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ROBERTO TRIGGIANI* (rt7u@virginia.edu), Mathematics Department, Kerchof hall,
Charlottesville, VA 22903. *Semigroup-wellposedness, strong and uniform stability of a
hyperbolic-parabolic Stokes-Lame fluid-structure interaction model.*

We consider an established hyperbolic-parabolic Stokes-Lame fluid-structure interaction model, with coupling taking place at the interface. We address the following problems: (i) contraction wemigroup well-posedness in the finite energy space, with explicit generator; (ii) spectral properties of the generator and their dependence on the geometry of the structure; (iii) higher level regularity (in connection with (iv) below); (iv) lack of compactness of the resolvent operator and lack of even strong stability in the whole energy space (the origin is always a simple eigenvalue); (v) backward uniqueness of the entire coupled system; (vi) insertion of a linear dissipative term at the interface to reproduce semigrup generation but, in addition, uniform stability as well, without geometrical conditions; (vii) the case of non-linear dissipative term. Problems (i),(ii),(iv),(v),(vi) are joint work with G.Avalos (U of Nebraska, Lincoln). Problems (iii), (vii) are joint work with G.Avalos and I.Lasiecka, U. of Virginia) (Received March 03, 2009)