

# Youssef SAADE

## PERSONAL DATA

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PLACE AND DATE OF BIRTH: Lebanon | 10 March 1995  
CURRENT ADDRESS: University of Twente, Physics of Fluids group,  
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## RESEARCH POSITIONS

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| JAN 2019-ONGOING  | <b>Numerical Simulation of Cavitation</b><br>PHYSICS OF FLUIDS, UNIVERSITY OF TWENTE<br>This Ph.D. position is under a program called UCOM: Ultrasound Cavitation is sOfT Materials. UCOM is a Marie Skłodowska-Curie Innovative Training Network: a joint research training and doctoral programme, funded by the EU and implemented by a partnership of high profile universities, research institutions, and non-academic organisations that are located in 8 different countries. Numerical simulations of cavitating phenomena are being performed with BASILISK for future biomedical applications.<br>Advisor : Professor Detlef LOHSE<br>Reference: <a href="mailto:d.lohse@utwente.nl">d.lohse@utwente.nl</a> |
| MAR 2018-DEC 2018 | <b>Contact Line Dynamics</b><br>INSTITUT JEAN LE ROND D'ALEMBERT & NEW JERSEY INSTITUTE OF TECHNOLOGY<br>This internship consists of the study of the transition to Landau-Levich-Derjaguin films in forced dewetting. The contact line dynamics are also being studied both in the theoretical and numerical frameworks, with the latter using a code called GERRIS.<br>Advisor : Professor Stéphane ZALESKI & Professor Shahriar AFKHAMI<br>Reference: <a href="mailto:stephane.zaleski@upmc.fr">stephane.zaleski@upmc.fr</a> & <a href="mailto:shahriar.afkhami@njit.edu">shahriar.afkhami@njit.edu</a>   |
| APR 2017-AUG 2017 | <b>Numerical Simulation of Turbulent Jets</b><br>INSTITUT JEAN LE ROND D'ALEMBERT<br>This internship was a part of a project conducted by the institute in favor of the steel and mining company ARCELORMITTAL. Steel plates were to be coated in molten zinc, with air knives hitting on both sides, with high velocities, in order to give the coating film its final thickness. 2D, 3D, one-phase and two-phase flow simulations were done on a code called BASILISK in order to investigate the turbulent properties of the flow, film thickness and edge effects.<br>Advisor : Professor Stéphane ZALESKI<br>Reference: <a href="mailto:stephane.zaleski@upmc.fr">stephane.zaleski@upmc.fr</a>                    |
| JAN 2016-MAY 2016 | <b>Clothing Optimization for Thermal Comfort</b><br>UNIVERSITY OF BALAMAND<br>This project is a quantitative analysis of clothes. In other words, all what was once intuitive regarding what to wear in such or such weather was quantified in terms of clothing thicknesses and "clo" values. A complete Heat Transfer analysis implementing theoretical studies, and numerical computations namely with MATLAB and ANSYS.<br>Coworkers: Jad YAACOUB & Salah Eddine ABDELKADER<br>Advisor : Professor Michel DAABOUL<br>Reference: <a href="mailto:michel.daaboul@balamand.edu.lb">michel.daaboul@balamand.edu.lb</a>   |

## EDUCATION

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- SEP 2016-SEP 2018 M.Sc. in FLUID MECHANICS  
JOINTLY BETWEEN SORBONNE UNIVERSITÉ & ECOLE POLYTECHNIQUE  
Average : M1 → 16.62/20 and M2 → 16.55/20  
Advisor : Professor Stéphane Zaleski  
Reference: [stephane.zaleski@upmc.fr](mailto:stephane.zaleski@upmc.fr)
- SEP 2013-MAY 2016 B.Sc. in MECHANICAL ENGINEERING  
UNIVERSITY OF BALAMAND  
Cumulative Average : 94.68  
Advisor : Professor Oussama JADAYEL  
Reference: [oussama.jadayel@balamand.edu.lb](mailto:oussama.jadayel@balamand.edu.lb)

## PUBLICATIONS

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- Afkhami, S., Buongiorno, J., Guion, A., Popinet, S., Saade, Y., Scardovelli, R., & Zaleski, S. (2018). Transition in a numerical model of contact line dynamics and forced dewetting. *Journal of Computational Physics*, 374, 1061-1093.

## SCHOLARSHIPS AND CERTIFICATES

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- Undergraduate Scholarship covering 75% of tuition
- Dean's Honor List (All semesters)

## LANGUAGES

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ENGLISH: Fluent in speech and writing  
FRENCH: Fluent in speech and writing  
ARABIC: Mother tongue

## SOFTWARE & CODING LANGUAGES

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Intermediate Knowledge: C++, Fortran, Python, Ansys Fluent, SolidWorks  
Advanced Knowledge: Adobe Illustrator, C, Basilisk, Windows, Linux, Latex, Word, Excel, PowerPoint, Matlab, Gerris

## INTERESTS AND ACTIVITIES

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- Table Tennis (Ping-Pong) | +10 years of practice | Participated in and won tournaments
- Reading books | Science, Philosophy, Fantasy, Novels
- Playing video games | Mainly because I love technology