

6th Conference on Blockchain Research & Applications for Innovative Networks and Services

BRAINS
2024



#BRAINS2024

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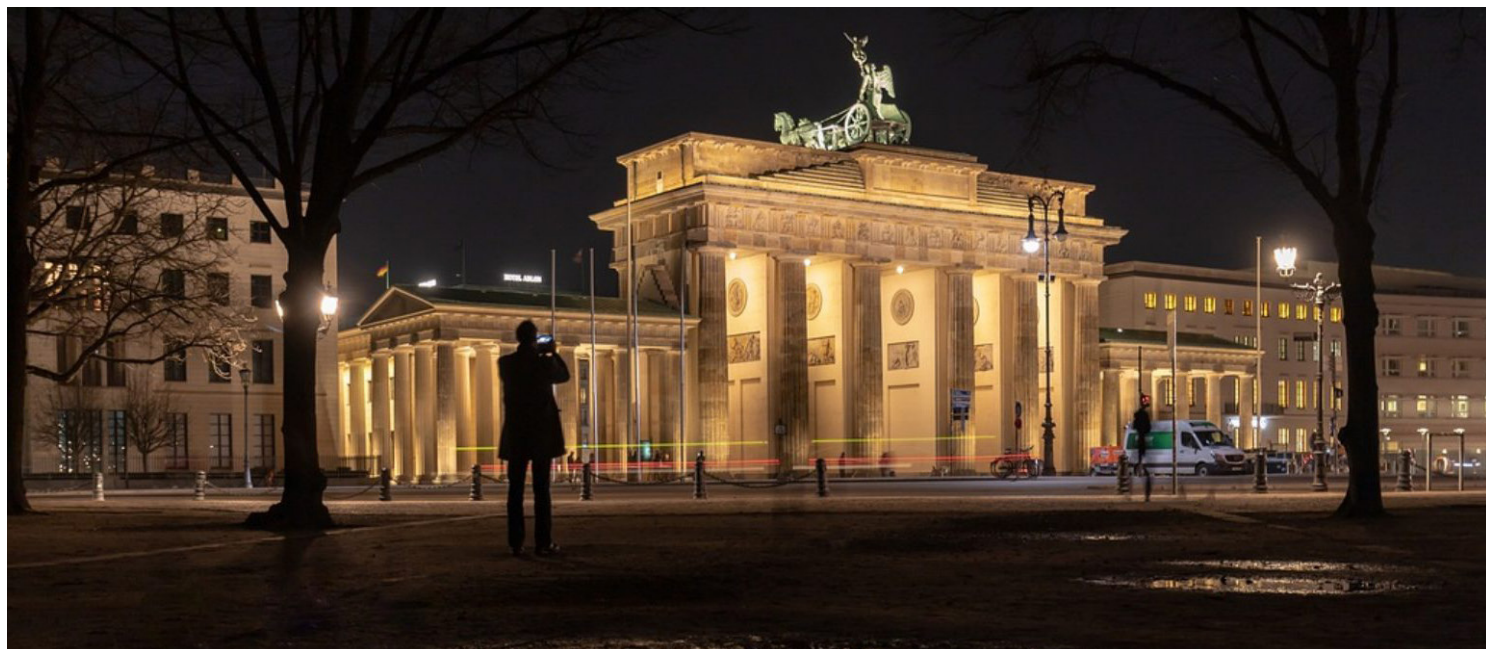
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Program BRAINS 2024

	October 9, 2024	October 10, 2024	October 11, 2024
9:00	Welcome & Session 1 Scalability & Interoperability	Session 5 Cloud & Cellular Networks	Session 10 Healthcare & DeSci
10:30	Poster/Demo #1 & Coffee Break	Poster/Demo #2 & Coffee Break	Poster/Demo #2 & Coffee Break
11:00	Keynote #1 Further Decentralizing Decentralized Finance	Keynote #2 Building a decentralized infrastructure for Europe to support the EU Digital Identity and EU Digital Product Passport	Keynote #3 Blockchain Application Design and Development: From Architecture to Analytics
12:00	Lunch Break	Lunch Break	Lunch Break
13:15	Session 2 Machine Learning	Session 6 DeFi & Cryptocurrencies II	Session 11 Fundamentals
14:45	Poster/Demo #1 & Coffee Break	Poster/Demo #2 & Coffee Break	Conference Closure + Awards
15:15	Session 3 DeFi & Cryptocurrencies I	Session 7 Simulations and Performances	
16:15		Session 8 Secure Data Management	
16:45	Poster/Demo #1 & Coffee Break	Coffee Break	
17:00			
17:15	Session 4 Decentralized Credentials I	Session 9 Decentralized Credentials II	
18:15	Welcome Reception		
19:15		Gala Dinner	





Welcome Message from the General Chairs

It is our great pleasure to welcome you to the 6th Conference on Blockchain Research & Applications for Innovative Networks and Services (BRAINS 2024), which will take place from October 9 to October 11 in the vibrant city of Berlin. We are excited to bring together a diverse and international community of experts, scholars, and practitioners who are pushing the boundaries of blockchain technologies.

