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A natural finite element for axisymmetric problem

François Dubois

CNAM Paris et Université Paris Sud, Orsay

conjoint work with

Stefan Duprey

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1) Axi-symmetric model problem

2) Axi-Sobolev spaces

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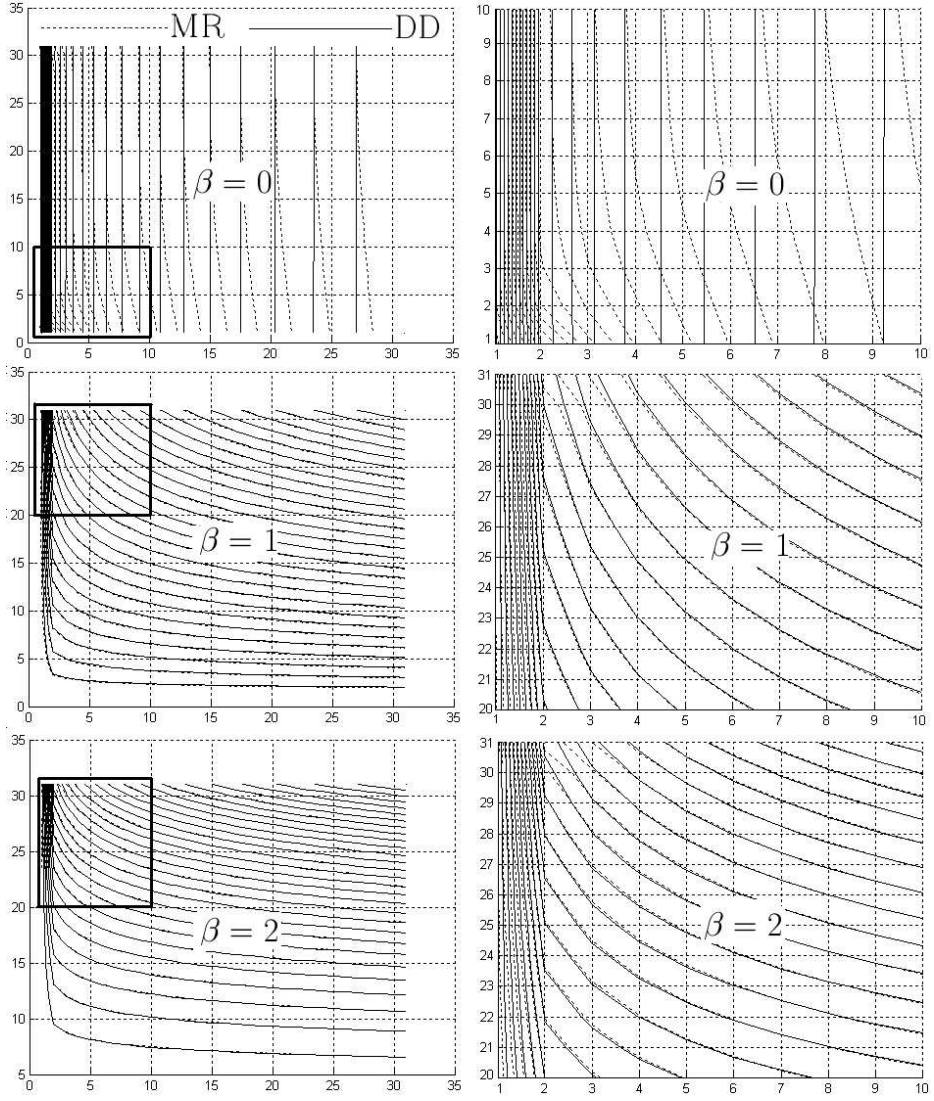
