On Levi-flat real hypersurfaces with positive normal bundle

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Abstract: Two families of 3-dimensional Levi-flat hypersurfaces with positive normal bundles are known: certain flat circle bundles in ruled surfaces, and hyperbolic torus bundles in hyperbolic Inoue surfaces. These are of particular interest because they resemble the hypothetical Levi-flat hypersurface in the complex projective plane, whose existence remains an open question. In this talk I will report on mostly computational observations of these examples, including those related to weighted Bergman spaces.