MiFuture News

Industry news, papers and events related to 6G C MIMO

September 2026

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MiFuture News: Monthly Updates on 6G and MIMO Technologies

MiFuture News is a monthly publication of the MiFuture project, complementing the MiFuture Newsletter, which will be published every six months. While the Newsletter includes internal project updates, MiFuture News features articles and information from external sources freely available on the internet.

This publication aims to gather the most interesting industry news, relevant technical papers, and upcoming events related to 6G and MIMO technologies to share with supervisors and PhD students within the project.

If you come across any interesting news, please share it with us for inclusion in the next issue.

UC3M Leads European Project for 6G Antennas That 'See' Surroundings and Protect Privacy

Jun 17 - The Universidad Carlos III de Madrid (UC3M) is heading PAISES-6G, a European project designing future 6G mobile technology with intelligent antennas capable of 'seeing' the environment and detecting cyber threats using Artificial Intelligence, while safeguarding user privacy.

India Aims To Lead Global 6G Development And Tech Standards

Sept 10 - India aims to lead the world in the upcoming sixth-generation mobile technology and become a designer of global technology standards, Union Communications Minister Jyotiraditya Scindia said on Thursday, asserting that the country is moving from being a market for technology to becoming a maker of technology. Speaking at the Global Fintech Fest 2026, Scindia said India had lagged the world on 4G but marched with the world on 5G and would lead the world on the sixth-generation mobile communication technology. "We were behind the world on 4G. We marched with the world on 5G, but I commit to you, we will lead the world on 6G," he said.

Wi-Fi and Cellular Industries Duke It Out Over 6-GHz Band The EU, India, and the United Kingdom are under scrutiny as the U.S. and China stake positions

Jun 25 – “Any country that chooses not to allocate the entire 6-GHz band to unlicensed use is putting itself at significant innovation disadvantage and limiting its capacity for economic growth,” says Mary Brown, executive director of Wifi Forward, a Wi-Fi advocacy group whose members include Broadcom, Comcast, Google, and Microsoft.

Global governments commit to tight 6G timeline

Jun 28 - More than 20 nations committed to a 6G development programme designed to deliver initial tangible progress within 12 months by aligning research direction and establishing clear lines of communication.

TTA expands mobile technology cooperation with Vietnam's Viettel to support exports by Korean firms

Ago 06 - The Telecommunications Technology Association (TTA) said it is expanding cooperation on next-generation mobile technology and business with Vietnam's mobile operator Viettel. TTA said it held a B5G and 6G standards technology business exchange event and workshop with Viettel Group in Hanoi over two days from Aug. 4. The event aimed to help South Korean firms with mobile equipment and solutions build business networks and pursue entry into Vietnam.

China eyes 6G commercial use before 2030

Aug 26 - China will strengthen 6G super-high-speed mobile communication technology research and development (R&D) and prepare for its commercial rollout between now and 2030, according to Chinese officials on Wednesday.

6G Rollout Will Be A Patchwork At First

July 08 - 6G is expected to begin rolling out in 2030, but advances in 5G will inch cellular technology close enough that it will make the first 6G implementations seem more like just another upgrade. That’s just the starting point, though. 6G technology gets much more interesting from there, connecting more devices at a significantly higher data rate, and enabling services that would be unattractive to consumers using today’s technology.

European governments back US-led call for 6G leadership and security

July 29 - The US Department of Commerce’s National Telecommunications and Information Administration (NTIA) has launched a new initiative aimed at shaping the future of 6G, thanks to the support from over 20 partner governments.

T-Mobile's US 6G coverage may come earlier than you think

Jun 27 - The current generation of cell network, 5G, has only been in our lives since 2019, but it already feels unfathomable that we could go back to 4G. But even the super-speedy 5G isn't the pinnacle of mobile internet speed, as T-Mobile has been discussing what the next big leap, 6G, will bring and when it could arrive.