Blockchain continues to revolutionize industries and services, offering innovative solutions that go beyond traditional systems. At BRAINS 2024, we will explore the latest advancements in areas such as smart contracts, decentralized finance (DeFi), scalability, and a range of other cutting-edge topics that are shaping the future of blockchain applications. Our goal is to foster collaboration and spark new ideas that will lead to breakthrough technologies and transformative business models.

We are especially thrilled to host this year's conference in Berlin, a city renowned not only for its rich history and culture but also as a global hub for innovation and technology. Berlin has emerged as one of the leading cities in Europe's blockchain and startup ecosystem, attracting a vibrant community of entrepreneurs, developers, and visionaries who are shaping the future of decentralized technologies. The city's dynamic and collaborative atmosphere makes it the perfect venue for BRAINS 2024, where we hope the exciting environment will inspire new insights and fruitful collaborations.

We would like to express our deepest gratitude to the Program Chairs Yackolley Amoussou-Guenou, Antonella Del Pozzo, Philip Raschke, and Jonathan Heiß, whose expertise and dedication have been instrumental in curating an excellent technical program. Special thanks also go to our Local Arrangement Chairs, Sandra Wild and Andrea Hahn, for their tireless efforts in organizing this event in Berlin. We are grateful to the Demos and Poster Chairs, Sebastian Werner and Giovanni Farina, for ensuring a dynamic and interactive experience for all attendees.

In particular, we extend our heartfelt thanks to our Overall Chair, Aziza Lounis, who have guided the entire conference to success. Additional thanks are due to Romaric Ludinard, Jakob Zwiers, Yang Chen, Müge Sayit, Nazih Salhab, and Elia Kallas for their significant contributions and support.

BRAINS 2024 will be held under the patronage of Deutsche Telekom and CEA-List. We warmly thank both for their strong support to the Blockchain technologies and to the BRAINS community.

We look forward to insightful discussions, fruitful exchanges, and forging new connections that will drive the field forward. Thank you for joining us for what promises to be an exciting and enriching experience.

Warmest regards,



Emmanuel Bertin
(Orange Innovation, France)
General Co-Chair



Emmanuelle Anceaume
(IRISA, France)
General Co-Chair



Axel Küpper
(TU Berlin, Germany)
General Co-Chair



Welcome Message from the TPC Chairs

This year we have the great pleasure to welcome three keynote speakers who will provide us with unique insights into the world of decentralised finance on top of blockchains with Sergio Rajsbaum (Professor at UNAM, Mexico), on digital identity and digital passport with Daniel Du Seuil (Research coordinator Cyber3lab at Howest, Belgium), and on the design of blockchain applications blockchains with Ingo M. Weber (Prof at TU Munich and Director for the Digital Transformation and IT Infrastrure).

This year, we reviewed 93 submissions, with an acceptance rate of 58%, which allowed BRAINS 2024 to feature a scientific program comprising 19 full papers, 18 short papers, 1 invited paper, 11 demos, and 10 posters, presented across eleven sessions with authors from all over the world. These sessions will cover a wide array of topics: scalability and interoperability (session #1), machine learning (session #2), DeFi and cryptocurrencies (sessions #3 and #6), decentralised credentials (sessions #4 and #9), cloud and cellular networks (session #5), simulations and performances (session #7), healthcare and DeSci (session #10), and blockchain fundamentals in session #11. We have done our best to ensure that each paper receives as much time as possible to stimulate meaningful discussions and engagement. We also encourage you to explore the poster sessions and demos, which will be showcased during the coffee breaks, offering an excellent opportunity for more interactive discussions with the presenters.

Now, it is your turn to contribute to the success of this conference through your questions, interactions, and discussions. We look forward to your active participation, making of BRAINS 2024 an inspiring and collaborative experience for all.



