KuVS Newsletter

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KuVS Newsletter

Editor Message

Dear KuVS members,

we welcome you to the 23rd edition of the KuVS newsletter.

This newsletter provides you with all information that you need to know about the KuVS community over the past six months. This edition features a summary on recent awards of KuVS members, finished PhD theses, a report of the MaLeNe workshop, the WueWoWas call, and some riddles from our dear colleague Rolf Windenberg.

More information and recent editions of our newsletter are available on https://www.kuvs.de/newsletter/.

We hope you enjoy reading this edition of the KuVS newsletter.

The newsletter editors,

Oliver Hohlfeld
University of Kassel

Bastian Bloessl
TU Darmstadt

KuVS Newsletter

Movement of persons

- Prof. Dr. **Boris Koldehofe** (TU Ilmenau) started a professorship at Uni Marburg (Distributed Systems).
- Prof. Dr. **Giang Nguyen** (TU Dresden) received offers from BTU Cottbus-Senftenberg and TU Dresden.
- Prof. Dr. **Christiane Weis** (nee Kuhn) started a professorship at HKA Karlsruhe.

KuVS Newsletter

KuVS Awards

Best Bachelor's Thesis

Mateusz Zakrzewski *Combining Wi-Fi TWT and MLO in OMNeT++*
Technische Universität Berlin ADVISOR: Falko Dressler

Best Master's Thesis

Shared award between

Keno Goertz *Towards a Generalized Framework for Secure Timestamping*
Technische Universität Dresden ADVISOR: Florian Tschorsch

and

Timon Krack *Feedback-driven Traffic Aggregate Labeling for Training DDoS Attack Mitigation*
Karlsruher Institut für Technologie (KIT) ADVISOR: Martina Zitterbart

Best PhD Thesis

Daniel Kopp *DDoS Equilibrium: Internet Measurement Perspective on Attacks and Mitigation*
Universität Kassel ADVISOR: Oliver Hohlfeld

and

Johannes Zirngibl *Detecting and Evaluating QUIC Deployments as Part of the Internet Ecosystem*
Technische Universität München (TUM) ADVISOR: Georg Carle

Congratulations to all winners – your outstanding research continues to strengthen KuVS's impact on computer science!

KuVS Newsletter

Finished PhD Theses

Simon Hanisch

TU Dresden (advisor Thorsten Strufe)

Title: Building and Evaluating Anonymizations for Human Motions

Abstract:

Human body motion is a rich source of information. Capturing motion data opens up a range of many new applications in mixed reality, robotics, and medicine. With the proliferation of inexpensive motion tracking hardware, such as mixed reality headsets, motion tracking suits, and smartphones, this source of information is becoming increasingly accessible in our everyday lives. Combined, this data can be used to create an accurate motion profile of the person captured, allowing for the creation of digital twins, the motion control of robots, and for more accurate diagnoses in medicine. However, motion data is also an inherently sensitive source of information, as it is behavioral biometric data that allows for many privacy sensitive inferences about the captured individual. An attacker with access to someone's motion data could identify that person by their unique motion patterns, infer the presence of diseases, such as Parkinson's, or infer private attributes such, as sex and weight.

In this thesis, we seek to understand the privacy problems of motion data and how we can solve them to enable the privacy preserving usage of motion data. Since privacy for motion data is a new research topic, we began our investigation with an extensive literature review of privacy-preserving techniques for behavioral biometric data. The main findings of the literature review are that there are only preliminary approaches to anonymizing motion data, that the methodology for evaluating biometric data anonymization is limited and needs improvement, and that there are few datasets suitable for evaluating the efficiency of motion data anonymization. Next, we investigated motion anonymization using various simpler techniques and their combinations to better understand which techniques would be effective for anonymizing motion data. Using gait data, we found that identifying individuals is very resilient and difficult to prevent, even when data utility is severely degraded. Due to the high number of correlations in motion data, anonymizing it is a hard problem. We also investigated the privacy issues surrounding motion data by collecting FacialMotionID, the first comprehensive dataset of facial motions. Using this dataset, we demonstrated that facial motion data can also be used to identify individuals.

