

Framatome partners with ADAGOS to bring artificial intelligence to the nuclear energy industry

September 3, 2020 – Framatome signed an exclusive partnership agreement with ADAGOS to bring advanced, parsimonious artificial intelligence technology to the nuclear energy industry. ADAGOS’ NeurEco architecture introduces a third-generation neural network to solve large and complex problems using fewer computational and data resources compared to previous generations.

“Artificial intelligence is a game changer for advancing technologies and increasing the competitiveness and efficiency of the nuclear energy industry now and in the decades to come,” said Catherine Cornand, senior executive vice president of the Installed Base Business Unit at Framatome. “This partnership will allow us to provide new digital solutions for our customers worldwide, contributing to reliable, economical, low-carbon electricity.”



Neural networks analyze data and information in a way that mimics the human brain. NeurEco addresses common challenges to artificial intelligence and deep-learning technology. Its new neural network approach based on parsimony reduces resources such as the amount of learning data, energy consumption, size of neural network, requested memory and computing time required to implement deep-learning methods. It generates new types of parsimonious neural networks that provide answers to non-linear questions while minimizing resource size and complexity.

The NeurEco technology provides robust solutions to historical challenges to applying artificial intelligence in the nuclear energy industry. Calculation times for non-linear fields such as neutronics and computational fluid designs can be reduced from days to a few minutes, and the generated metamodel provides more information on the output. Sensitivity studies are raised to the next level with extensive results verses one for consideration. Calculation files are several hundred times smaller and can be compressed and decompressed infinitely, saving time and money for operators.

“This partnership combines Framatome’s engineering expertise and ADAGOS’ cutting-edge technology to automate and resolve complex issues,” said Alexis Marincic, senior executive vice president of the Engineering and Design Authority at Framatome. “Together, we share a

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commitment to provide the nuclear industry with an unprecedented, high-quality, innovative solution that transforms data and drives performance for our customers' daily operations.”

Located in Toulouse, France, ADAGOS is a computer software provider that specializes in neural network advancements for the health, automotive and energy industries. The [Silicon Review](#) recognized ADAGOS as one of the 50 best companies to watch in 2020.

About Framatome

Framatome is an international leader in nuclear energy recognized for its innovative solutions and value added technologies for the global nuclear fleet. With worldwide expertise and a proven track record for reliability and performance, the company designs, services and installs components, fuel, and instrumentation and control systems for nuclear power plants. Its more than 14,000 employees work every day to help Framatome's customers supply ever cleaner, safer and more economical low-carbon energy. Visit us at: www.framatome.com, and follow us on Twitter: [@Framatome](#) and LinkedIn: [Framatome](#). Framatome is owned by the EDF Group (75.5%), Mitsubishi Heavy Industries (MHI – 19.5%) and Assystem (5%).

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