

# MATTEO MORONI

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Via Cernaia, 42  
Voghera (PV), Italy 27058  
Born 25/05/1990

## EDUCATION

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|------------|---|----------------|
| <b>MS</b>  | Master Degree in Physics, University of Pavia, Pavia, Italy<br>Thesis: "Effect of Mn impurities on the low energy excitations of iron-based superconductors"<br>Mark: 107/100 | October 2014   |
| <b>BS</b>  | Physics, University of Pavia, Pavia, Italy<br>Mark 103/100  | September 2012 |
| <b>SEC</b> | Liceo Galileo Galilei, Voghera (PV), Italy<br>Secondary School Diploma - Mark: 100/100  | July 2009      |

## RESEARCH EXPERIENCE

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- 2<sup>nd</sup> Year Physics PhD, University of Pavia, Pavia, Italy**      November 2014 to present  
**Subject:** My PhD work is focused on the study on the effect of impurities and defect in iron-base superconductors by NMR, Muon Spin Rotation and SQUID magnetometry.

## TEACHING EXPERIENCE

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- University of Pavia, Italy**  
2015 to present  
Tutor for the II year students of the Bachelor Degree in Physics, Circuit laboratory.  
2015  
Tutor for the I year students of the Bachelor Degree in Physics, Informatics.

## PUBLICATIONS

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### *Journal Publications*

- July 2015:** *Enhancement of low-frequency fluctuations and superconductivity breakdown in Mn-doped  $La_{1-y}Y_yFeAsO_{0.89}F_{0.11}$  superconductors.*  
F. Hammerath, M. Moroni, L. Bossoni, S. Sanna, R. Kappenberger, S. Wurmehl, A. U. B. Wolter, M. A. Afrassa, Y. Kobayashi, M. Sato, B. Büchner, and P. Carretta, Phys. Rev. B 93, 224517

**June 2016:** *Persistence of slow fluctuations in the overdoped regime of  $Ba(Fe_{1-x}Rh_x)_2As_2$  superconductor.*

L. Bossoni, M. Moroni, M. H. Julien, H. Mayaffre, P. C. Canfield, A. Reyes, W. P. Halperin, and P. Carretta, Phys. Rev. B 92, 020505(R)

### ***Journal Papers in Review***

**May 2016:** *Competing effects of Mn and Y doping on the low-energy excitations and phase diagram of  $La_{1-y}Y_yFe_{1-x}Mn_xAsO_{0.89}F_{0.11}$  iron-based superconductors.*

M. Moroni, S. Sanna, G. Lamura, T. Shiroka, R. De Renzi, R. Kappenberger, S. Wurmehl, A.U.B. Wolter, M.A. Afrassa, B. Büchner, P. Carretta, arXiv:1605.09334, submitted to Phys. Rev. B.

### **LANGUAGES**

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**Italian:** Native Language

**English:** Good knowledge

**Language certificates:** Preliminary English Test (ESOL)

### **COMPUTER SKILLS**

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**Programming:** C, C++, Python, MATLAB, Pascal, Julia

**Applications:** Microsoft Office, Latex, OriginLab, NTNMR

**Platforms:** Linux, Microsoft Windows and Apple Mac OSX

### **LAB SKILLS**

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Nuclear Magnetic Resonance(NMR), Muon Spin Rotation, SQUID magnetometry, Cryogenics and vacuum techniques.

I'm accustomed to use and modify customized setups and to face several technical problems regarding spectrometers, rf electronics and cryogenics.

Last updated: 18 July 2015