We addressed the lack of a strong evaluation methodology for biometric data anonymization. We developed a stronger attacker model based on stronger assumptions about the attacker's capabilities. This makes our evaluation methodology more rigorous and produces more reliable privacy results. In order to address the lack of motion datasets, we collected the gait sequences of 50 people using an IMU motion capture suit to create CeTI-Locomotion. Lastly, we present Pantomime, the first general anonymization technique for full-body motion data that can main-

tain high utility while removing most identifiable information. Pantomime demonstrates that meaningful anonymization of motion data is possible, while keeping the utility of the data high.

Link to the PDF: https://publikationen.bibliothek.kit.edu/1000189863

KuVS Newsletter

Daniel Szafranski

TU Clausthal (advisor Andreas Reinhardt)

Title: Reliable Communication for Outdoor Sensing – Improving Link Quality in Long Range Wide Area Networks

Abstract:

Wireless sensor networks are a major driver of the increasing digitalization in various domains. They consist of embedded systems, so-called nodes, which combine energy efficient operation, sensing of physical parameters, and radio communication. As a result, nodes can be deployed even in hard-to-reach areas and report relevant parameters remotely. Common application scenarios are widely spread and include environmental monitoring, smart cities, digital twins, and many more.

Over the years, LoRaWAN (Long Range Wide Area Network) has emerged as the de-facto standard communication protocol for numerous applications. It offers high energy efficiency, allowing for years of battery life, and long range connectivity up to several kilometers. However, many real-world use cases require nodes to be deployed outdoors, exposing them to the environment and prevailing weather conditions. Both can have a negative impact on the link quality and ultimately result in communication failures and data loss. Such unavailability of data can impair the functionality of applications and lead to severe consequences in safety-critical contexts, e.g., in early warning systems.

This thesis thus provides several approaches and methods to tackle different real-world challenges and increase the reliability in LoRaWANs. The first contribution is an advanced path loss model, which was developed with empirical data and enables link quality and coverage estimations based on the topographical settings in an area of interest. It allows for the identification of suitable locations for nodes and base stations already ahead of deployment. Subsequently, the second contribution is an in-depth investigation of the link quality deterioration caused by individual weather parameters. It includes a statistical analysis and the development of regression models to estimate the link quality based on the prevailing weather conditions. Building on that, as the third contribution, three methods for increasing the reliability of the LoRaWAN protocol itself are proposed. The first approach, PreCo, is based on the pre-computation of all plausible data packets a node could send and correlating them with the received signal on the physical layer, which improves demodulation performance for weak signals. CEC-LoRa shifts this approach to the data link layer and allows for platform-independent correction of corrupted packets. Lastly, Backpack-LoRa extends the LoRaWAN protocol with multi-hop functionality on the network layer and enables packet forwarding for lossy links.

The practical feasibility of the proposed methods is shown through prototypical implementations and evaluations with actual hardware.

KuVS Newsletter

Konrad Wolsing

RWTH Aachen University (advisor Klaus Wehrle)

Title: On the Generalizability and Transferability of Industrial Intrusion Detection Research

Abstract:

The increasing automation of Industrial Control Systems (ICSs) has brought significant advantages across various industrial domains such as water treatment, power grids, and manufacturing. Simultaneously, the accompanying digitization of ICSs has led to increasing surfaces for cyberattacks. While preventive security measures to thwart these attacks exist, they can prove challenging to retrofit into legacy systems, making specialized Industrial Intrusion Detection Systems (IIDSs) a viable alternative. Addressing the specific needs of unique and diverging ICS applications, a large research community has gathered, inventing novel and effective detection methodologies yet focusing on specific industrial protocols or domains. However, as two ICSs are rarely identical, IIDSs are expected to generalize to different use cases or even transfer to new domains instead of being built for a single purpose. While the protocols and physical processes underlying all ICSs show remarkable similarity concerning their functionality or predictability, current IIDS research remains fragmented, as we show, rather than providing generalizable solutions. This dissertation addresses this overarching challenge by investigating the feasibility of protocol- and domain-independent intrusion detection. Through a Systematic Mapping Study (SMS), five critical issues hindering effective IIDS research were identified, including (i) disjoint research areas for each ICS domain, (ii) inefficiencies in evaluation methodologies to holistically capture the capabilities of new IIDSs, (iii) a strong focus of research on complex detection methodologies with little justification, (iv) few efforts to transfer existing achievements to all ICS domains, and (v) little considerations on implications to select and deploy an IIDS. To overcome these limitations, this dissertation introduces the Industrial Protocol Abstraction Layer (IPAL), a novel framework that proposes a standardized data representation for industrial intrusion detection. Thereby, IPAL facilitates the generalizability, transferability, and comparability of IIDSs across different ICS environments and among research. Furthermore, this dissertation presents new lightweight yet effective detection methodologies disproving the current misconception of complexity in research. Ultimately, since deploying just the single-best IIDS can be disadvantageous with respect to optimal detection performance, we successfully explore techniques for ensemble learning to streamline multiple IIDSs' capabilities to enhance detection performance while reducing false positives. These findings demonstrate that intrusion detection can be both efficient and adaptable to ICS domains or leveraged communication technologies. On the one hand, our contributions support a more coherent and effective IIDS research landscape. On the other hand, we pave the way for sustainable and practical implementations of IIDSs in real-world deployments. Thereby, we make IIDSs more accessible for ICSs to protect critical infrastructure more efficiently against harmful cyberattacks.

https://publications.rwth-aachen.de/record/1033592

KuVS Newsletter

Leonhard Brüggemann

Universität Osnabrück (advisor Nils Aschenbruck)

Title: From Species Classification to Species Abundance using Acoustic Sensor Networks

Abstract:

Biodiversity loss, though often overshadowed by climate change, poses an equally urgent threat to ecosystem stability, food security, and human well-being. The continuing decline in species diversity weakens the resilience of natural systems and disrupts essential ecosystem services such as pollination, water purification, and soil fertility. In response, global and national initiatives – such as the UN's Kunming-Montreal Global Biodiversity Framework, the EU Biodiversity Strategy for 2030, and Germany's national research programs – aim to halt and reverse this trend. However, their success depends on reliable and efficient methods of biodiversity monitoring, which remain challenging given the immense variety of species and habitats across the planet. Traditional biodiversity monitoring often relies on indicator species – species whose presence or population size reflects broader ecological conditions. While valuable, these approaches typically demand intensive expert fieldwork, contain methodological errors, and offer only limited spatial and temporal coverage. Consequently, there is a growing need for scalable and automated monitoring systems capable of delivering continuous, high-resolution insights into species populations and ecosystem dynamics.

This thesis advances biodiversity monitoring by developing and evaluating sensor network-based methods to estimate species abundance from passive acoustic recordings in dense deployments. Here, species abundance refers to the size of a species' population. Birds are effective ecological indicators and can be monitored non-invasively through sound. By integrating ecological insight with advances in machine learning and engineering, the work moves beyond today's presence-absence detection of species toward quantitative, spatially explicit population estimation. A core contribution of this work is the Terrestrial Acoustic and Wireless Simulation Framework (TAWNS), which combines acoustic and network simulation within a single environment. The simulator generates realistic soundscapes and sensor configurations with built-in ground truth, allowing rapid, controlled experimentation and reducing reliance on costly fieldwork. Building on this, two complementary methods for population estimation are presented, assuming that the spatial localization of vocalizations enables the estimation of species abundance, which is already used by traditional monitoring methods. First, the Classifier-Deduced Signal Extraction (CDSE) algorithm integrates species classifiers directly into signal separation, transforming confidence scores into species-specific signals. Those signals enable accurate localization even within complex, overlapping soundscapes. Second, the Territorial Acoustic Species Estimation (TASE) approach links classification data across sensors to infer the spatial structure of bird territories – and the number of territories is a reliable proxy for species abundance during the breeding season.