Yackolley Amoussou-Guenou
(Ponthean-Assas University, France)
TPC Co-Chair



Antonella Del Pozzo
(Paris-Saclay University, France)
TPC Co-Chair



Philip Raschke
(TU Berlin, Germany)
TPC Co-Chair



Jonathan Heiß
(TU Berlin, Germany)
TPC Co-Chair

BRAINS 2024 Keynotes



Further Decentralizing Decentralized Finance **Sergio Rajsbaum**

(Professor at Instituto de matematicas, UNAM, Mexico)

Sergio Rajsbaum received a degree in Computer Engineering from the Universidad Nacional Autónoma de México (UNAM) in 1985, and a PhD in the Computer Science from the Technion, Israel, in 1991. Since then he has been a faculty member at the Instituto de Matemáticas at UNAM. After a postdoc at MIT, he has visited several institutions, currently IRIF-Universite Paris Cite. His research interests are in the theory of distributed computing. He published a book on the topology approach to distributed computability with Maurice Herlihy and Dmitry Kozlov. He has been chair of the Program Committee of conferences such as LATIN, PODC, SIROCCO and a member of the editorial board of IEEE Transactions on Dependable and Secure Computing, Information Processing Letters, and Computer Science Review.

Abstract: Automated market makers (AMMs) are automata that trade assets on one or more blockchains. They typically rely on arbitrage agents to keep prices in line with prices set by a shared reference market. But if there is no reference market? Consider a distributed system where a population of AMMs interact with a population of arbitrage agents who seek to profit from pairwise price differences between randomly-chosen AMMs. We give bounds on convergence rates, arbitrage profits, and the degree to which arbitrageurs can collude to set prices. Joint work with Maurice Herlihy.



Blockchain Application Design and Development: From Architecture to Analytics **Ingo M. Weber**

(Full Professor at Technical University of Munich, Germany)

Ingo Weber is Full Professor in the Computer Science Department, TUM School of Computation, Information and Technology, at Technical University of Munich, Germany. Ingo Weber is also Director of Digital Transformation and ICT Infrastructure at the Fraunhofer-Gesellschaft. Before moving to Munich, he was Full Professor of Software and Business Engineering at Technische Universität Berlin from 2019 to 2022. Before that, he spent ten years in Sydney, Australia, where he worked for the research institutions CSIRO, NICTA and UNSW. In 2009, he received his PhD from the University of Karlsruhe (TH), now KIT, and worked in parallel for SAP Research.

In his research, Ingo Weber focuses on various subfields of computer science, in particular business process management and process mining, software architecture and engineering, DevOps, blockchain, and applied artificial intelligence (AI). He is author of numerous publications and co-author of the textbooks "DevOps: A Software Architect's Perspective" (2015) and "Architecture for Blockchain Applications" (2019).

Abstract: Blockchain has emerged as a decentralized platform for managing digital assets and executing 'smart contracts', i.e., user-defined programs.



On this basis, decentralized applications (Dapps) can be developed and executed.

In this keynote talk, I will provide an overview of what architects and developers need to know in order to build blockchain-based applications, and how it relates to software services. Among others, I will cover architectural concerns and model-driven engineering for blockchain applications, particularly in relation to collaborative business processes. Additionally, I will explore analytics methods for Dapp data, including process mining. This approach offers insights into blockchain-based systems' behavior and performance, enabling the understanding and optimization of processes and Dapps and user behavior."



Building a decentralized infrastructure for Europe to support the EU Digital Identity and EU Digital Product Passport

Daniël Du Seuil

(Research coordinator Cyber3lab at Howest, Belgium)

Daniel Du Seuil acted as the convenor of the European Self Sovereign Identity Framework within the European Blockchain Partnership. This partnership of 30 EU member states and related countries cooperate in the

establishment of a European Blockchain Services Infrastructure (EBSI) that will support the delivery of cross-border digital public services with the highest standards of security and privacy. Daniel supported the taskforce to transform EBSI into the new European Digital Infrastructure Consortium Europeum. Daniel is also the initiator and project co-lead of the Digital Europe Project EBSI-VECTOR, and participating in DEP EBSI-NE and the EUDI LSP DC4EU. He is currently working as research coordinator in Howest University college working on web3 and Cybersecurity, and was the former blockchain program manager of the Flemish government. He is also a member of the EU blockchain observatory and co-initiator of the Belgian blockchain taskforce at Beltug.



