On integrable classes of surfaces in the Euclidean space

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The poster will discuss classification of integrable PDE describing immersed surfaces in $\mathbb{R}^3$. The integrability criterion we apply is the existence of an $\mathfrak{sl}(n)$-valued curvature representation depending on a non-removable parameter. Results obtained so far recover a number of classical integrable classes as well as classes related to classical integrable classes, many of which had fallen into oblivion.