Together, TAWNS, CDSE, and TASE enable the investigation and presentation of a complementary approach to the automated detection, localization, and mapping of bird populations based on acoustic data. By integrating ecological expertise with methods from computer science, this work contributes to the methodological advancement of sensor network-based approaches to biodiversity monitoring.

KuVS Newsletter

Karim Elsayed

Leibniz University Hannover (advisor: Amr Rizk)

Title: Joint Modeling and Performance Evaluation of Communication and Memory Systems in the Classical and the Quantum Internet: A Time-to-live Approach

Abstract:

Memory systems are indispensable in communication networks, enabling data processing for various fundamental tasks in every aspect of communication networks, including scheduling, routing, etc. This thesis focuses on network memories that store the most relevant data for its future use by application requests, which are essential, e.g., to meet strict latency requirements. The performance of such network memories depends on the strategies that manage their finite capacity. In addition, memories across communication networks are interconnected to collaboratively fulfill application requests. Accordingly, jointly evaluating their performance under the impact of communication latency between the interconnected network memories is necessary.

In this thesis, we study network memories that store either *replicable* time-independent objects or *consumable* time-dependent objects in the context of the classical and the quantum Internet, respectively. In the classical Internet, network memories are cache memories that store copies of objects from network servers closer to the users. In the quantum Internet, memories emerge to hold the unique quantum links, also called entanglements, which are consumed to enable data transmission. Due to the adverse effects of noise, the entanglement quality, also called fidelity, decays in quantum memories, which limits the object storage lifetime.

We take a Time-to-live (TTL) analytical approach to model the occupancy of objects in network memories under consumption and copying, as well as time-independent storage versus time-dependent degeneracy. We provide a *universal* TTL occupancy model, which models the object TTL in memory as a *delayed jump and drift process* that models the jumps in the TTL as well as intercommunication delays under arbitrary management strategies. On the one hand, TTLs model the assigned timers to objects in cache memories under time-driven management strategies. On the other hand, TTLs model the inherent lifetime of entanglements in quantum memories. Accordingly, we use the universal TTL model to analytically evaluate the performance in both memory systems.

First, we provide an exact analytical evaluation framework using Markov arrival processes for hierarchical interconnected cache memories under the impact of non-zero network delays. Markov arrival Processes are instrumental to model non-renewal request and miss processes at each cache memory in the hierarchy. Our results show the detrimental impact of delays on the probability of finding an object upon request, i.e., the *hit probability*. Surprisingly, results show that the delay impact on the hit probability may be *non-monotonic* when the request process becomes periodic. Accordingly, we derive the range of delays giving rise to such non-monotonic hit probability. Further, we build on the exact hit probability performance evaluation to optimize the utility of interconnected cache memories. Our results show that by optimally choosing the TTL parameters of each object, the same utility can be maintained under longer fetch delays.

Second, for quantum memories, management strategies of the entanglement lifetime depend on quantum purification, a process that consumes two entanglements in memory to produce a higher fidelity one with a longer lifetime. Using purification as a basis for memory management protocols is still primitive. To this end, we design static purification-based management protocols for quantum link-level systems with more than one long-term quantum memory. Our rationale for considering the quantum link-level system is that the fidelity of link-level entanglement represents the bottleneck of remote communication. We show that the exact modeling of purification-based protocols is challenging due to the dependence of the jumps in the TTL delayed jump and drift process on the TTL at purification times. To this end, we propose an approximate analytical discrete-time Markov chain model based on the discretization of the TTL. Our results show that different static purification protocols and system sizes result in diverse trade-offs between the availability and fidelity of link-level entanglements. Further, we propose a tunable utility-aware strategy, denoted as General Pumping Strategy, which tunes the purification intensity depending on the lifetime of stored link-level entanglements and the loss risk of entanglements on the utility. Our evaluations show that tuning the general pumping strategy to optimize the utility of the quantum link-level system outperforms the performance of static purification strategies.

