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Regularity results for solutions to some PDEs with Orlicz growth

The talk deals with the higher differentiability of solutions to some nonlinear PDEs in divergence form whose nonlinearity is expressed through Orlicz functions. These problems are of interest since physical phenomena are often governed by nonlinearities which are not of polynomial type and then associated mathematical models involve the use of more general functions.

The results that will be illustrated have been obtained in two recent papers in collaboration with A. Passarelli di Napoli and C. Scheven.