It's official – 6G specs are set for early 2029

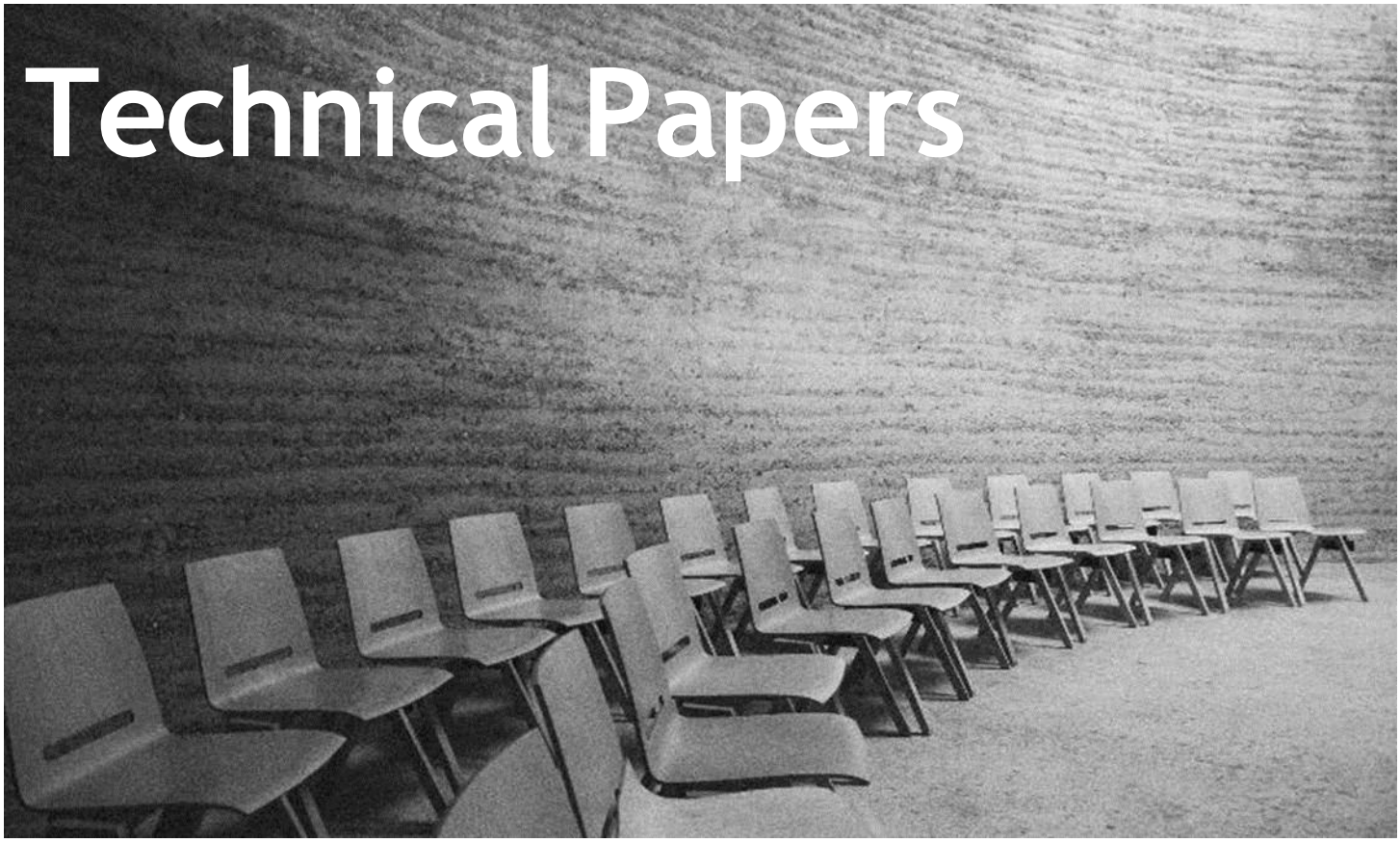
Jun 16 - 3GPP specifications group agrees to timeline for 6G standards to be complete in March 2029 but defers some key decisions to the September plenary meeting.

European Researchers Develop AI-Native Wireless Networks With NVIDIA 6G Research Portfolio

Jun 11 - Using NVIDIA platforms, tools and libraries, European telecommunications institutions are accelerating efforts to develop 6G — the next generation of cellular technology, with AI woven in from the start.

The mobile technology revolution: The journey from 1G to 6G

Ago 13 - From bulky phones used only for making calls to smart smartphones connecting everything, mobile technology has undergone a spectacular revolution. The journey from 1G to 6G is a story of the relentless development of technology, of leaps forward that have completely transformed our lives.



