

# **Melle Anne-Cecile Lesage, Ph.D. student.**

## **Address**

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## **Personal Profile**

26 years old. Single. Researcher in the field of Fluid Mechanics.  
French citizenship. Current residency in Golfe-Juan, France.

## **University Education**

Nov. 2003 - Ph.D., Doctoral School EDSTIC, University of Nice - Sophia-Antipolis, France.

Doctoral Thesis (tentative name):  
“Level Set Method for bi-fluid incompressible flow  
with surface tension and contact angle”

Thesis co-financed by  
Lemma (SARL) and a regional scholarship of Provence-Alpes-Côte d’Azur

Supervisor:  
Alain Dervieux. INRIA Sophia-Antipolis. France.  
Charles Leca and Olivier Allain. Lemma company. La Roquette-sur-Siagne. France.

Sept. 2002 - Sept. 2003	M.Sc. degree (DEA Fluid Dynamics), University of Toulouse, France.  Master Thesis and Fluid Mechanics Engineer thesis: “Influence study of the numerical parameter of FLOWER code on the aerodynamic coefficients.”
Sep. 2000 - Jun. 2003	Fluid Mechanics Engineer degree from Superior National School of Electrotechnics, Electronics, Computer Science, Hydraulics and Telecom Network (Ecole Nationale Supérieure d'Electrotechnique, d'Electronique, d'Informatique, d'Hydraulique et des Télécommunications ENSEEIHT) Web page: <a href="http://www.enseeiht.fr">http://www.enseeiht.fr</a> , University of Toulouse, France.  Formation: Fluid Mechanics, Thermodynamics, Turbulence Numerical methods, Signal analysis, Fortran and C++ language.
Sep. 1998 - Jun. 2000	Third year speciality: Fluid process.  B.Sc degree in Mathematics and Physics, “Classes préparatoires” in Lycée Faidherbe University of Lille, France.

## Professional Experience and Developed Projects

Feb. 2003 - Jul. 2003	Internship (III) at Airbus in Bremen (Germany). “Design and Tool” Department EGAG Study of artificial viscosity models. Optimisation of the leading edge tips position on A320 plane to reduce drag coefficient.
Sept. 2002 - Jan. 2003	Industrial study project. Chemical water proceeding : ozonation Study of instationnarity on the injection system Comparison between experimental results and Ested-Astrid code simulation.
Jul. 2002 - Aug. 2002	Internship (II) at Framatome-ANP in Erlangen (Germany). Subject “Security of PWR nuclear facility” Participation in thermohydraulics test on a nuclear test facility. Development of a Labview code to calibrate a measure device.
Jul. 2001	Internship (I) at EDF (french electricity company) in La Rance (France) Study of oil filtering process for power hydraulics in an electricity production facility.

## Publications and Conference Papers

- Anne-Cécile Lesage, Alain Dervieux.  
**A local mass conservation Method for the Level Set Method applied to two-phase incompressible flow subjected to break-up** Abstract submitted to ECCOMAS CFD 2006 European Conference on Computational Fluid Dynamics, The Netherlands, September 5-8 2006.
- Anne-Cécile Lesage, Alain Dervieux.  
**On Level Set modelling of Bi-fluid capillary flow**, submitted to **International Journal for Numerical Methods in Fluid**, December 2005.
- Anne-Cécile Lesage, Alain Dervieux.  
**A unified Level Set Method**, abstract presented to FEF05 IACM Special Interest Conference supported by ECCOMAS, April 4-6, 2005, Swansea, Wales, UK.
- Helluy, P., Golay, F., Caltagirone, J.-P., Lubin, P., Vincent, S., Drevard D., Marcer, R., Fraunie, P., Seguin, N., Grilli, S., Lesage, A.C., Dervieux, A. and Allain, O.  
**Numerical Simulations of Wave Breaking**, paper published in **Mathematical Modelling and Numerical Analysis**, mars 2005.
- Anne-Cécile Lesage, Alain Dervieux.  
**An error analysis of the Level Set Method**, abstract presented at the conference “Mathematical and Numerical aspects of Low Mach Number Flows”, June 21-25 2004, Porquerolles, France.

## Miscellaneous information

- **Language skills**

French (mother tongue), English (written and spoken), German (written and spoken), Spanish (spoken).

- **Computational Background**

- Operating Systems: Linux, MS Windows, MS DOS.
- Languages: C++, HTML, LaTeX, Fortran 77/90.
- Several CFD code: Fluent, Ananas, Estet-Astrid.

## References

- Alain Dervieux  
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- Charles Leca

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