Wednesday, October 9, 2024

08:30 - 09:00 Registration

09:00 - 10:30 Welcome & Session #1: Scalability & Interoperability

Session Chair : Antonella Del Pozzo (Paris-Saclay University, France)

Mathematical Modelling of Dual-Layer Byzantine Fault-Tolerant Consensus Process for Optimal Sharding and Mitigation of Blockchain Trilemma

Akihiro Fujihara (Chiba Institute of Technology, Japan)

A Scalable State Sharing Protocol for Low-Resource Validator Nodes in Blockchain Networks

Ruben Hias, Weihong Wang and Jan Vanhoof (KU Leuven, Belgium); Tom Van Cutsem (KU Leuven & Nokia Bell Labs, Belgium)

Threshold Signature in Off-Chain Components to Manage Inter-chain Transactions

Alessandro Bigiotti (University of Camerino, Italy); Leonardo Mostarda (University of Perugia & University of Camerino, Italy); Alfredo Navarra (University of Perugia, Italy); Purav Shah and Ramona Trestian (Middlesex University, United Kingdom (Great Britain))

Verifiable Decentralized IPFS Cluster: Unlocking Trustworthy Data Permanency for Off-Chain Storage

Sid Lamichane and Patrick Herbke (Technische Universität Berlin, Germany)

10:30 - 11:00 Coffee break & Poster/Demo Session #1

A platform to ease dApp development and adoption

Raghu Sesha Iyengar (Birla Institute of Technology and Science & Zbyte Foundation, India); Ankush Tiwari, Abhijeet Zilpelwar, Bijay Singh and Naveen Sharma (Zbyte Foundation, India)

Blockstash Intelligence: Real-time Crypto crime Investigation and Forensics Tool

Deepesh Chaudhari and Sandeep K Shukla (Indian Institute of Technology Kanpur, India)

IMBIE: Identity Management with Blockchain Information Exchange

Lucas Airam Castro de Souza (Inria, Brazil & Universidade Federal do Rio de Janeiro, France); Gabriel Rebello and Gustavo F Camilo (Universidade Federal do Rio de Janeiro, Brazil); Miguel Elias M. Campista (Federal University of Rio de Janeiro & GTA, Brazil); Luis Henrique M. K. Costa (Federal University of Rio de Janeiro, Brazil)

Notara: Efficient Blockchain Asset Notarization Service

Guillermo Toyos-Marfurt (Université Paris-Saclay, CEA, LIST, France); Rouwaida Abdallah (CEA LIST, France); Alvaro García-Pérez (Université Paris-Saclay, CEA, LIST, France)

Building Trustworthy AI Systems: AI Inference Verification with Blockchain and Zero-Knowledge Proofs

Patrizio Germani (Almaviva S.p.A., Italy); Michelangelo Amoruso Manzari (Almaviva S.p.A., Italy); Riccardo Magni (Almaviva s.p.a., Italy); Paolo Dibitonto (Almaviva S.p.a., Italy); Fabio Previtali and Emanuele D'Agostini (Almaviva S.p.A., Italy)



Lifecycle Management of Resumés with Decentralized Identifiers and Verifiable Credentials

Patrick Herbke, Anish Sapkota and Sid Lamichhane (Technische Universität Berlin, Germany)

DAO Governance Protocols and their Vulnerabilities

Aida Maria Manzano Kharman (Imperial College London, United Kingdom (Great Britain)); Ben Smyth (University of Birmingham, United Kingdom (Great Britain))

Research Note on the Heterogeneity of the Tokenization of Financial Assets

Xavier Lavayssière (Université Paris 1 Panthéon-Sorbonne & ECAN, CERSA – Paris II, France)

Poster: I Know What Crypto You Got Last Summer: A Study on Web3 Wallet Security and Privacy

Weihong Wang (KU Leuven, Belgium); Tom Van Cutsem (KU Leuven & Nokia Bell Labs, Belgium)

Predicting Node Colocality for an Auto-Scaling Multi-Tiered Node-Organizing Blockchain Architecture for IoT

Riham Elsaadany (Université Du Québec À Montréal, USA); Guy Begin (UQAM, Canada)

11:00 - 12:00 Keynote #1: Further Decentralizing Decentralized Finance

Speaker : Sergio Rajsbaum (Professor at Instituto de matemáticas, UNAM, Mexico)

Session Chair : Yackolley Amoussou-Guenou (Ponthean-Assas University, France)

12:00 - 13:15 Lunch Break

13:15 - 14:45 Session #2: Machine Learning

Session Chair : Adriano Galindo Leal (Instituto de Pesquisas Tecnológicas, Brazil)

