

## **Dimitri DEFRANCE**

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### ***PhD Student in hydrology (3rd year)***

**Subject:** Flash flood anticipation on small ungauged basins in mountainous area

**Thesis director :** V. ANDREASSIAN (UR HBAN, IRSTEA, Antony), P. JAVELLE (GR RHAX, IRSTEA, Aix-en-Provence) (Co-director)

**University:** Ecole doctorale Géosciences et ressources naturelles, Université Pierre et Marie Curie (Paris VI, France).

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#### **WORK EXPERIENCE**

##### **professional training supervision**

**2011-2012** Flash flood warning methods evaluation on ungauged basins (6 months, Master 2nd year professional training) (S. Ecrepont)

##### **Dissertations**

**2009 - 2010** **professional training** in IRSTEA (Aix-en-Provence): Hydrological model Initialization with a moisture index (P. Javelle)

**2008 - 2009** **Dissertation** in Université Libre de Bruxelles : Modeling of ice sheet grounding line: Representation improvement of the grounding line migration process in the numerical models (F. Pattyn)

##### **scientific popularization**

**2006 - 2007** March : « Greenland, Antarctica Ice Sheet Model » (GRANTISM - F. Pattyn) showing at the « Printemps des Sciences » exhibition (Brussels)

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#### **ACADEMIC EDUCATION**

**2009 - 2010** **Master 2nd year** in Earth, Universe and Environment Sciences, specialized in Watersheds Engineering (François-Rabelais University, Tours, France) class 'assez bien'

**2008 - 2009** **Master 2nd year in Geographical Sciences** (Université Libre de Bruxelles) class 'distinction'

**2007 - 2008** **Master 1st year** achieved in **Erasmus program** at Joseph Fourier University (Grenoble, France) in Earth, Universe and Environment Sciences

**2004 - 2007** **Bachelor in Geographical Sciences** (Université Libre de Bruxelles) class 'distinction'

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## ***PUBLICATIONS***

### **Articles in international peer-reviewed journals**

**2012:** Javelle, P., Demargne, J., **Defrance, D.**, Pansu, J., Arnaud, P. *Evaluating flash flood warnings at ungauged locations: a case study with the AIGA warning system*, Hydrological Sciences Journal (Submitted)

### **Articles in international peer-reviewed conference proceedings**

**2012:** Javelle, P., **Defrance, D.**, Mérieux P., Liébault, F., Navratilo, O., Segel, V., Westrelin, S. Flash flood warning system in mountainous areas using X-band weather radars: some preliminary results obtained in the framework of the RHYTMME project. 12th Congress Interpraevent 2012, Grenoble

**2011:** Mériaux, P., Westrelin, S., Chèze, J.L., Tabary, P., Javelle, P., **Defrance, D.** *Projet RHYTMME : déploiement d'un réseau de radars dédié à la Gestion des risques en territoires montagneux méditerranéens. L'eau en montagne, mieux observer pour mieux prévoir*, SHF, 16-17 march 2011, Lyon

### **Posters and oral presentations in conferences**

**2012:** **Defrance, D.**, Javelle, P. , Arnaud, P. , Andréassian, V. *Flash flood warning at ungauged locations: can proxy data be useful to calibrate the hydrological model used?* . EGU General Assembly 2012, 22-27 april 2012, Vienna

**2011:** **Defrance, D.**, Javelle, P. , Arnaud, P. , Andréassian, V. , Moreau, E. , Mériaux, P. *Flash flood warning methods: how to evaluate them? An application in the French Southern Alps using the AIGA warning method and different rainfall input data*. EGU General Assembly 2011, 3-8 april 2011, Vienna.

**2010:** Javelle, P., **Defrance, D.**, Aubert, Y., Diss, S., Cantet, P., Tolsa, M., Fouchier, C., Arnaud, P., Lavabre, J., Breil, D. *Application of the AIGA flash flood warning method to the 15th of June 2010 event on the Nartuby and Argens rivers (South of France)*. EGU Leonardo Topical Conference on the hydrological cycle Looking at Catchments in Colors, 10-12 november 2010, Luxembourg.

**2010:** Fouchier, C., Arnaud, P., Javelle, P., **Defrance, D.** *The flood of the Nartuby and Argens rivers claimed the lives of 25 people in June 2010. These two French rivers were not monitored at that time. This dramatic event highlights the need for an operational flood alert system dedicated to ungauged watersheds*. EGU Leonardo Topical Conference on the hydrological cycle Looking at Catchments in Colors, 10-12 november 2010, Luxembourg.

**2010:** Javelle P., Fouchier C., Arnaud P., Lavabre J., **Defrance, D.** *Flash flood warning at ungauged locations using radar rainfall and antecedent soil moisture estimations*. EGU General Assembly 2010, 2-7 may 2010, Vienna.