June 4th, 2025

Simula **Strategy**

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This is Simula

Mission:

Solving fundamental problems in ICT that benefit society.

Vision:

To be an excellent research lab. Educating future technology leaders. Providing independent advice to government. An innovator and innovation partner.

Core values:

I CARE Impact, Curiosity, Ambition, Respect, Excellence

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*Solving fundamental problems in ICT that benefit society—through **research, education and innovation.***

AMBITIONS

Research

Simula conducts high-quality, excellent and focused research, of high relevance and societal value.

Simula maintains strong and strategic partnerships with leading universities and research groups, nationally and internationally.

Simula provides independent, research-based advice to the Norwegian government on the risks and rewards of emerging technologies.

Education

Simula educates the next generation of researchers and technology leaders that match societal needs.

Simula promotes an informed public conversation by sharing our knowledge and expertise.

Innovation

Simula works closely with industry and public sector to turn knowledge into innovation and real-world impact.

Simula promotes a culture of innovation, enabling commercialization and dissemination of research results by turning ideas into working solutions.

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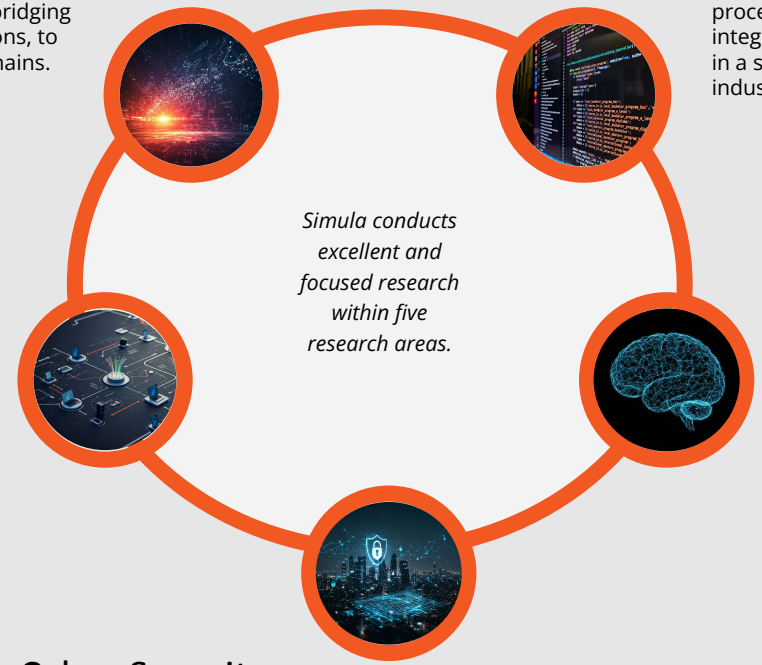
Scientific Computing

Simula's research team in scientific computing develops advanced computational methods, bridging mathematical theory and real-world applications, to study complex systems in select scientific domains.

Software Engineering

Simula's software engineering research concentrates on procedures, methods and tools for ensuring the reliability and integrity of complex software systems throughout their lifecycle in a socio-technological perspective, in close collaboration with industry and the public sector.



Communication Systems

Simula´s communication systems research targets the development of intelligent, resilient, and secure communication infrastructures. The strategic focus is to enable networks that support digital sovereignty, critical services, and long-term societal needs.

Artificial Intelligence

Simula´s research in artificial intelligence is focused on the mathematical foundations of machine learning, the experimental study of algorithms, and developing applied solutions that address real-world challenges in areas as diverse as sport, human health, and defense.

Cyber Security

Simula´s cyber security research is driven by the pursuit of novel solutions and knowledge to enable a more secure society. This includes, but is not limited to, cryptography and privacy-enhancing technologies, security of emerging technologies, and evidence-based insights into the impact of implemented security measures

APPLYING OUR EXPERTISE TO PROBLEMS THAT MATTER

Through long-term focus, Simula has developed a strong foundation and expertise in our five research areas.

This expertise is deployed to solve important problems that matter to society.

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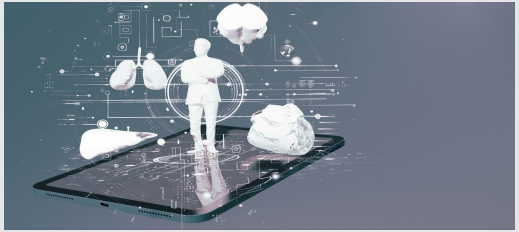
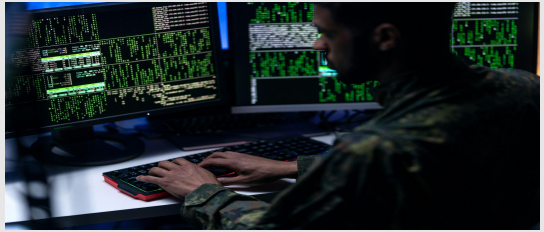
Tackling Societal Challenges



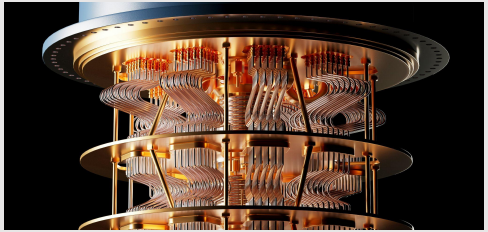
Future of Healthcare Technology

An aging population is driving a demand for more advanced and effective treatments.
Simula leverages its strengths in simulation, modeling of physiological processes and artificial intelligence to develop the advanced digital health technologies essential for delivering efficient, precise, individualized care.
Through strong partnerships with medical research groups, Simula aims to tackle major health challenges and improve fundamental understanding of the underlying physiology, as well as diagnosis and treatment planning.



Technology for Societal Resilience and Security

In an increasingly complex and interconnected world, the rise in geopolitical tensions is creating new challenges. At the same time, societies around the globe are becoming increasingly reliant on digital technologies for essential services.
There is a need for robust and resilient technologies that underpin stable and just societies.
Simula aims to apply its expertise in digital technologies and infrastructures to enhance the security of critical digital services, the safety of our citizens and an increased total defence.



Disruptive Technologies

Digital technologies are being developed at an ever accelerating rate, with immense impacts on almost every part of society.
Quantum Technologies are recognized as the next significant advancement in computing, communication and sensing. Simula aims to position Norway as a global leader in the fields of quantum software engineering and secure quantum communication.
Artificial Intelligence (AI) is a research field with significant challenges remaining. Simula aims to contribute to the safe, secure and effective development and adoption of AI.

Sustainability and energy efficiency as a guiding technology development principle.

Ethical and inclusive development of technology.

Research Standards

Open Science and reproducibility, prioritizing open source software and open data.

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Reach higher. Dig deeper.
And never be content.

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