Overall, using the universal TTL occupancy model as a delayed jump and drift process, this thesis develops analytical performance evaluation and utility optimization frameworks for network memories with diverse storage properties. The developed frameworks provide a unified analytical basis for studying interconnected memory systems under copying, consumption, delays and time-dependent degradation in both classical and quantum communication networks.

KuVS Newsletter

Leonhard Balduf

Technische Universität Darmstadt (advisor: Björn Scheuermann)

Title: Insights into Hybrid Decentralized Systems

Abstract:

The past decades have seen increased centralization of the Internet in key services such as content delivery networks and social networks. These systems often develop due to economies of scale, which can benefit users. At the same time, they are criticized for concentrating power, single points of failure, and control over user data. As such, a counterculture of fully decentralized alternatives has developed in parallel. These systems promise to do away with centralized components, thus removing single points of failure and limiting the power of individual stakeholders. However, they often lack safety and convenience features like content moderation and impose greater complexity on users.

Hybrid decentralized systems promise the best of both worlds and tangible benefits for users: decentralization of the core infrastructure to avoid systemic risks of centralized systems while also empowering users with more choice, privacy, and participation. They provide safety features through, often optional, centralized components. In light of growing debate around centralization of power and increasing need for cybersecurity, we examine two of the most successful hybrid decentralized systems of recent times to test whether these promises hold in practice. We study the InterPlanetary File System (IPFS), a peer-to-peer (P2P) data storage and retrieval network, and Bluesky, a novel social network. We find that, while these systems do exhibit features of both centralized and decentralized predecessors, real-world implementations as of yet often fall short of delivering the stated goals.

In terms of privacy, decentralization can avoid the aggregation of user data but, in the case of IPFS, we find that it leads to more observable data traffic and thus less privacy in practice. In terms of decentralization for resilience, IPFS suffers from latent centralization pressures due to convenience features and implementation choices, which ultimately reintroduce reliance on centralized structures. Public gateways represent linchpins for the network, and the distributed hash table (DHT) underpinning the P2P network is largely hosted on a handful of cloud providers. In terms of safety, we examine implementations of content moderation systems in IPFS and Bluesky. We find that these solutions theoretically empower users through participative moderation, transparency, and choice, but practical implementations exhibit opacity and centralization of power.

Our work is timely given rising geopolitical tensions and the desire to be independent of large corporate providers. We give pointers for future Internet design for policymakers as well as developers. We highlight existing shortcomings and make concrete recommendations to guide further developments, be they in existing systems or future iterations.

https://doi.org/10.26083/tuda-8088

KuVS Newsletter

Event Reports

7th KuVS Fachgespräch on Machine Learning in Networking (MaLeNe 2026)

The Seventh KuVS Fachgespräch on Machine Learning in Networking (MaLeNe) was held at the University of Augsburg on March 19–20, 2026, as a successful event spanning two half-days. The workshop was organized by the co-chairs Michael Seufert (University of Augsburg), Andreas Blenk (Siemens AG), and Björn Richerzhagen (Siemens AG). In total, 13 full papers were presented and about 30 participants from industry and academia were brought together to discuss the lates advances in applying machine learning in networking.

Day 1 – From 6G Visions to Intelligent Routing

Dr. Andreas Mäder (Nokia) gives his keynote talk, titled "AI for 6G and AI for Standards – a transformation journey."
© Universität Augsburg

The workshop opened with a welcome by the organizers, setting the stage for two days of lively exchange. The first highlight was an industry keynote by Dr. Andreas Mäder (Nokia) titled *"AI for 6G and AI for Standards – a transformation journey."* In his talk, he highlighted the role of AI as a key enabler for future 6G networks and discussed the convergence of development cycles in mobile communications and machine learning, emphasizing the need to better align innovation with standardization.

