

Alejandro Martínez Calvo

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- Current position** **Universidad Carlos III de Madrid**
Ph.D. student under the FPU contract (MECD), Oct. 2017–Currently
- Former positions** **Universidad Carlos III de Madrid**
UC3M-PIPF contract, Feb. 2017–Sept.2017
- Education** **Universidad Carlos III de Madrid**
Interuniversity Ph.D. program in Fluid Mechanics, Nov. 2016–Currently
- Universidad Carlos III de Madrid**
M.S., Industrial Mathematics, Sept. 2015–Feb. 2017
Mark: 9.56/10 (First of promotion)
M.S. thesis: The nonlinear states of viscous capillary jets confined in the axial direction
Mark: 10/10
- Universidad Carlos III de Madrid**
B.S., Mechanical Engineering, Sept. 2011–Jul. 2015,
Mark: 8.50/10 (Second of promotion)
- Awards and Fellowships** **Premio extraordinario fin de Máster (M.S. with honours)**
Universidad Carlos III de Madrid
Nov. 2017
- Second award of the XV Certamen Arquímedes 2016 (Engineering area)**
Ministerio de Educación Cultura y Deporte
Feb. 2017
- Young Researcher Grant**
11th European Fluid Mechanics Conference
Sept. 2016
- UC3M Postgraduate Fellowships (M.S. Studies)**
Applied Mathematics Department, Instituto Gregorio Millán
Sept. 2015–Feb. 2017

Collaboration grant in the Thermal Engineering and Fluid Mechanics Department.
Universidad Carlos III de Madrid, Ministerio de Educación Cultura y Deporte,
2014-2015.

Excellence grant
Comunidad de Madrid,
2012-2013, 2014-2015.

Pre-University grant
Comunidad de Madrid.
Payment of the first university academic year due to outstanding performance
2010-2011

Publications

1. **A. Martínez-Calvo**, M. Rubio-Rubio & A. Sevilla
The nonlinear states of viscous capillary jets confined in the axial direction
J. Fluid Mech. **834**, 335-358 (2018)
2. **A. Martínez-Calvo** & A. Sevilla
Temporal stability of free liquid threads with surface visco-elasticity
J. Fluid Mech. **846**, 877-901 (2018)
3. **A. Martínez-Calvo**, J. Rivero-Rodríguez, B. Scheid & A. Sevilla
Natural break-up and satellite formation regimes of surfactant-laden liquid threads
Accepted for publication in *J. Fluid Mech*
4. **A. Martínez-Calvo**, A. Sevilla, G. G. Peng & H. A. Stone
Start-up flow in shallow deformable microchannels
Accepted for publication in *J. Fluid Mech*
5. D. Moreno-Boza, **A. Martínez-Calvo** & A. Sevilla
Stokes theory of thin film rupture
Accepted for publication in *Phys. Rev. Fluids*

Congresses

- A. Martínez-Calvo**, D. Moreno-Boza & A. Sevilla
Stokes description of thin liquid film break-up
8th International Symposium on Bifurcations and Instabilities in Fluid Dynamics
Limerick, Ireland, Jul. 2019
- A. Martínez-Calvo**, J. Rivero-Rodríguez, B. Scheid & A. Sevilla
Satellite droplet formation in the natural breakup of surfactant-laden liquid threads
8th International Symposium on Bifurcations and Instabilities in Fluid Dynamics
Limerick, Ireland, Jul. 2019
- A. Martínez-Calvo**, A. Sevilla & H. A. Stone
Transient flow in shallow deformable microchannels
2019 PRISM Annual Research Symposium, Princeton, USA, March. 2019
- A. Martínez-Calvo**, A. Sevilla & H. A. Stone
Transient flow in deformable microchannels
STAMS 2019 (First Colloquium of the Spanish Theoretical and Applied Mechanics Society)
Madrid, Spain, March. 2019

A. Martínez-Calvo, J. Rivero-Rodríguez, B. Scheid & A. Sevilla
Satellite-droplet formation regimes in the natural breakup of
clean and surfactant-laden liquid threads
71st Annual Meeting of the APS DFD
Atlanta, USA, Nov. 2018

A. Martínez-Calvo, J. Rivero-Rodríguez, B. Scheid & A. Sevilla
Temporal analysis of surfactant-laden liquid threads: linear stability and nonlinear dynamics
12th European Fluid Mechanics Conference
Vienna, Austria, Sept. 2018

A. Martínez-Calvo & A. Sevilla
The role of surface viscosities in the instability of liquid threads
70th Annual Meeting of the APS DFD, Volume 62, Number 14
Denver, USA, Nov. 2017

A. Martínez-Calvo & A. Sevilla
Poster: The effect of surface viscosity on the capillary instability of liquid threads
Challenges in Nonlinear Systems: A meeting to celebrate the 60th birthday of Prof. L.L. Bonilla
Madrid, Spain, Jul. 2017

A. Martínez-Calvo & A. Sevilla
Dinámica no lineal de chorros de líquido viscoso sometidos a estiramiento y confinamiento axial:
auto-oscilación vs. rotura
Certamen Arquímedes, 2nd award
Madrid, Spain, Feb. 2017

A. Martínez-Calvo
Bailando con chorros emocionalmente inestables
Seminario Junior IGMB - Universidad Carlos III de Madrid
Madrid, Spain, Dec. 2016

A. Martínez-Calvo, M. Rubio-Rubio & A. Sevilla
Non-linear regimes of axially-confined vertical capillary jets
11th European Fluid Mechanics Conference
Sevilla, Spain, Sept. 2016

A. Sevilla, **A. Martínez-Calvo** & M. Rubio-Rubio
Non-linear state selection of axially confined viscous liquid jets
68th Annual Meeting of the APS DFD, Volume 60, Number 21
Boston, USA, Nov. 2015

Workshop on Fluid Mechanics
Granada 2019, Málaga 2018, Tarragona 2017, Cádiz 2016 and Jaén 2015

Seminars **A. Martínez-Calvo**
Complex Fluids Group, Princeton University, USA, March. 2019

A. Sevilla & **A. Martínez-Calvo**
Instability and break-up of liquid jets with clean and surfactant-laden interfaces
Invited seminar at TIPs, Université Libre de Bruxelles, Belgium, March. 2018

Research stays	FPU grant - 3 months at TIPs-ULB Brussels with Prof. Benoit Scheid, March - June 2018
	FPU grant - 3 months at Princeton University with Prof. Howard A. Stone, March - June 2018
Languages and Skills	Spanish (native), English (advanced) Matlab, Python, \LaTeX , Comsol Multiphysics