Attention to Lightning Change: Utilizing BERTs to Detect Bitcoin Change Address with Lightning Network Information

Mikaeil Mayeli Feridani and Rodrigue Naha Tonga (École de Technologie Supérieure, Canada); Oumayma Dekhil (École de Technologie Supérieure (ÉTS), Canada); Fatma Najjar (ÉTS, Canada); Kaiwen Zhang (École de Technologie Supérieure, Canada)

BlockFed: A Novel Federated Learning Framework Based On Hierarchical Aggregation

Reza Nourmohammadi (Ecole de Technologie Supérieure, Canada); Mohammadreza Sabramooz, Kaiwen Zhang and Chamseddine Talhi (École de Technologie Supérieure, Canada)

Blockchain-based Approaches for Secure Federated Learning

Lucas Airam Castro de Souza (Inria, Brazil & Universidade Federal do Rio de Janeiro, France); Gustavo F Camilo and Gabriel Rebello (Universidade Federal do Rio de Janeiro, Brazil); Lucas Guimarães (UFRJ, Brazil); Miguel Elias M. Campista (Federal University of Rio de Janeiro & GTA, Brazil); Luis Henrique M. K. Costa (Federal University of Rio de Janeiro, Brazil)

Benchmarking Large Language Models for Ethereum Smart Contract Development

Etienne Daspe, Mathis Durand and Julien Hatin (Orange Innovation, France); Salma Bradai (National School of Engineering of Sfax & ReDCAD, Tunisia)

14:45 - 15:15 Coffee break & Poster/Demo Session #1

15:15 - 16:45 Session #3: DeFi & Cryptocurrencies I **Session Chair : Alessandro Bigiotti (University of Camerino, Italy)**

A Purely Posted-Price Transaction Fee Mechanism for Leaderless Blockchains

Andrew Cullen (IOTA Foundation, Ireland); Darcy Camargo (IOTA Foundation, Brazil); Luigi Vigneri (IOTA Foundation, Spain)

On Tokenizing Securities in Contemporary Decentralized Finance Ecosystems

Reina K Li, Srisht Fateh Singh, Andreas Park and Andreas Veneris (University of Toronto, Canada)

AfriBit: A People-Oriented Wallet Fostering Financial Inclusion in Kibera

Marco Leder and Daria Schumm (University of Zürich, Switzerland); Bruno Rodrigues (University of St. Gallen, Switzerland); Burkhard Stiller (University of Zürich, Switzerland)

Developing Payment Channels on the Algorand Blockchain

Domenico Tortola, Andrea Pelosi, Alessandro Di Biase and Laura Emilia Maria Ricci (University of Pisa, Italy)

16:45 - 17:15 Coffee break & Poster/Demo Session #1

17:15 - 18:15 Session #4: Decentralized Credentials I **Session Chair : Peter Ruppel (Code University of Applied Sciences, Germany)**

Using Blockchain to Secure Passenger Name Records and Effectively Protect Citizen Rights

Michal Koutenský (Brno University of Technology, Czech Republic); Vladimír Veselý, Martin Perešíni, Daniel Dolejška and Jan Pluskal (Brno University of Technology, Czech Republic)

Identities & Blockchain in Automotive: Trends and Challenges

Christian Prehofer (DENSO Automotive, Germany)

EU Battery Regulation and the Role of Blockchain in Creating Digital Battery Passports

Alberto Butera and Valentina Gatteschi (Politecnico di Torino, Italy)

18:15 - 19:15 Welcome Reception





Thursday, October 10, 2024

08:30 - 09:00 Registration

09:00 - 10:30 Session #5: Cloud & Cellular Networks
Session Chair : Emmanuelle Anceaume (IRISA, France)

A Blockchain-based Platform for Mobile Telcos for the Provision of Private Networks in the Context of Beyond-5G/6G

Meroua Moussaoui (Orange Innovation, France); Emmanuel Bertin (Orange Labs, France); Noel Crespi (Institut Mines-Télécom, Télécom SudParis, France)

Web3-Powered Service Provisioning in Cellular Networks using NFT and Self-Sovereign Identity

Nischal Aryal (Institut Polytechnique de Paris, France & Orange Innovation, France); Fariba Ghaffari (Institut Polytechnique de Paris, IRT B-COM, France); Emmanuel Bertin (Orange Labs, France); Noel Crespi (Institut Mines-Télécom, Télécom SudParis, France)