5G/6G mobile telephone technology, methodical progress, pertinent health protection, and artificial intelligence

Sunil Jain (Manipal Tata Medical College, Jamshedpur, India), Prem Kamal Jain (Department of Computer Science & Applied Bioinformatics, Indraprastha Institute of Information Technology, New Delhi, India)

Rapid growth in mobile data traffic, driven partly by artificial intelligence (AI), raises concerns about health and safety as 5G, 6G, and future networks expand. The proposed "3RRs" framework promotes risk reduction through safer devices, engineering and environmental measures, and personalized user habits. AI can help minimize electromagnetic field exposure by analyzing real-time data, optimizing network deployment, and enabling autonomous decision-making. It can also support safer use of wireless technologies across communications, healthcare, fitness, and defense. As networks become denser and more interconnected, AI-based safety strategies, supportive government policies, and healthy user habits will be increasingly important.

Ultra-Massive MIMO with Orthogonal Chirp Division Multiplexing for Near-Field Sensing and Communication Integration

Wan, Ziwei; Gao, Zhen; Héliot, Fabien; Luo, Qu; Xiao, Pei; Zhang, Haiyang; Masouros, Christos; ... Chen, Sheng; + view all (2026) Ultra-Massive MIMO with Orthogonal Chirp Division Multiplexing for Near-Field Sensing and Communication Integration. IEEE Transactions on Communications 10.1109/tcomm.2026.3704230

The paper proposes a near-field integrated sensing and communication (ISAC) system combining ultra-massive MIMO (UM-MIMO) with orthogonal chirp division multiplexing (OCDM). A UM-MIMO base station uses dedicated sensing subcarriers and antennas, while an FMCW-based receiver reduces hardware complexity and separates echoes from different antennas. This enables antenna-pairwise estimation of target range and velocity. The authors introduce virtual bistatic sensing (VIBS), which combines measurements from multiple antenna pairs to improve target positioning and three-dimensional velocity estimation, even under spatially non-stationary and multipath channels. Sensing information is also used to enhance channel estimation. Simulations show improved sensing accuracy and communication performance.

Integrated Sensing and Communication in 3GPP: Evolution from 5G-Advanced to 6G

Xingqin Lin

The article reviews the evolution of integrated sensing and communication (ISAC) within 3GPP, from 5G-Advanced toward 6G. ISAC enables mobile networks to sense and track passive objects by exploiting parameters such as propagation delay, Doppler, angle, and temporal variations while reusing existing spectrum, infrastructure, and edge computing. The paper describes Release 19 requirements and channel models, Release 20 sensing architecture and reporting mechanisms, and the 5G monostatic approach for drone detection. It also examines 6G-native sensing, including multiple sensing modes, communication-assisted sensing, and multi-source data integration, while highlighting challenges involving privacy, trust, uncertainty, and service integration.

6G – connectivity and beyond for the 2030s

Gustav Wikström, Patrik Persson, Patrik Persson, Stefan Parkvall, Stefan Parkvall, Göran, Robert Baldemair, Farnaz Moradi, Marie Hogan, Torbjörn Cagenius, Torbjörn Cagenius, Carlos Bravo, Johan Lundsjö, Ricardo Blasco, ERICSSON

Ericsson's 6G vision was first announced in 2020 in the first edition of this white paper and later updated in 2024. Today we can see accelerated focus on 6G across the ecosystem. With early standardization activities underway and expectations rising for the 2030s, the industry is aligning on what must come next: a network that expands the 5G standalone (5G SA) and 5G-Advanced journey, scales with new traffic patterns and device classes, is highly autonomous, and enables new services and business models. As artificial intelligence (AI), cloud, and mobile technologies converge, they are reshaping how systems sense, learn, and act. This calls for 6G to become an intelligent fabric, an open, secure and interoperable infrastructure that lets distributed, autonomous AI agents collaborate at machine timescales with predictable, verifiable performance. Similar to previous generational shifts, 6G must meet both technical and business needs. It should build on the global success of mobile communications and set a new baseline for performance, efficiency, and programmability.