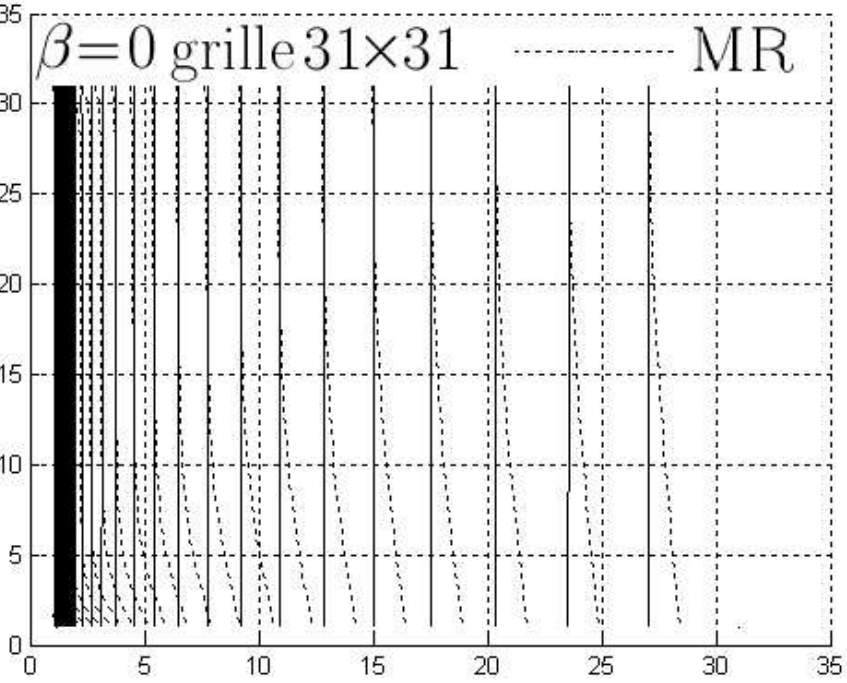
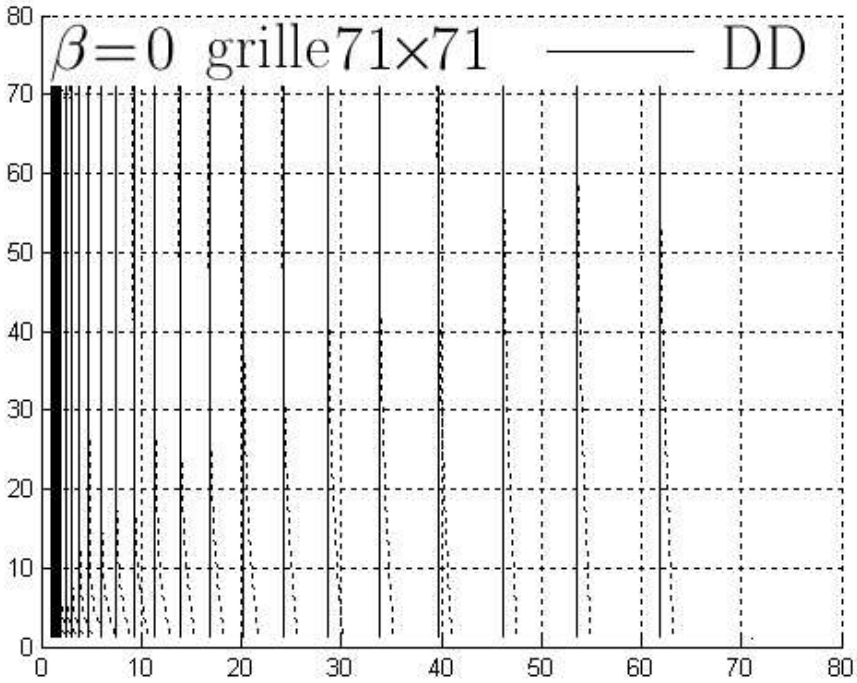
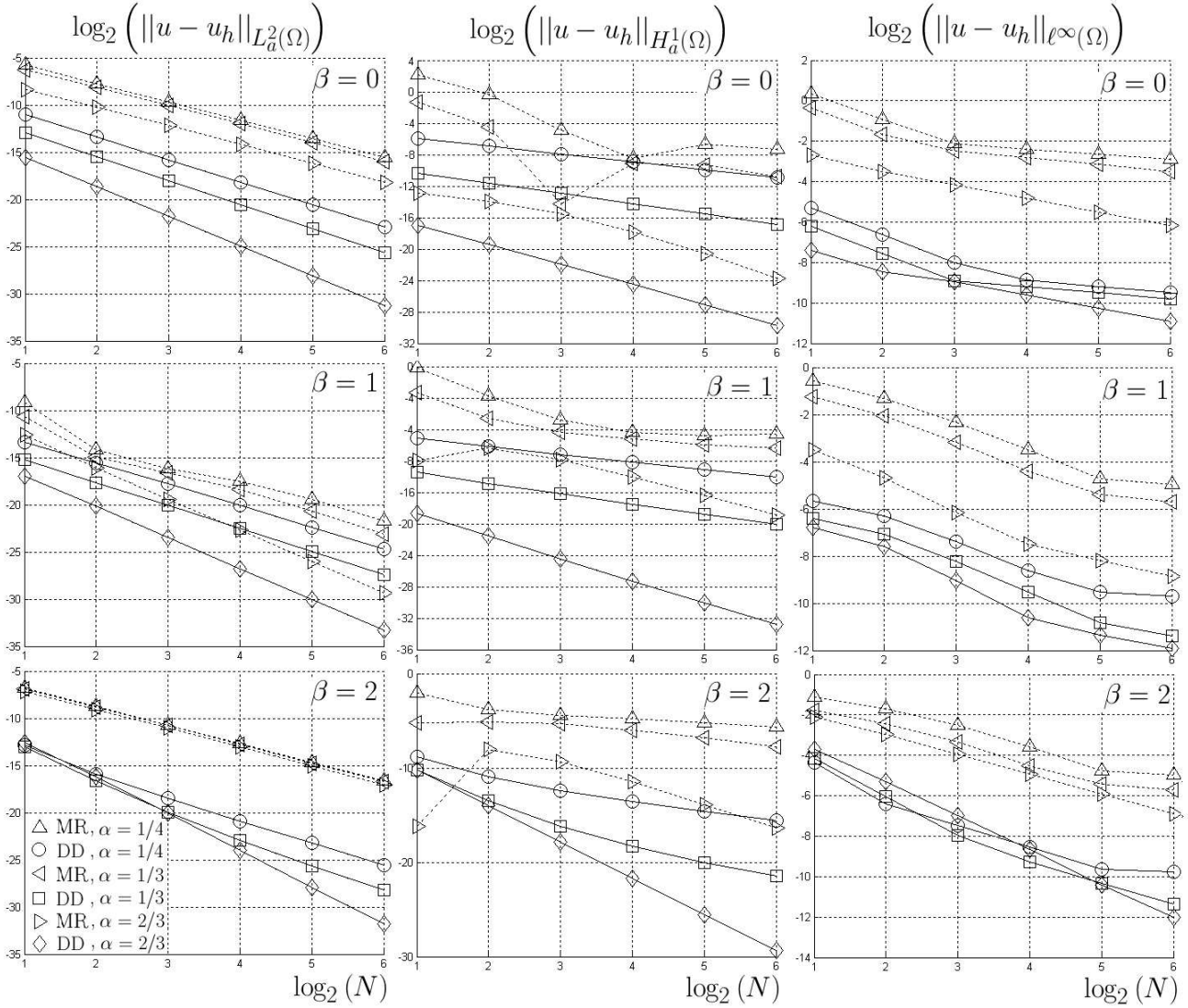
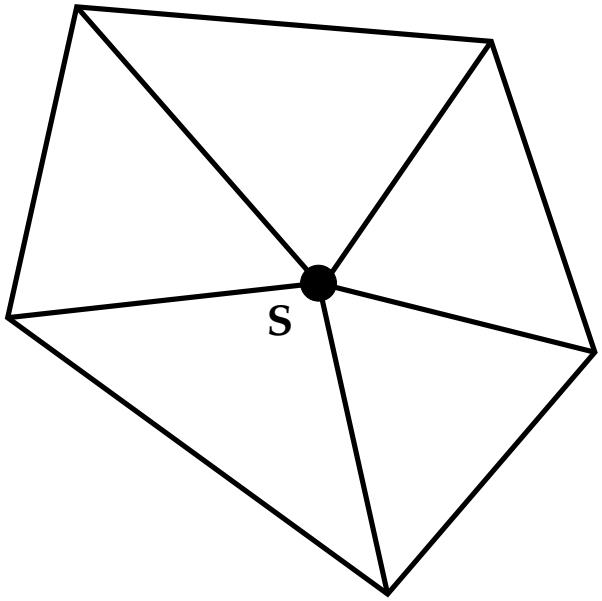

