Press Release

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Bentley Systems Announces Acquisition of ADINA to Extend Nonlinear Simulation throughout Infrastructure Engineering

Digital Twins Will Benefit from Authoritative ADINA Simulations for Enhanced Infrastructure Resilience

EXTON, Pa. – April 7, 2022 – Bentley Systems, Incorporated (Nasdaq: BSY), the *infrastructure engineering software* company, today announced it has acquired Watertown, Massachusetts-based ADINA R & D Inc., a leading developer of finite element analysis software applications used in a comprehensively diverse range of engineering fields (adina.com). ADINA was founded in 1986 by Dr. Klaus-Jürgen Bathe, professor of mechanical engineering at the Massachusetts Institute of Technology and a world-renowned leader in the field of finite element analysis and its applications.

Civil, structural, and mechanical engineers choose ADINA software for its authoritative veracity, including in analysis of buildings, bridges, stadiums, pressure vessels, dams, and tunnels. By virtue of the ADINA System's integral robustness across disciplines, materials, and simulation domains (structures, mechanical, fluids, thermal, electromagnetic, and multi-physics), engineers use it to perform comprehensive safety and performance studies where reliability and resilience are of critical importance.

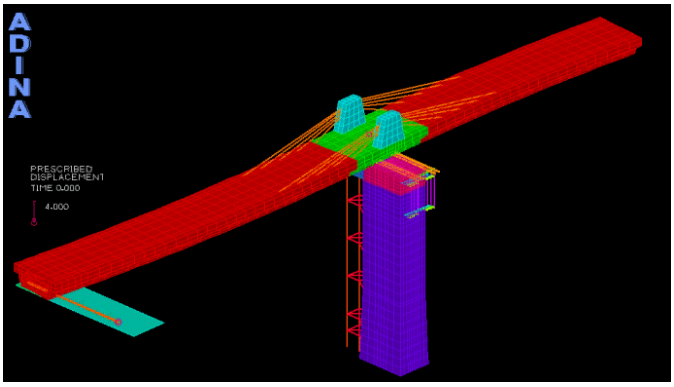
With infrastructure digital twins, users can simulate the complete behavior of structures to create confidence in designs that are much safer and more cost-effective than those merely analyzed to meet prescribed code standards. Of particular importance for infrastructure resilience, ADINA will also be applied within digital twins of existing infrastructure assets, now made practical by the Bentley iTwin platform, to simulate their responses and vulnerabilities to stresses so extreme that nonlinear effects must be considered—caused (for instance) by seismic, wind, flood, pressure, thermal, collision, or blast forces.

The ADINA System's nonlinear simulation capabilities will in turn become directly accessible, through convenient technical and commercial integration, to users of Bentley Systems' uniquely comprehensive modeling and simulation software portfolio for infrastructure engineering. As the ADINA System's nonlinear extensions are introduced to complement these existing physical simulation applications—currently spanning STAAD, RAM, SACS, MOSES, AutoPIPE, PLAXIS, LEAP, RM, LARS, SPIDA, and PLS—the scope of mainstream simulation underlying the engineering of infrastructure resilience will be valuably enhanced. ADINA's advantages also include advanced dynamics, 3D solid FEM, buckling, substructuring, and advanced meshing for critical joints and sections.

"Incorporating ADINA and its creators is very exciting for all of our engineering simulation teams, as it will also be for existing and new users," said Raoul Karp, vice president, engineering simulation at Bentley Systems. "Dr. Bathe literally wrote the book on advancing finite element simulations, and the ADINA System provides the reference for benchmarking all other disparate analysis approaches. We will now be able to extend nonlinear realism across all of our infrastructure digital twin simulation offerings."

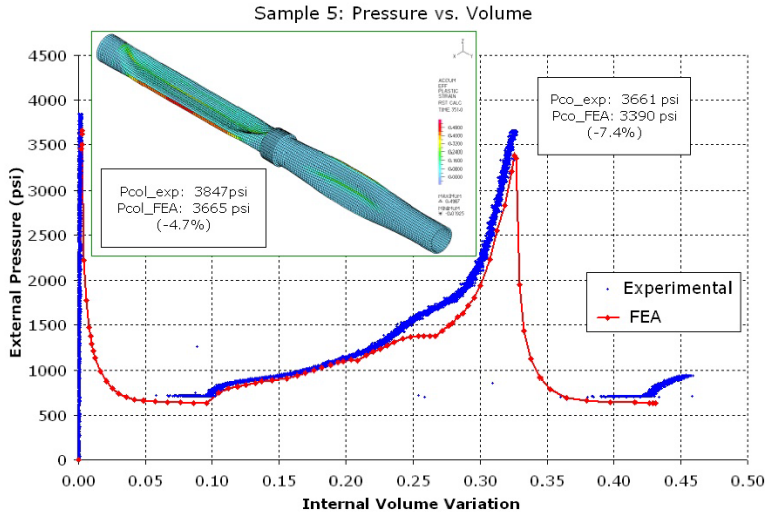
Founder of ADINA Dr. K.J. Bathe, who will remain as a technical advisor, said, "My colleagues and I are proud to be joining Bentley Systems' broad and deep simulation team. Our aim in the development of ADINA has always been to provide a most reliable and efficient analysis tool to scientists and engineers, and it is wonderful that with Bentley, ADINA will now be used and further developed with great potential for solving the varied and interrelated challenges of infrastructure resilience."

