

## Sébastien DE VALERIOLA

Born on April 17, 1984

Belgian nationality

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sebastien.devaleriola@uclouvain.be

### Professional address

Université Catholique de Louvain  
Institut de Mathématique Pure et Appliquée  
Chemin du cyclotron 2  
1348 Louvain-la-Neuve  
Belgium

### Private address

Rue Van Ostade 45  
1000 Brussels  
Belgium

### Phone numbers

+32 (0)2 733 16 82 (private)  
+32 (0)473 60 55 67 (cellular)  
+32 (0)10 47 31 53 (professional)

### Fax

+32 (0)10 47 25 303 (professional)

### Homepage

[http://perso.uclouvain.be/  
sebastien.devaleriola/](http://perso.uclouvain.be/sebastien.devaleriola/)

## Academic formation

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| 2006–2007 | <b>Master in mathematics</b> , Université Catholique de Louvain. Title of the master thesis : “ <i>Nodal solutions of semilinear problems involving Sobolev exponent</i> ”. Advisor : Michel Willem (UCL). |
| 2002–2006 | <b>Graduate studies in mathematics</b> , Université Libre de Bruxelles. Title of the senior-thesis : “ <i>Semilinear elliptic problems with critical growth</i> ”. Advisor : Jean-Pierre Gossez (ULB).     |

## PhD - research

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| 2007–now | <b>Science PhD (mathematics)</b> , Université Catholique de Louvain. Advisor : Michel Willem. Member of the research group on calculus of variations and differential equations of the Département de mathématique (head professor : Michel Willem). Research interests : <i>nonlinear analysis, PDE's, calculus of variations, critical problems, Euler equations, concentration-compactness principle, minimal surface equation, ...</i> |
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## Education and training

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- 2009      **PhD course** , Université catholique de Louvain. Course given by Sagun Chagnillo : “Regularity and uniqueness in some free boundary problems”.
- 2009      **Course** of the Chaire de la Vallée Poussin. Course given by Juan Luis Vazquez : “The theories of nonlienar diffusion, Université catholique de Louvain .
- 2008      **Workshop** “Groupe de travail transfrontalier des doctorants en mathématiques de la Grande-Région”, Université de Metz.
- 2008      **Research visit** on the invitation of Laurent Moonens, Université de Paris Orsay.
- 2008      **Colloquium** “NODE 2008, a tribute to the work of Patrick Habets and Jean Mawhin”, Palais des académies (Brussels).
- 2008      **Summer School** “PDE’s and geometry”, Köln university.
- 2008      **Spring School** “PDE 2008”, Université catholique de Louvain.
- 2008      **Summer school** “Topics in PDE and applications”, CRM (Barcelona).
- 2008      **Course** of the “Collège de France”, Palais des académies (Brussels). Course given by P-L. Lions : “ *PDE’s and applications*”.
- 2008      **PhD course** , Université Catholique de Louvain. Course given by Anna Capietto (Torino) : “ *Bifurcation theory*”.
- 2008      **Seminar** about semilinear parabolic problems, Université catholique de Louvain.
- 2007      **Doctoral school** “Introduction to the finite elements method”, Université Mons-Hainaut.
- 2007      **Seminar** about the concentration-compactness lemma, Université catholique de Louvain.
- 2007      **PhD Course**, Université Catholique de Louvain. Course given by Luis Caffarelli (Austin) : “ *Non linear problems involving integral diffusions*”.
- 2007      **PhD day**, Université Libre de Bruxelles. Special meeting of all PhD students of Belgium.
- 2006–2007      **Seminar** about the Schrödinger equation with multipolar potential, Université catholique de Louvain.
- 2006–now      **General nonlinear analysis seminar** Université catholique de Louvain.

## Teaching career

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- 2006–now      **Teaching/research assistant**, Université Catholique de Louvain. Courses : “ *Functional analysis* ”, “ *Elliptic problems and PDE* ”, “ *Parabolic problems and PDE* ”, “ *Measure theory* ” “ *General mathematics* ”.
- 2004–2006      **Student teaching assistant**, Université Libre de Bruxelles. Course : “ *Geometry and linear algebra* ”.

## Accepted papers (to appear)

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- 2009      **Removable sets for the flux of continuous vector fields** with Laurent Moonens, to appear in *Proceedings of the American Mathematical Society*.
- 2009      **On Some Quasilinear Critical Problems** with Michel Willem, to appear in *Advanced Nonlinear Studies*.