Aula CIMNE-ITBA

September 8th - 2017

VII Reunión de Aulas CIMNE
Our Academic Contribution

- **Undergraduate Courses**
  - Finite Elements

- **Graduate Courses**
  - Advanced Finite Elements
  - Computational Fluid Dynamics
  - Advanced Mechanical Design
  - Modelling and Simulation – Energy MSc. (KIT)

- **Undergrad Final Projects (Thesis)**
  - Extrusion Modelling - García Diez M.
  - Bolted joint static and dynamic modelling. Aldet M. and Lopez R.
  - Trailer optimization using microalloyed steels - Unger M.
  - Wind mill blade redesign - Cabral G. and Alderete N.
  - Active Vibration Control of a Beam with Piezoelectric Materials. Bensusan S.
  - Failure prediction of threaded inserts for sandwich panels. Di Salvo and Wilk.
  - Automated Die Design for Cold Drawing Process. Gonzalez, F.
  - Reconstitution modelling for drug delivery. L. Fraile and L. Refojo
  - Fracking Modelling via Virtual Elements. F. Kyburg and J. Mollica

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Our Projects

- Ductile Failure
  - Ductile Fracture
  - Strain Localization (TENARIS)
  Incompressible plasticity in porous ductile material (GTN)

- Biomechanics
  - Implant

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Our Projects

- Drug Reconstitution
- Micro devices

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Our Projects

- Vector Born Decease Protection

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Our Projects

- Aortic Flow Diagnostics
  - Intravascular ultrasound Images (IVUS)
  - Fractional Flow Reserve (FFR)
Our Projects

- Fluid Structure Interaction (KIT)

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Our Projects

- Bolted Joints

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Our Projects

- Collaboration with Petroleum Eng. Department

SPE-185563-MS “A Fluid Structure Interaction Model for Hydraulic Fracture Simulation on Vaca Muerta Argentina Shale Formation” Alderete, I.D., Sosa Massaro A., D’hers, S.
Our Capabilities

- **Crew**
  - 4 Professors / Researchers
  - 1 Assistants
  - 8 Undergrad students

- **Installations**
  - 11 Workstations
  - 2 HPC (32c / 28c)

- **Laboratory**

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Publications

Thank you.