The first technical session focused on **security and intrusion detection.** The presentations showcased how machine learning can strengthen network defenses -from Xenia Wagner's (ipoque, Germany) SPARTAN dataset for IoT-based APT detection in smart homes, to Marleen Sichermann's (University of Wuerzburg, Germany) intrusion detection approaches for IPFIX networks. Johannes Schleicher (University of Augsburg, Germany) then addressed the challenge of detecting previously unseen attacks through active learning, before Hannes Schwanzer (RheinMain University of Applied Sciences, Germany) closed the session with his work on Bayesian packet header synthesis and authenticity evaluation.

In the second session, the focus shifted to **learning-based routing and congestion control**. Ahmed Al-Dulaimy (University of Koblenz, Germany) presented a machine learning-based approach for predicting optimal parent nodes in software-defined wireless sensor networks to improve routing efficiency. Musab Ahmed (Hamburg University of Technology, Germany) introduced a learning-based method for local routing

decisions in sparse aeronautical communication networks to enhance connectivity under challenging conditions. Andreas Boltres (Karlsruhe Institute of Technology, Germany) explored how neural networks can generate latent embeddings for telemetry-aware greedy routing, enabling more informed forwarding decisions. The session concluded with Michael König (Karlsruhe Institute of Technology, Germany), who presented a method for generalizing coordinated congestion control across multiple flows and network topologies.

The discussions continued after a city tour in Augsburg during a dinner event at a traditional Bavarian Wirtshaus.

Augsburg city tour © Universität Augsburg

Day 2 – From Industrial AI to Digital Twins

The second day began with another keynote, this time by Dr. Andreas Blenk (Siemens AG), titled *"Industrial AI Today. Autonomous Industry Tomorrow."* His talk highlighted current developments in industrial AI, including automation, digitalization, and future research directions toward autonomous systems.

Dr. Andreas Blenk (Siemens AG) gives his keynote talk, titled "Industrial AI Today. Autonomous Industry Tomorrow." © Universität Augsburg

The third technical session focused on **AI for network management**. Zineddine Bettouche (Deggendorf Institute of Technology, Germany) introduced a spatial PDE-aware model for mobile traffic forecasting, while Ibrahima Ndiaye (Otto von Guericke University Magdeburg, Germany) presented a federated learning-based approach for proactive load balancing in IIoT gateways. Jonas Wessner (Ulm University, Germany) complemented these contributions by demonstrating how large language models can be used to automate network access control.

In the final session, attention turned to **systems, platforms, and digital twins**. Johannes Späth (Technical University of Munich, Germany) presented a high-fidelity virtualized digital twin for ISP core networks, enabling realistic experimentation in controlled environments. Sebastian Hauschild (University of Luebeck, Germany) concluded the session with a portable IoT platform designed for experimental cadaverine measurements, showcasing the diversity of application domains covered during the workshop.

Best Presentation Award

After all sessions concluded, the best paper award was presented to Jonas Wessner (Ulm University, Germany) for his outstanding presentation on the topic how can LLMs be used to have an automated network access control.

We would like to express our gratitude to **Siemens AG** for sponsoring this award.

Best presentation award ceremony (from left to right: Dr. Andreas Blenk, Jones Wessner, Prof. Dr. Michael Seufert)
© Universität Augsburg

Conclusion

The workshop co-chairs concluded the day with a brief summary and expressed their gratitude to all speakers and participants for the engaging and productive discussions. As the workshop once again demonstrated its ability to foster active collaboration within the research community, a future edition is already being considered.

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We also sincerely thank all authors, reviewers, attendees, and local organizers for their valuable contributions to the success of the workshop.

Michael Seufert, Andreas Blenk, Björn Richerzhagen
MaLeNe 2026 & Workshop Co-Chairs

Group picutre MaLeNe 2026 © Universität Augsburg

KuVS Newsletter

KuVS Calls and Announcements

WueWoWAS'26 on Networking and Computing in the 6G Era

The KuVS Fachgespräch - Würzburg Workshop on Next-Generation Networks returns for its 2026 edition. After a successful 2025 event focusing on 6G networks and communication technologies, the 2026 workshop expands its scope to include compute infrastructure and networking in the 6G era. The event will take place in Würzburg, Germany, from **28 to 30 September 2026**.

