

Title: **Biomechanical aspects of soft tissues**

- I. Solids and multi-species mixtures as open systems: a continuum mechanics perspective
- II. Electro-chemo-mechanical couplings: tissues with a fixed electric charge
- III. Growth of biological tissues

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Textbook, 24 chapters, 1097 pages, CRC Press, October 10, 2016

<https://www.crcpress.com/Biomechanical-Aspects-of-Soft-Tissues/Loret-Simoes/p/book/9781498752398>

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¹Mise à jour 1er Janvier 2017/ updated January 1st, 2017

Title: **Fluid injection in deformable geological formations - energy related issues -**

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Textbook, 9 chapters, 564 pages, in press Oct. 2018, Springer Nature

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MODELISATION DE LA CROISSANCE EN BIO-INGENIERIE MODELING OF GROWTH IN BIO-ENGINEERING

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Growth of biological tissues •

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COUPLAGES CHIMIE-MECANIQUE EN BIO-INGENIERIE CHEMO-MECHANICAL COUPLINGS IN BIO-ENGINEERING

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Effects of pH on physical properties •

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Electro-chemo-mechanical couplings in articular cartilages •

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RUPTURE QUASI-STATIQUE, DYNAMIQUE, INTERSONIQUE QUASI-STATIC, DYNAMIC, INTERSONIC FRACTURE

- Rupture intersonic dans les roches saturées Intersonic fracture in saturated rocks •
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LOCALISATION DES DEFORMATIONS ET INSTABILITES DYNAMIQUES STRAIN LOCALIZATION AND DYNAMIC INSTABILITIES IN SOLIDS AND MULTIPHASE MEDIA

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Visco-plasticity regularization under transient dynamic loadings •

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