TEMBUV: Trust Ensuring Mechanism Based on Blockchain using UAVs and VANETs

İpek Motorcu, Emin Şahin Mektepli, Arda Hacifevzioglu and Kubra Kalkan (Ozyegin University, Turkey)

Blockchain-Based Implementation of Service Function Chains in Multicloud and Multitenant Environments Over Containerized Networks

Rui Kang and Mengfei Zhu (Kyoto University, Japan); Klaus-Tycho Foerster (TU Dortmund, Germany)

10:30 - 11:00 Coffee break & Poster/Demo Session #2

Integrating Blockchain for Enhanced Subscription Management in B5G and 6G Networks

Nischal Aryal (Institut Polytechnique de Paris, France & Orange Innovation, France); Fariba Ghaffari (Institut Polytechnique de Paris, IRT B-COM, France); Emmanuel Bertin (Orange Labs, France); Noel Crespi (Institut Mines-Télécom, Télécom SudParis, France)

A Decentralised Videoconferencing Service using Ethereum Smart Contracts

Ghinwa Ismail (Samovar, Telecom SudParis, Institut Polytechnique de Paris, France); Julien Hatin, Valentin Andre and Juliette Cantais (Orange Innovation, France)

MedTech Chain Demo: Decentralised, Secure and Privacy-preserving Platform for Medical Device Data Research

Alin-Petru Roşu, Tamara Tataru, Jegor Zelenjak, Roland Kromes and Zeki Erkin (Delft University of Technology, The Netherlands)

A Co-Simulation Approach of Blockchain Connected Last-Mile Delivery Using Autonomous Robots

oussema Gharsallaoui, Damien Nicolas, Marie-Laure Watrinet and Ion Turcanu (Luxembourg Institute of Science and Technology, Luxembourg)

Securing Democracy: EOS Blockchain-Based Electronic Voting System

Shai Matzliach and Tal Sinay (Shamoon College of Engineering, Israel); Kiril Danilchenko (University of Waterloo, Canada); Hadassa Daltrophe (Shamoon College of Engineering, Israel)

Advocate – Trustworthy Evidence in Cloud Systems

Sebastian Werner, Sepideh Masoudi, Fernando J Castillo, Fabian Piper and Jonathan Heiss (TU Berlin, Germany)

Enhancing Validators' Decision-Making: Practical Testing with a Blockchain Benchmarking Framework

Marios Touloupou (Cyprus University of Technology, Cyprus); Evgenia Kapassa (University of Nicosia, Cyprus & Innov-Acts, Cyprus); Marianna Charalambous (University of Nicosia, Cyprus)

Preserving data privacy and confidentiality in a distributed ledger architecture: a use case in Logistics

Stefano Avola, Pierpaolo Baglietto, Massimo Maresca and Andrea Parodi (University of Genoa, Italy)

Augme: Trust-Minimized Bitcoin Layer2

Han Liu (Tsinghua University, China); Yue Li (Assembly Research, China); Yuan Tan, Menghang Zhang and Da Hongfei (Assembly Research, Singapore)

On using Blockchain in beyond 5G: Roaming Improvements

Stavros Dimou, Kostas Choumas and Thanasis Korakis (University of Thessaly, Greece)

Blockprint Accuracy Study

Santiago Somoza (MigaLabs, Argentina); Tarun Mohandas-Daryanani (Barcelona Supercomputing Center, Spain); Leonardo Bautista-Gomez (MigaLabs & Status. im, Spain)

11:00 - 12:00 Keynote #2: Building a decentralized infrastructure for Europe to support the EU Digital Identity and EU Digital Product Passport

Speaker : Daniël Du Seuil (Research coordinator Cyber3lab at Howest, Belgium)

Session Chair : Philip Raschke (TU Berlin, Germany)

12:00 - 13:15 Lunch Break

13:15 - 14:45 Session #6: DeFi & Cryptocurrencies II
Session Chair : Xavier Lavyssière (Université Paris 1 Panthéon-Sorbonne, France)

A Taxonomy of Anti-Fraud Measures within Token Economy: Insights from Rug Pull Schemes

Christian Rene Sechting and Philip Raschke (Technische Universität Berlin, Germany)

Cross-Chain Non-Fungible Assets Sharing on Polkadot

Dušan Morháč, Viktor Valaštin, Kristián Košťál and Ivan Kotuliak (Slovak University of Technology, Slovakia)

An Anti-Money Laundering Approach for the Brazilian Smart Contract/Digital Currency (DREX) Platform

Jose Ricardo de Oliveira and Adriano Galindo Leal (Institute for Technological Research of the São Paulo State, Brazil)

