

# FABIANO MONTI

## CONTACT INFORMATION

PLACE & DATE OF BIRTH *Como, Dec. 10 1981*

Cell: (+39) 380 2577329  
[monti@alpsolut.eu](mailto:monti@alpsolut.eu)

ADDRESS *23030 Livigno, via Saroch 118E (Sondrio)*  
NATIONALITY *Italian*

## EDUCATION

NOV 2009 – JAN 2014 UNIVERSITÀ DEGLI STUDI DELL'INSUBRIA (COMO) – WSL INSTITUTE FOR SNOW AND AVALANCHE RESEARCH SLF (DAVOS)

Ph.D. Environmental Science

- *Research topic: Estimating snow stability with the snow cover model SNOWPACK*
- *Advisors: Dr. Jürg Schweizer, Prof. Carlo Dossi*

DEC 2008 UNIVERSITÀ DEGLI STUDI DELL'INSUBRIA (COMO) – ARPA VENETO – DRST CENTRO VALANGHE DI ARABBA

M.A.Sc, Environmental Science (110/110)

- *Thesis: SNOWPACK MODEL: verification on the Dolomites area and application to the avalanche forecasting system*
- *Advisors: Professor Carlo Dossi, Dott. Anselmo Cagnati*

MAR 2006 UNIVERSITÀ DEGLI STUDI DELL'INSUBRIA (COMO)

B.S., Environmental Evaluation and Control (104/110)

## PROFESSIONAL FORMATION

MAR 2014 AINEVA INTER-REGIONAL ASSOCIATION (TRENTO)

AINEVA Professional for Artificial Avalanche Release

2013 REGIONE LOMBARDIA – COLLEGIO REGIONALE LOMBARDO DEI MAESTRI DI SCI

Freeride specialization course for Ski Instructor

JUL 2009 REGIONE LOMBARDIA – COLLEGIO REGIONALE LOMBARDO DEI MAESTRI DI SCI

Regional Lombardy Ski Instructor course, Snowboard specialization

- *International Snowboard Instructor*

NOV 2008 – JUN 2009 ARPA VENETO – DRST CENTRO VALANGHE DI ARABBA

Pre-post graduation training

- *Advisor: Dott. Anselmo Cagnati*

*Fabiano Monti*

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JAN 2008

AINEVA INTER-REGIONAL ASSOCIATION (TRENTO)

AINEVA Snow-Weather Observer

#### RESEARCH EXPERIENCE

DEC 2007

–  
JAN 2014

ARPA VENETO – DRST CENTRO VALANGHE DI ARABBA – WSL INSTITUTE FOR SNOW AND AVALANCHE RESEARCH SLF (DAVOS)

Doctoral and Master Research

- *Conducted winter field work over five seasons in collaboration with avalanche technicians and snow cover scientists*
- *Implemented a new parameterization to simulate snow hardness in the snow cover model SNOWPACK*
- *Developed a new method for visualizing snow stability profiles actually implemented in the snow profile viewer YETI NIK (software used by the Italian avalanche centres)*
- *Verification of the snow cover model SNOWPACK simulations*
- *Snow stratigraphy analysis*

NOV 2012

–  
DEC 2012

XXVIII<sup>^</sup> ANTARCTIC EXPEDITION 2011-2012. DOMEX-3: IFAC-CNR AND ESA PROJECT (DOME-C, ANTARCTICA)

Researcher

- *Assembled and installed a radomex radiometer*
- *Performed snow cover measurements in order to characterize the Antarctica snow cover and to interpret the snow microwave data*

#### REFERRED PUBLICATIONS

2014

MONTI, F., SCHWEIZER, J., & FIERZ, C.. Hardness estimation and weak layer detection in simulated snow stratigraphy. *Cold Regions Science and Technology*, 103(0), 82-90.

2012

MONTI F., CAGNATI A., VALT M. AND SCHWEIZER J.. A new method for visualizing snow stability profiles. *Cold Regions Science Technology* 78: 64-72.

#### NON-REFERRED PUBLICATIONS

2013

MONTI F., SCHWEIZER J.. A relative difference approach to detect potential weak layers within a snow profile. *Proceedings of the International Snow Science Workshop, Grenoble, France, 7-11 October 2013.*

2013

MONTI F., SCHWEIZER J.. Snow profile visualizations to highlight structural instability conditions. *Proceedings of the International Snow Science Workshop, Grenoble, France, 7-11 October 2013.*

2013

CHIAMBRETTI I., MONTI F., VALT M.. Comparison of structural instability indices (Lemons), ECT and RB results. *Proceedings of the International Snow Science Workshop, Grenoble, France, 7-11 October 2013.*

2012

MONTI F., CAGNATI A., VALT M. AND SCHWEIZER J.. Nuovo metodo per visualizzare i profili di stabilità del manto nevoso. *Neve e Valanghe* 75: 14-23.