WueWoWAS'26 continues to focus on preliminary and ongoing research and on previously published hot-topic papers in the field of next-generation networks. The workshop goal is to explore novel concepts and technologies that will enable the next generation of connectivity, intelligence and automation across multiple domains. The workshop emphasises distributed computing, the edge-cloud continuum and joint communication-computation infrastructures as enablers for 6G.

Similar to the 2025 edition, the workshop invites submissions of extended abstracts presenting early-stage results, ongoing projects or condensed versions of recently published works. Abstracts should not exceed **three pages**, with an additional page allowed for references. PhD students, early-career scientists and senior researchers are encouraged to contribute their ideas. Contributions may address topics such as converged and non-terrestrial 6G architectures, specialised networks for industrial or IoT scenarios, joint sensing and communication, softwarisation and AI/ML-driven network control, resilient and energy-efficient design, as well as novel testbeds and reproducibility frameworks. Building on the momentum of the last four editions of the workshop, WueWoWAS'26 places particular emphasis on compute-aware networking and the relation between communication and distributed computation.

The timeline for WueWoWAS'26 is as follows: paper submission is due by **17 July 2026**, acceptance notifications will be sent by **31 July 2026**, and the registration deadline is **28 August 2026**. The workshop itself will run from **28 September to 30 September 2026** in Würzburg.

Participants can look forward to an in-person event that fosters communication between academia and industry. The programme will include invited experience talks and discussion slots on key topics in NGN, 6G and compute systems. These sessions are designed to complement the presentation of accepted papers and provide ample time for questions and networking. Details about speed-mentoring sessions, tutorials and PhD-day activities—highlights of previous editions—will be announced on the workshop website as the date approaches.

We invite interested researchers to mark the key dates, prepare their extended abstracts and join us in Würzburg to discuss how networking and computing will evolve in the 6G era. Additional information and updates will be published on the WueWoWAS'26 website: https://lsinfo3.github.io/WueWoWAS2026/.

KuVS Newsletter

KuVS/Resilient Worlds Research School on Network and System Resilience, 30 Sept., Berlin

30 September - 2 October 2026, Berlin, Germany

https://www.resilient-worlds.org/research_school/

Resilience is emerging as a critical property of all kinds of complex, networked systems, describing the ability of a system to absorb shocks, recover promptly, adapt to maintain comparable functionality, and continuously improve by learning from past incidents. As the complexity and heterogeneity of critical networks and systems continues to grow, the scope of resilience reaches far beyond traditional fault tolerance and security, encompassing ultra-reliability, deterministic performance, trustworthiness, and privacy.

The KuVS Research School on Network and System Resilience is jointly organized by DFG Priority Programme 2378 Resilient Worlds and KuVS. It aims to foster the next generation of resilience researchers through collaborative learning, skill development, and community building. We welcome early-career researchers (from 1st year PhDs to PostDocs) working on any aspect of resilience, whether in the context of security, availability, dependability, reliability or others, across any kind of system or network, and using any methodology.

The school program combines expert-led sessions with hands-on and community-oriented activities. This will cover keynotes, longer mini-courses on hot topics, and hackathons. The participants are also expected to give 7-minute lightning talks on their research directions.

Participation

All participants are expected to submit a short research statement of up to two pages (double-column, IEEE format) describing their research topic. Participants will also give a lightning talk based on their statement (No pressure! Just as an opportunity to share your work and get to know your peers.) Attendance is free of charge for Resilient Worlds and KuVS members. A registration fee of 300€ applies to all other participants. Admission is handled on a first-come, first-served basis; KuVS members are given priority.

