

# Elastic deformations on the plane and approximations

*(lecture III)*

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“Nonlinear Hyperbolic PDEs, Dispersive and  
Transport Equations: Analysis and Control”,  
Sissa, June 20–24 2011

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- Lecture VI: *Bi-Lipschitz extension Theorem (part 2).*



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$$\det Dv(x) \geq \frac{1}{16} \left( \frac{L_{\max}}{\ell_{\min}} \right)^4 \det Du(x)$$



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- if  $u$  is  $L$  bi-Lipschitz, then  $v$  is  $CL^{7/3}$  bi-Lipschitz.

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- Region 4:  $v = u$ .