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- 2009 MONTI F., CAGNATI A., FIERZ C., LEHNING M., VALT M. AND POZZI A.. Validation of the SNOWPACK model in Dolomites. *Proceedings of the 2009 International Snow Science Workshop, Davos, Switzerland, 27 September – 2 October, 2009*: 313-317.
- 2009 MONTI F., CAGNATI A. AND VALT M.. The 2008-2009 exceptional snowfalls in the Italian Alps: threshold sum approach and analysis of the SNOWPACK model stability indices. *Proceedings of the 2009 International Snow Science Workshop, Davos, Switzerland, 27 September – 2 October, 2009*: 318-312.

#### SELECTED ABSTRACTS – ORAL PRESENTATIONS

- 2013 CHIAMBRETTI I., MONTI F., VALT M.. Comparison of structural instability indices (Lemons), ECT and RB results. *International Snow Science Workshop, Grenoble, France, 7-11 October 2013*
- 2013 MACELLONI G., BROGIONI M., PETTINATO S., MONTOMOLI; F., MONTI F., CASAL T.. L-BAND characterization of DME-C region using ground and satellites data. *IEEE International Geoscience and Remote Sensing Symposium, Melbourne, Australia, Sunday 21 - Friday 26 July 2013*
- 2013 MONTI F., GROOT ZWAAFTINK C. D., SCHNEEBELI M., FIERZ C., MACELLONI G., CAGNATI A.. Exploring the snow lateral variability within a 20m snow trench at Concordia Station, East Antarctica. *Davos Atmosphere and Cryosphere Assembly DACA-13, 8 - 12 July 2013, Davos, Switzerland.*
- 2012 MONTI F., SCHWEIZER J.. Weak layer detection in simulated snow stratigraphy. *International Snow Science Workshop, Anchorage, Alaska, 17-21 September 2012*
- 2012 MICHAEL LEHNING; SASCHA BELLAIRE; CHARLES G. FIERZ; FABIANO MONTI; MICHAEL SCHIRMER; JUERG SCHWEIZER. Assessing snow cover stability with simulated snow profiles, *Abstract C13G-02 presented at 2012 Fall Meeting, AGU, San Francisco, Calif., 3-7 Dec.*
- 2009 MONTI F., CAGNATI A. AND VALT M.. The 2008-2009 exceptional snowfalls in the Italian Alps: threshold sum approach and analysis of the SNOWPACK model stability indices. *International Snow Science Workshop, Davos, Switzerland, 27 September – 2 October, 2009.*

#### SELECTED ABSTRACTS – POSTERS

- 2014 MONTI F., STEINKOGLER W., MITTERER C., POZZI A.. An integrated approach for backcountry snow sports safety and avalanche risk management. *Forum'14 Alpinum, Darfo Boario Terme, Italy, September 17<sup>th</sup> - 20<sup>th</sup> 2014.*
- 2014 MONTI F., BELLAIRE S., MITTERER C., STEINKOGLER W., POZZI A.. Bringing avalanche forecasting into the 21st century: a combination of models and weather stations. *Forum'14 Alpinum, Darfo Boario Terme, Italy, September 17<sup>th</sup> - 20<sup>th</sup> 2014.*
- 2014 MONTI F., SCHWEIZER J., GAUME J., SCHWEIZER J.. Deriving snow stability information from simulated snow cover stratigraphy. *International Snow Science Workshop, Banff, Canada, September 7<sup>th</sup> - October 3<sup>rd</sup> 2014.*
- 2014 MONTI F., STEINKOGLER W., MITTERER C.. Livigno (Italy) Freeride Project. *International Snow Science Workshop, Banff, Canada, September 7<sup>th</sup> - October 3<sup>rd</sup> 2014.*



