MINIMAL SURFACE APPROXIMATION USING ISOGEOMETRIC METHODS

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We develop an algorithm to approximate minimal surface problems using isogeometric spaces. In particular we take advantage of the higher regularity of these spaces. The scheme is implemented in the software library IGATOOLS (www.igatools.org), which allows a seamless coding of the so called direct tensor notation. The latter permitting us to implement a Newton method for which we find an explicit formula for the second derivative of the area functional.

Joint work with Sebastián Pauletti (UNL, IMAL, Argentina) and Diego Sklar (UNL, IMAL, Argentina).