6G Spectrum Recommendations

Next G Alliance

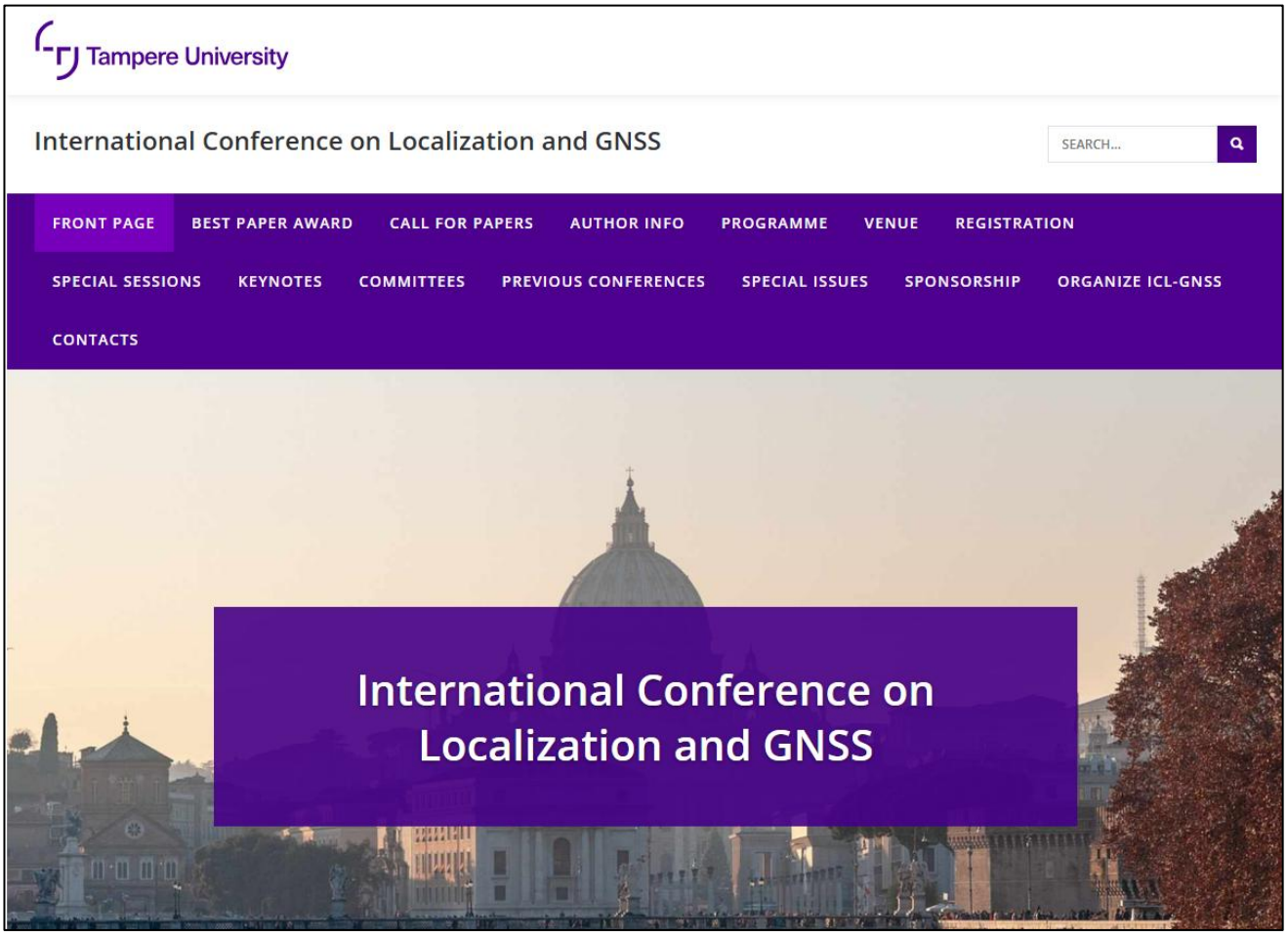
The Next G Alliance report presents a strategic roadmap for securing spectrum for U.S. commercial 6G networks by 2030. It reviews key frequency ranges being studied by the NTIA and FCC and assesses the technical, regulatory, and policy barriers to making them available. The report also considers the requirement to repurpose 800 MHz of spectrum for commercial mobile use by 2033 and its importance for U.S. 6G leadership. It emphasizes large contiguous mid-band spectrum blocks for advanced applications, alongside satellite connectivity. Recommendations include prioritizing suitable bands, accelerating incumbent-system studies, promoting international harmonization, and developing realistic transition plans for early 6G deployment.

A comprehensive survey on 6G: Enabling technologies, key applications, and future challenges

Sofiane Latreche, Hocine Bellahsene

The paper provides a comprehensive overview of 6G, explaining why future applications such as holographic telepresence, autonomous systems, brain–computer interfaces, and ubiquitous 3D connectivity require capabilities beyond 5G. It reviews major enabling technologies, including terahertz communications, ultra-massive MIMO, intelligent reflecting surfaces, AI-native networking, Digital Twin Networks, and generative AI. The survey also explores new network architectures integrating terrestrial, aerial, satellite, and underwater systems, together with emerging applications in healthcare, robotics, industry, mobility, and immersive environments. Finally, it identifies key technical and architectural challenges that must be overcome to turn the 6G vision into practical, deployable networks.