- 2014 MONTI F., GAUME J., VA HERWIJNEN A., SCHWEIZER J.. A new approach to assess the skier additional stress within a multi-layered snowpack. *EGU2014. European Geosciences Union, Vienna, Austria, 27 April – 2 May 2014.*
- 2013 MONTI F., SCHWEIZER J.. A relative difference approach to detect potential weak layers within a snow profile. *Proceedings of the International Snow Science Workshop, Grenoble, France, 7-11 October 2013.*
- 2013 MONTI F., SCHWEIZER J.. Snow profile visualizations to highlight structural instability conditions. *Proceedings of the International Snow Science Workshop, Grenoble, France, 7-11 October 2013.*
- 2013 MONTI F., SCHWEIZER J.. Weak snow layer detection based on relative differences in snow properties between layers. *EGU2013. European Geosciences Union, Vienna, Austria, 7-12 April 2013.*
- 2013 MONTI F., SCHWEIZER J.. A relative differences approach to detect weak layers in simulated snow profiles. *Davos Atmosphere and Cryosphere Assembly DACA-13, 8 - 12 July 2013, Davos, Switzerland*
- 2012 MONTI F., SCHWEIZER J.. Deriving snow hardness from density and its application to the 1-D snow cover model SNOWPACK. *EGU2012. European Geosciences Union, Vienna, Austria, 22-27 April 2012.*
- 2012 VALT M., MONTI F., CIANFARRA P. AND MORO D.. Physical properties of snow cover in Alps: insight from the Davos area (Switzerland) and Veneto-Friuli Venezia Giulia regions (Italy). *EGU2012. European Geosciences Union, Vienna, Austria, 22-27 April 2012.*
- 2011 MONTI F., SCHWEIZER J.. Stability information supplied by the snow cover model SNOWPACK. *9<sup>th</sup> Swiss Geoscience Meeting, Zurich 2011.*
- 2009 MONTI F., CAGNATI A., FIERZ C., LEHNING M., VALT M. AND POZZI A.. Validation of the SNOWPACK model in Dolomites. *International Snow Science Workshop, Davos, Switzerland, 27 September – 2 October, 2009.*

## TEACHING EXPERIENCES

- 2013 – 2014 REGIONE LOMBARDIA – COLLEGIO REGIONALE LOMBARDO DEI MAESTRI DI SCI
- Lecturer
- *Freeride course: nivology, snow stability, risk mitigation, avalanche bulletin*
  - *Ski Instructor courses: nivology, snow stability, risk mitigation, avalanche bulletin, alpine meteorology*
- 2009 – 2014 UNIVERSITÀ DEGLI STUDI DELL'INSUBRIA (COMO)
- Organizer and lecturer
- *Course on security in the winter mountain environment: basic snow science and security issues*
- 2013 – 2014 SNOWSPORTS ACADEMY SAN MARINO S.r.l.
- Lecturer and ski instructor
- *Ski Instructor course: nivology, snow stability, risk mitigation, avalanche bulletin*

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- 2009 – 2014 AINEVA INTER-REGIONAL ASSOCIATION (TRENTO)
- Lecturer at courses
- *Training for weather / snow observers (2A course)*
  - *Training for director of operations / safety officers (2C-D course)*
  - *Refresher course for avalanche forecasters*
- 2013 CNR- IFAC (FIRENZE)
- Lecturer
- *Nivology course: the snow cover model SNOWPACK*
  - *Nivology course: the snow cover thermal exchanges*
- 2010 – 2013 ARPA VENETO – DRST CENTRO VALANGHE DI ARABBA
- Lecturer at courses
- *San Marino Republic Ski Instructor courses*
  - *Regione Veneto Ski Instructor courses*
- 2010 – 2013 WSL INSTITUTE FOR SNOW AND AVALANCHE RESEARCH SLF (DAVOS)
- Lecturer at courses
- *IFKIS course: training for snow observers of the Swiss national avalanche service*

#### PROFESSIONAL EXPERIENCES

- DEC 2013 ALPSOLUT S.R.L. (SONDRIO)
- 
- PRESENT Charter member and president
- DEC 2009 SNOW&CO SNOWBOARD SCHOOL (LECCO)
- 
- PRESENT Charter member and snowboard instructor
- MAR 2010 UNIVERSITÀ DEGLI STUDI DELL'INSUBRIA (COMO)
- 
- JUL 2010 Sampling campaign in mountain terrain
- OCT 2004 SAFARI SERVICE S.R.L (LECCO)
- 
- APR 2007 Partner in managing three mountain huts, among which a hotel, in the ski resort Piani di Bobbio-Valtorta (Lecco)



## COMPUTING SKILLS

### OPERATIVE SYSTEMS

Windows, Linux, Mac OS

### GIS

ArcGis 10

### NUMERICAL

Matlab, R-project

### OFFICE APPLICATIONS

MS Office package, OpenOffice, Adobe Illustrator, Adobe PhotoShop, Adobe InDesign

## LANGUAGES

Italian: *native speaker*

English: *business fluent*

## INTERESTS

Snowboarding, skiing, mountain biking, hiking and mountaineering are my great passions. I love travelling and cooking.