Registration link: https://tinyurl.com/35mhcfvp

Submission link: https://tinyurl.com/j4h8vxfv

Important Dates

- School Dates: 30 September - 2 October 2026
- Registration Deadline: 15 August 2026
- Submission Deadline: 22 August 2026

Organizers

- Dr. Doğanalp Ergenç, TU Berlin
- Dr. Shadi Attarha, University of Bremen
- Dr. Nurefşan Sertbaş Bülbül, UHH

For more information, visit: https://www.resilient-worlds.org/research_school/

23. GI/ITG KuVS Fachgespräch Sensornetze (FGSN)

More information on the web page at http://www.tu-ilmenau.de/fgsn26

Key facts:

- Scope: All work on WSNs (incl. IoT, CPS, M2M, etc) is welcome
- Submissions: Extended abstracts of up to 4 pages length, IEEE format. Early stage work is welcome
- Deadline for paper submissions: 01 July 2026
- FGSN will take place on 28+29 September 2026 in Ilmenau

KuVS Newsletter

Fun

How 2 Shor10 English Texts

Riddles Based on a "Mathematically Oriented Reform" of English Orthography

Rolf Windenberg (alias: Nigel Fred Brown)

The Rules:

1. Usage of mathematical symbols and of numbers
2. Capital letters are pronounced as in the alphabet

Examples:

(Trafalgar)^2 [meaning: Trafalgar Square]

$\sqrt{66}$ [meaning: Route 66]

Y R U so Z 2dA ? [meaning: why are you so sad today ?]

The Riddles *(Solutions, see on next page)***:**

- *Beginners:* **chemi • cal**
- *Playing with Capital Letters:* **la10C**
- *Advanced Persons:* **he 0s 2 smoke lRge CgRs** **[hint: 0 pronounced "love" (as in tennis)]**
- *Experts:* **(s+ra) + (+y) h8 2 w8 in a Q**
- *Geniuses:* **40ms domin8ed the $\frac{nation}{al}$ in footb∀**

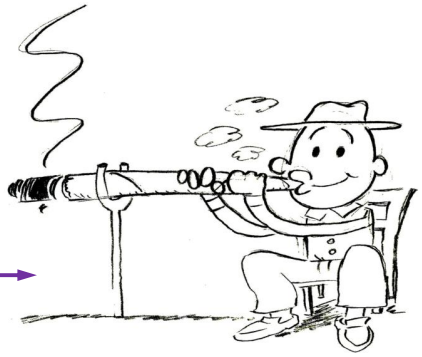

Fig. 1: Illustration to assist the reader in solving the third riddle (source: [1])

[1] Windenberg, R., Hasselfang, R.W.: How 2 Shor10 English Texts. Shaker Media Verlag, Düren, ISBN 978-3-95631-590-9, 2017

Solutions of the riddles (by Rolf Windenberg):

- chemical product [because: chemi-cal-*product*]
- latency [because: la-*ten*-*C*]
- he loves to smoke large cigars [because: he-*love*-s-*two*-smoke-l-*R*-ge-*C*-g-*R*-*s*]
- Sandra and Andy hate to wait in a queue [because: *s*-*and*-ra-*and*-*and*-y-h-*eight*-*two*-w-*eight*-in-a-*Q*]
- four teams dominated the national division in football [*fourty*-ms-domin-*eight*-ed-the-nation-al-*division*-in-footb-*all*].

KuVS Newsletter

Next Newsletter - Deadline November 15th

Next newsletter : 12/2026

Deadline for submissions and contributions : 15th November 2026

We ask you for submissions in English. Topics can be from the following time frame:
June 2026 - December 2026

- Fachgruppe KuVS
  - Geschäftsberichte der GI - KuVS - Fachgruppe
  - ...
- News from the working groups
  - Dissertations
  - Awards
  - News form persons
  - Open positions
  - ...
- New projects (DFG, BMBF, KMU, etc.)
  - Initiatives
  - Larger projects
  - ...
- Calls and news from events, conferences, etc.
  - Reports (Conferences, workshops, Fachgespräche, Dagstuhl, doctoral summer/winter schools, ...)
  - Call for papers and participation
    (conferences (supported by or hosted in Germany/Austria/Switzerland), Fachgespräche, Summer Schools, ...)
  - Fun
  - ...
- Announcements and important dates

The preferred submission format is text, e.g., using markdown language. Call for papers can also be submitted as PDFs.

Submissions should be done by sending emails to the editors:

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