MR
DD
$\beta = 0$
$\beta = 0$
$\beta = 1$
$\beta = 1$
$\beta = 2$
$\beta = 2$

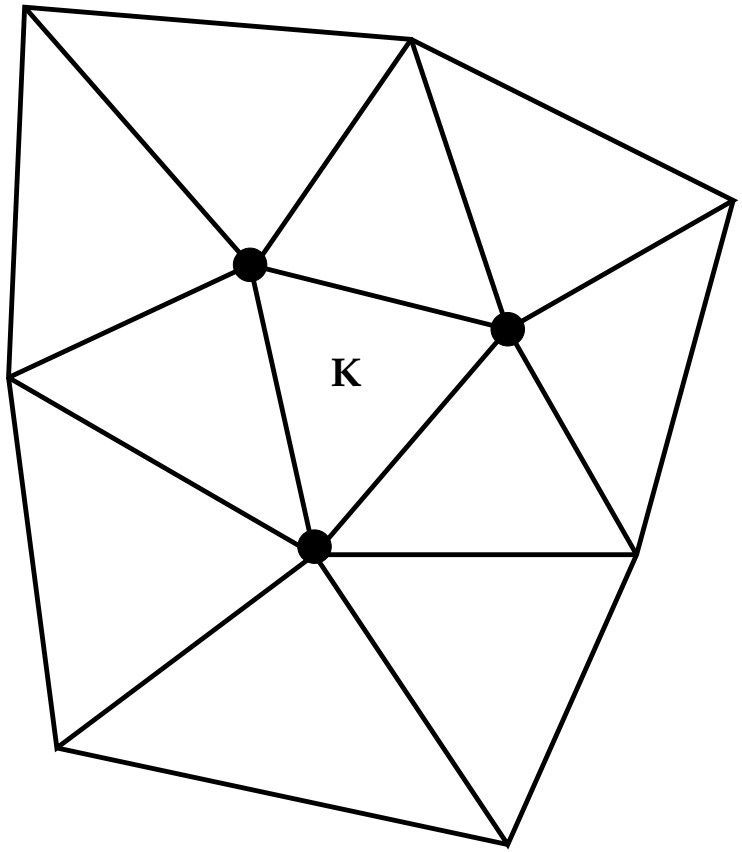

β=0 grille31×31
MR
0
5
10
15
20
25
30
35


β=0 grille71×71
DD
0
10
20
30
40
50
60
70
80

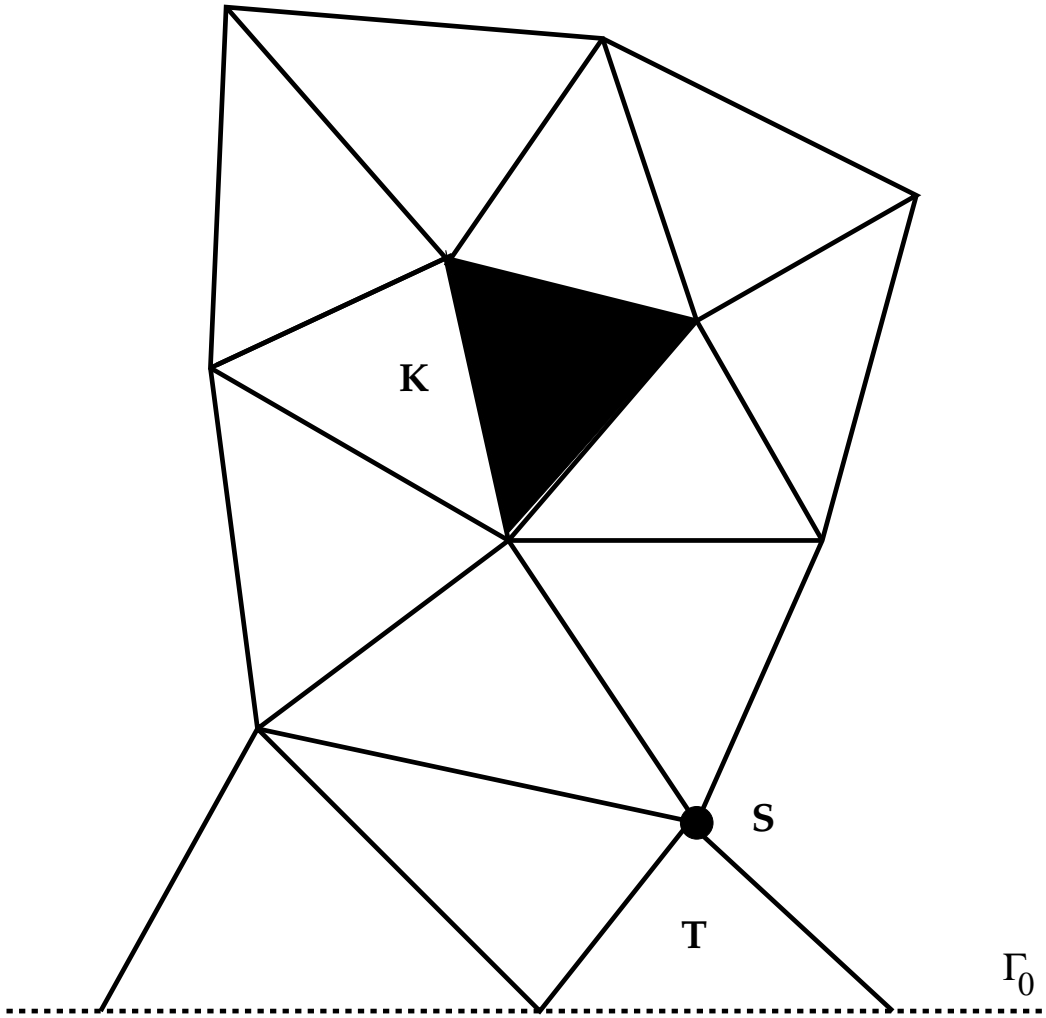

$\log_2\left(||u-u_h||_{L^2_a(\Omega)}\right)$
$\log_2\left(||u-u_h||_{H^1_a(\Omega)}\right)$
$\log_2\left(||u-u_h||_{\ell^\infty(\Omega)}\right)$
$\beta = 0$
$\beta = 1$
$\beta = 2$
MR, $\alpha = 1/4$
DD , $\alpha = 1/4$
MR, $\alpha = 1/3$
DD , $\alpha = 1/3$
MR, $\alpha = 2/3$
DD , $\alpha = 2/3$
$\log_2(N)$



Vicinity Ξ_S of the vertex $S \in \mathcal{T}^0$.



Vicinity Z_K for a given triangle $K \in \mathcal{T}^2$.



Triangle element K that belongs to the sub-domain Ω_+.

May be all this material is well known ?!