Image 1:



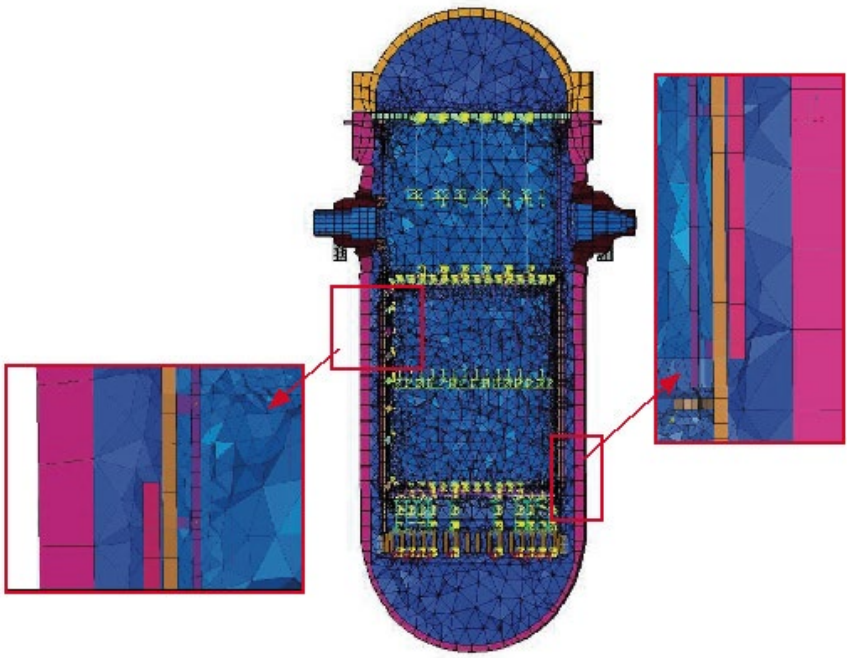
Caption: The frictional sliding of a prestressed concrete bridge girder can be studied with ADINA technology.

Image 2:



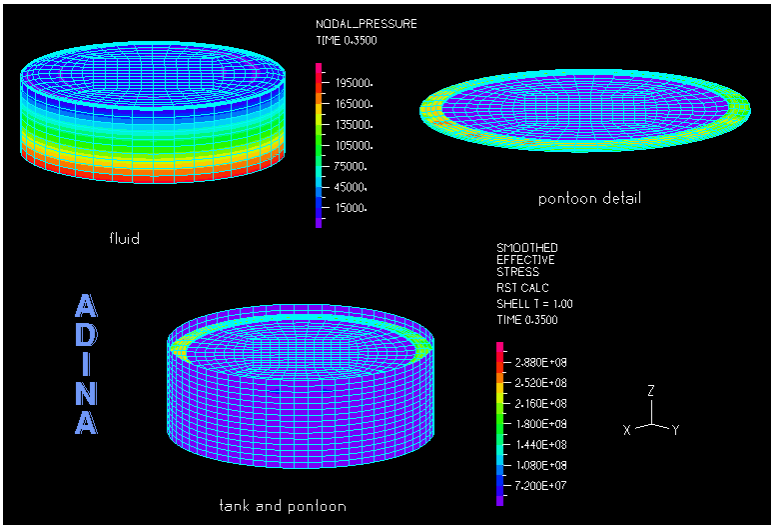
Caption: Collapse analysis of pressurized pipe can be performed with ADINA software.

Image 3:



Caption: Simulation of a pipe break in a nuclear reactor using ADINA technology.

Image 4:



Caption: Sloshing of an oil tank with the base subjected to horizontal ground motion with ADINA software.

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About Bentley Systems

Bentley Systems (Nasdaq: BSY) is the *infrastructure engineering software* company. We provide innovative software to advance the world's infrastructure – sustaining both the global economy and environment. Our industry-leading software solutions are used by professionals, and organizations of every size, for the design, construction, and operations of roads and bridges, rail and transit, water and wastewater, public works and utilities, buildings and campuses, mining, and industrial facilities. Our offerings include *MicroStation*-based applications for modeling and simulation, *ProjectWise* for project delivery, *AssetWise* for asset and network performance, Seequent's leading geoprofessional software portfolio, and the *iTwin* platform for infrastructure digital twins. Bentley Systems employs more than 4,500 colleagues and generates annual revenues of approximately $1 billion in 186 countries.
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