

How to pose boundary conditions for Friedrichs systems?

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Abstract. There has been a renewed interest in the theory of Friedrichs' systems recently, which resulted in their new interpretations in the terms of Hilbert spaces. In particular, the admissible boundary conditions have been characterised by two intrinsic geometric conditions, and via boundary operators as well.

While the new abstract approach has provided a simplified framework, its relation to the classical Friedrichs' well-posedness result is still open.

As a first step, we shall investigate under which assumptions do the classical matrix-valued boundary fields determine the boundary operator. The viability of the assumptions will be tested on classical examples.

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