Cost-aware Blockchain Mining Strategy: Dynamic Energy Pricing (DEP) Model

Daewoong Cho and Gowri Ramachandran (Queensland University of Technology, Australia); Raja Jurdak (Queensland University of Technology & CSIRO, Australia); Salil S Kanhere (UNSW Sydney, Australia)

14:45 - 15:15 Coffee break & Poster/Demo Session #2



15:15 - 16:15 Session #7: Simulations and Performances

Session Chair : Giovanni Farina (Sapienza University of Rome, Italy)

“Which Blockchain is Best?”, Simulating IoT-MANET DLTs: Network Scalability, Confirmation Time, & Latency in Smart Cars

Nicholas D Troutman (University of Houston & Sandia National Labs, USA)

Performance Optimization of High-Conflict Transactions within the Hyperledger Fabric Blockchain

Alexandros Stoltidis, Kostas Choumas and Thanasis Korakis (University of Thessaly, Greece)

On the Design of Ethereum’s Data Availability Sampling: A Comprehensive Simulation Study

Arunima Chaudhuri (Status, India); Sudipta Basak (IIT Jammu, India); Csaba Kiraly (Codex Storage, Italy); Dmitriy Ryajov (Status, Costa Rica); Leonardo Bautista-Gomez (MigaLabs & Status. im, Spain)

16:15 - 17:00 Session #8: Secure Data Management

Session Chair : Emmanuel Bertin (Orange Innovation, France)

Blockchain-based Rental Documentation Management with Audit Support

João F. Santos (Unlocked.io, Portugal); Miguel Correia (INESC-ID & Instituto Superior Técnico, Portugal); Tiago Dias (Unlocked.io, Portugal)

GeoBlocks: Trustless Geospatial Data Sharing with Accountability and Decentralized Access Control

Pankaj Kumar Agarwal and Amrit Chadha (IIT Kharagpur, India); Bishakh Chandra Ghosh, Soumya K Ghosh and Sandip Chakraborty (Indian Institute of Technology Kharagpur, India)

17:00 - 17:15 Coffee break

17:15 - 18:15 Session #9: Decentralized Credentials II

Session Chair : Sebastian Werner (TU Berlin, Germany)

SoK: Bridging Trust into the Blockchain. A Systematic Review on On-Chain Identity

Awid Vaziry (Technical University of Berlin, Germany); Kaustabh Barman and Patrick Herbke (Technische Universität Berlin, Germany)

Decentralized Credential Status Management: A Paradigm Shift in Digital Trust

Patrick Herbke and Thomas Cory (Technische Universität Berlin, Germany); Mauro Migliardi (University of Padova, Italy)

On Addressing Governance Challenges in Blockchain Networks

Sokratis Vavilis (Inlecom Innovation, Greece); Harris Niavis (Inlecom Innovation, Greece & Konnecta Systems IKE, Greece); Lucia Recolons García-Mauriño (Verdia Legal S. L. P., Spain)

19:15 Gala Dinner

Friday, October 11, 2024

08:30 - 09:00 Registration

09:00 - 10:30 Session #10: Healthcare & DeSci

Session Chair : Sergio Rajsbaum (Universidad Nacional Autónoma de México, Mexico)

The Impact of Decentralized Science on Women’s Health Equity

Veronica Kirin (Asterisk Womxn’s Health, Germany)

MedTech Chain: Decentralised, Secure and Privacy-preserving Platform for Medical Device Data Research

Alin-Petru Roşu, Tamara Tataru, Jegor Zelenjak, Roland Kromes and Zeki Erkin (Delft University of Technology, The Netherlands)

Auditable Medical Data Sharing through Recoverable Key Agreement

Jorrit S van Assen, Roland Kromes and Zeki Erkin (Delft University of Technology, The Netherlands)

10:30 - 11:00 Coffee break & Poster/Demo Session #2

11:00 - 12:00 Keynote #3: Blockchain Application Design and Development: From Architecture to Analytics

Speaker : Ingo M. Weber (Professor at Technical University of Munich, Germany)

Session Chair : Jonathan Heiße (TU Berlin, Germany)

12:00 - 13:15 Lunch Break

13:15 - 14:45 Session #11: Fundamentals

Session Chair : Axel Küpper (TU Berlin, Germany)

