Florian Miconi
Curriculum Vitae

Education

2009–Now
**PhD in particle physics**, Université de Strasbourg – Institut Pluridisciplinaire Hubert Curien.

2007–2009
**Master’s degree in subatomic physics**, Université de Strasbourg, Magna cum laude.

2004–2007
**Bachelor’s degree in physics**, Université Henri Poincaré, Nancy, Magna cum laude.

PhD Thesis

**Title**
Search for a standard Higgs boson of mass below 140 GeV/c² with the Dø experiment at the Tevatron.

**Supervisor**
Isabelle Ripp-Baudot

**Description**
This work focused on:

- The development of a dedicated multivariate analysis to reduce the $W(Z) + b\bar{b}$ background, irreducible by the standard b-tagging method.
- The development of an algorithm to recover a part of the radiation from the Higgs in the 3 jets channel, improving the reconstruction of its mass.
- The optimization of the final multivariate discriminant of the WH analysis.
- And various studies on b-tagging (comparison of the b-tagging efficiency vs time and luminosity) and on the overall analysis (comparison of previous set of data vs new one, adding new reweighting and corresponding systematics uncertainties).

**Key words**
Particle physics, Higgs, Dø, Tevatron, b-tagging, multivariate analysis, neural network, decision tree.

**Skills involved**
Large dataset handling, statistical approach, C++ development, teamwork.

Shifts
Tracker shifts, SAM (data handling system at Fermilab) and data quality shifts.

Experience

**Student jobs**

Monitoring of the student work, help for homework. Preparation for the baccalaureate


Teaching at the University of Strasbourg
2009–Now  **Instructorship, Université de Strasbourg**, Classical Mechanics, Programming (C/C++) and Mathematics for first year college students.

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**Languages**

- **French**  Native tongue
- **English**  Fluent
- **Italian**  Basics

  *Lot of time spent abroad, especially in USA*

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**Computer skills**

- **Operating system**  MacOS, Windows, Unix/Linux
- **Software**  Microsoft Office, Latex, iWork
- **Programming**  Shell, C/C++, Python, Html
- **Physics tool**  Root, Geant4

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**Interests**

- **Reading**  Sci-fi novels
- **Sport**  Martial arts, running, rollerblading
- **Music**  Playing guitar
- **Dance**  Salsa dancing

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**Misc.**

- First aid certificate
- Driving licence

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**References**

**Dr. Isabelle Ripp-Baudot**

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**Dr. Sebastien Greder**

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**Meetings attended**

- HCP 2011, Paris, France, November 14-18, 2011 (Poster contribution and proceeding)
- Dø workshop, Princeton, USA, June 12-17, 2011
- Lake Louise Winter Institute, Lake Louise, Canada (Alberta), February 14-20, 2011 (Oral contribution)
- Dø collaboration meeting , Fermilab, USA, November 7-12, 2010 (Oral contribution)
- European School of High Energy Physics, Raseborg, Finland, June 20- July 03, 2010 (Poster contribution)
- Dø workshop, Marseille, France, July 25-01, 2010
• Dø France meeting, IPN, Lyon, May 3-4, 2010 (Oral contribution)
• IPHC PhD Student Day, Strasbourg, France, February 12, 2010 (Oral contribution)
• Dø collaboration meeting, Fermilab, USA, February 02-07, 2010
• Dø France meeting, LAL, Orsay, 26-27 November 2009 (Oral contribution)

Communication / Publications

• "Jet Energy Resolution" F. Miconi, Dø France meeting, LPNHE, Paris, May 30-31 2011
• "Experimental aspect of low mass Higgs search at D0" F. Miconi Lake Louise Winter Institute, Lake Louise, Canada (Alberta), February 14-20, 2011
• "b-tagging dependance with luminosity and time" F. Miconi, Dø collaboration meeting, Fermilab, USA, November 7-12, 2010
• "Search for a standard Higgs Boson of mass below 140 Gev/c2 with the DZero experiment at the Tevatron" F. Miconi, European School of High Energy Physics, Raseborg, Finland, June 20- July 03, 2010
• "Tests of llb-3 Dataset (WH electron channel)" F. Miconi, Dø France meeting, IPN, Lyon, May 3-4 2010
• "La physique des particules auprès des collisioneurs" D. Bodin, C. Ferro, M. Karim, A. Maire, F. Miconi, IPHC PhD Student Day, Strasbourg, France, February 12, 2010
• "Implémentation des variables du discriminant Vbb/Hbb dans l’analyse WH" F. Miconi, Réunion Dø France, LAL, Orsay, 26-27 November 2009