Events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London, United Kingdom

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6G Forum

Preparing networks and services for the 6G era

Free Virtual Event | October 6th, 2026, 9 AM EST / 2 PM BST

IEEE Future Networks™ WORLD FORUM • 2026

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26–28 October 2026 // Lisbon, Portugal

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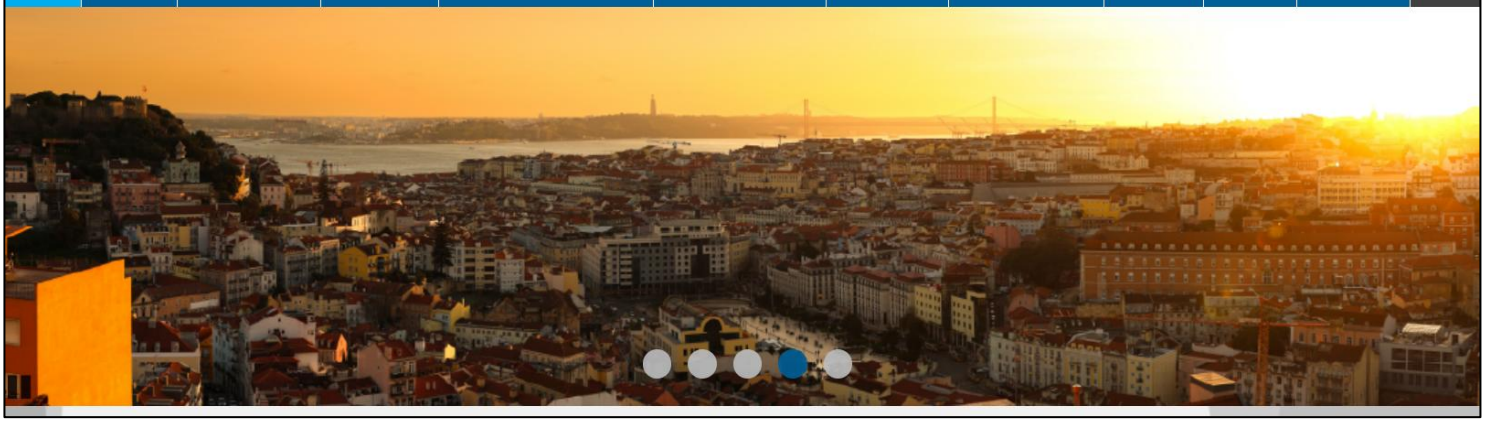

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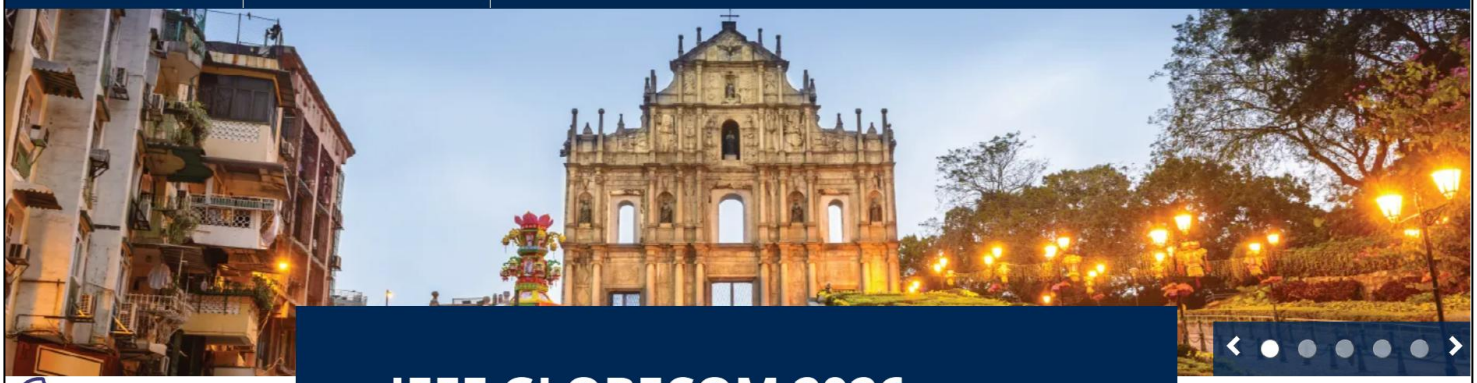

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