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Dedicated to Professor LAZĂR DRAGOȘ on his 75th birthday

On the Stokes problem with slip boundary condition

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Abstract - We study the Stokes system with slip boundary condition in a domain with periodic inclusion of the size of the period. At the limit we obtain a Darcy's law. This model describes the flow of an incompressible viscous fluid through a porous medium under the action of an exterior electric field.

Key words and phrases : Stokes' system, slip boundary condition, exterior electric field, Darcy's law.

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