



Flows on Metric Graphs with General Boundary Conditions

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We present abstract results on the generation of C_0 -semigroups by first order differential operators on the Banach space of L^p -functions on a collection of compact intervals, normalized as $[0, 1]$, and non-compact intervals, parametrized along semi-axis $[0, \infty)$, coupled with very general boundary conditions. In many cases we are able to characterize the generation property in terms of the invertibility of a matrix associated to the boundary conditions. The abstract results are used to study well-posedness of transport equations on non-compact metric graphs.

References

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