All submissions must be in PDF -format and must be submitted online to the EasyChair portal.

TECHNICAL PROGRAM COMMITTEE

The Program Committee is an independent panel of expert volunteers and as such will do their best to judge papers objectively and on the principle of a level playing field for all.

We are inviting additional members to the Program Committee and welcome nominations from the community.

- Alessandra Bagnato, Softeam, France
- Alexandros Chatzigeorgiou, UoM, Greece
- Athanasios Salamanis, CERTH/ITI, Greece
- Benoit Combemale, INRIA, France
- Dimitrios Tsoukalas, CERTH/ITI, Greece
- Dimitris Syrivellis, NVIDIA, Israel
- Enrico Ferrera, LINKS Foundation, Italy
- Evi Karakozoglou, Google Cloud, UK
- Fulya Horozal, ATB, Germany
- Jean-Yves Rigolet, IBM, France
- Jose Barata, FCT NOVA, Portugal
- Kevin Nagorny, ATB, Germany
- Marco Jahn, Eclipse Foundation, Germany
- Maria-Teresa Delgado, Eclipse Foundation, Mexico
- Marija Jankovic, CERTH/ITI, Greece
- Miltiadis Siavvas, CERTH/ITI, Greece
- Teemu Karvonen, University of Oulu, Finland
- Tero Päivärinta, University of Oulu, Finland

CONFERENCE CO-CHAIRS

- Sebastian Scholze, ATB, Germany
- Dionysios Kehagias,CERTH/ITI, Greece
- Philippe Krief, Eclipse Foundation, France

The Eclipse SAAM on Cloud 2022 conference is co-organized by the Eclipse Foundation, ATB and CERTH/ITI.

PROGRAM COMMITTEE CHAIR

- Fulya Horozal, ATB, Germany
- Marija Jankovic, CERTH/ITI, Greece
- Marco Jahn, Eclipse Foundation, Germany

CONTACT US

If you have questions about the conference or the CFP, please contact research@eclipse.org.

Conference Website: https://events.eclipse.org/2022/saam-cloud/