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New Statistical Capabilities Coming in JMP Pro 19: Bayesian Optimization, Rigorous Stability Analysis, Peak Modelling & Baseline Correction

JMP Pro 19 and JMP Student Edition 19, coming in October 2025, is a major advancement of JMP's statistical modeling capabilities. In this presentation we highlight three of its most important and impactful new developments. The new Bayesian Optimization platform which combines model optimization via the Profiler with Gaussian Process (GaSP) based active learning methods. Essentially any industrial multiple response optimization supported by the Profiler can be solved using less time and fewer resources with this new capability. It simplifies industrial formulation projects because GaSP models are more robust to complicated linear constraints than linear statistical models. Another new capability is the Fit Mixed platform has a built-in Stability Analysis / expiration date calculator that uses random coefficient models to directly derive the distribution of the expiration date, yielding a more rigorous approach than the existing ICH Guidelines based approach. Finally, we will demonstrate the new Peak Modeling and Baseline Correction capabilities of the Functional Data Explorer, which makes more efficient use of chromatographic data in analytical chemistry by making it possible to deconvolve poorly resolved peaks.

Special/ Invited session

Software Session

Classification

Mainly application

Keywords

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