A Deeper Grasp of Handshake: A Thorough Analysis of Blockchain-based DNS Records

Katsuki Isobe (Osaka Metropolitan University, Japan); Jean-Philippe Eisenbarth (University of Luxembourg, Luxembourg); Daishi Kondo (Osaka Metropolitan University, Japan); Thibault Cholez (Université de Lorraine, CNRS, Inria, LORIA, France); Hideki Tode (Osaka Metropolitan University, Japan)

Security threshold for FPCS on star graphs

Rafael Cizeski Nitchai (Universidade Do Porto, Portugal); Serguei Popov (IOTA, Portugal); Sebastian Müller (Aix Marseille University, France); Olivia Saa (IOTA Foundation, Germany)

The impact of block mining time distribution on the probability of forks

Thomas Lelièvre (ICUBE, University of Strasbourg, France); Quentin Bramas (University of Strasbourg, France)

A Review on Privacy in DAG-Based DLTs

Mayank Raikwar (University of Oslo, Norway)

14:45 - 15:15 Closing Ceremony + Awards



BRAINS 2024 Dinner

The conference dinner will take place on
Thursday October 10, 2024 at 7:15 pm
at:

Berlin TV Tower
Panoramastraße 1a,
10178 Berlin

Berlin TV Tower is a must-see experience. Discover Berlin's
breathtaking view from the highest point in the city!



General Co-Chairs



Emmanuel Bertin
(Orange Innovation, France)



Emmanuelle Anceaume
(IRISA, France)



Axel Küpper
(TU Berlin, Germany)

TPC Co-Chairs



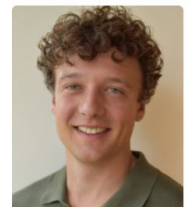
Yackolley Amoussou-Guenou
(Pontbean-Asas University, France)



Antonella Del Pozzo
(CEA List, Paris-Saclay University, France)



Philip Raschke
(TU Berlin, Germany)



Jonathan Heiß
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Sebastian Werner
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Jakob Zwiars
(Berlin Partner, Germany)



Yang Chen
(Fudan University, China)



Müge Sayit
(University of Essex, UK)

Local Arrangements Co-Chairs



Andrea Hahn
(TU Berlin, Germany)



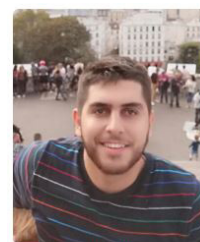
Sandra Wild
(TU Berlin, Germany)

Overall arrangements Chair



Aziza Lounis
(DNAC, France)

Web/IT Chair



Elia Kallas
(DNAC, France)

Technical Program Committee

Isaac Agudo (University of Malaga, Spain)
Leonardo Aniello (University of Southampton, United Kingdom (Great Britain))
Lennart Ante (Blockchain Research Lab, Germany)
Artem Barger (Idea Blockchain Research Lab, Israel)
Rafael Belchior (Instituto Superior Técnico & INESC-ID, Portugal)
Silvia Bonomi (University of Roma, Italy)
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Raphael Eidenbenz (Hitachi Energy Research, Switzerland)
Jean-Philippe Eisenbarth (University of Luxembourg, Luxembourg)
Nour El Madhoun (ISEP Engineering School, France)
Joshua Ellul (University of Malta, Malta)
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Theo Gauthier (Toposware, USA)
Fariba Ghaffari (Institut Polytechnique de Paris, IRT B-COM, France)
Salil S Kanhere (UNSW Sydney, Australia)
William J Knottenbelt (Imperial College, United Kingdom (Great Britain))
Maryline Laurent (Télécom SudParis, Institut Polytechnique de Paris, France)
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Jéferson Nobre (Federal University of Rio Grande do Sul, Brazil)
Aafaf Ouaddah (INPT, Morocco)
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Guy Pujolle (Sorbonne University, France)
Yuansong Qiao (Technological University of the Shannon, Ireland)
Mohammad Ashiqur Rahman (Florida International University, USA)
Mayank Raikwar (University of Oslo, Norway)
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Motoyoshi Sekiya (Fujitsu Limited, Japan)
Wazen M. Shbair (VNX, Luxembourg)
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Burkhard Stiller (University of Zürich, Switzerland)
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Florian Tschorsch (TU Dresden, Germany)
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Andreas Veneris (University of Toronto, Canada)
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Yingjie Xue (The Hong Kong University of Science and Technology (Guangzhou), China)
Sherali Zeadally (University of Kentucky, USA)
Kaiwen Zhang (École de Technologie Supérieure, Canada)
Avelino F. Zorzo (Pontifical Catholic University of RS – PUCRS, Brazil)

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