

Contact Information *Currently at:* Department of Physics Yale University
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Research Interests Intensity Frontier & Neutrino Physics, GUT and Flavor Physics.
 Liquid Argon Neutrino Detectors. Machine learning.

Education **Yale University**, New Haven, CT, USA

Phd candidate, August 2013 - current

Advisors: Prof. Bonnie Fleming¹, Prof. Flavio Cavanna¹
 Area of Study: Neutrino Physics, Hadron Cross Sections, LArTPC

University of Bologna, Bologna, Italy

M.S. in Nuclear and Particle Physics, March 2012

Thesis Title: Study of low p_T D^0 meson production cross section
 at CDF II in $p\bar{p}$ collisions at $\sqrt{s} = 900$ GeV.
 Advisor: Prof. Stefano Zucchelli²
 Area of Study: Flavor Physics, Charm Production at Colliders

B.S. in Physics, December 2009

Thesis Title: Optimization of the vertex reconstruction
 in OPERA neutrino interaction events.
 Advisor: Prof. Maximiliano Sioli²
 Area of study: Neutrino Physics, Data Analysis

Professional training

International Neutrino Summer School August 2017
 Alan Alda Center scientific communication workshop May 2017
 APS Short Course on Nuclear Weapon and Related Security Issues April 2017
 Phystat-Nu Fermilab, statistics for neutrino physics workshop September 2016
 Fermilab Summer School Summer 2010

Awards &
 scholarships

2017-2018 Dean's Emerging Scholars Research Award 2017
Yale Office of the Provost and Graduate School of Arts and Sciences

Best poster at the 2017 International Neutrino Summer School, INSS 2017
A study of charged kaon-nucleon total interaction cross section

URA Visiting Scholar Program Award 2015
Award for the peer-reviewed proposal
"Study of nucleon decay topologies and their background in LArTPCs"

Leigh Page Prize, Yale University 2013
Academic Based Award for Incoming Graduate Students

Scholarship for international thesis & 2011-2012
 Scholarship for the deepening of an international thesis,
University of Bologna Awards for the peer-reviewed proposal
"Measurement of D^0 production cross section at the CDF experiment"

¹Yale University & Fermilab

²Department of Physics and Astronomy, University of Bologna, Bologna

	Placed 3 rd in the contest “Inventare il futuro, <i>University of Bologna Awards for a peer-reviewed proposal on technology applications to welfare</i>	2011
	Scholarship “Orfani Enasarco”, Enasarco Foundation	2010, 2008-2006, 2004, 2003
Committee & Academic Service	<ul style="list-style-type: none"> - Fermilab Students and Postdocs Association elected fellow + Head organizer of the 2016 New Perspectives conference + Regular participation to the Fermilab User Executive Committee + Participant in the Fermilab Visit to the US Congress 2016 - Elected member of the Climate and Diversity Committee for the Yale physics department 	2015-2016 2014-ongoing
Teaching & Mentoring	<ul style="list-style-type: none"> - Mentored Students: William De Rocco (undergrad), Daniel Smith (undergrad), Marina Guzzo (master student), Ohana Rodrigues (master student), Supraja Balasubramanian (PhD candidate). - LArSoft, Grid and Data Handling tutorials for the LArIAT Collaboration & LArSoft users - Teaching Fellow, Lab Instructor for P165, Yale University - Teaching Fellow, Discussion Leader for P180-P181, Yale University - Teaching Fellow for the “Fisica t-a” (General Physics) class in mechanical engineering , University of Bologna 	2014-current 2014-2015 2013-2014 2012-2013
Talks, Posters & Presentations	<p>Invited talks:</p> <ul style="list-style-type: none"> - Physics Department Seminar, <i>University of Bologna & INFN, Italy</i> “Liquid Argon detectors for Neutrino Physics @FNAL” - High Energy Physics Group Seminar, <i>Imperial College London, UK</i> “Liquid Argon under investigation: first results from the LArIAT experiment” - 2nd UK LArSoft Workshop, <i>Manchester University, UK</i> “LArSoft Architecture, MC and Grid Submission” - Joint SBN-DUNE Meeting, <i>Fermilab, IL</i> “MuCS measurements and CRT measurements” - Niel Bohr Lunch Seminar, <i>Manchester University, UK</i> “Liquid Argon under investigation: first results from the LArIAT experiment” - WIDG Seminar, <i>Yale University, New Haven, CT</i> “LArIAT: Total $\pi - Ar$ cross section measurement” <p>Other Contributions at International Conferences:</p> <ul style="list-style-type: none"> - DPF 2017 (Talk), <i>Fermilab, IL</i> “A study of the inclusive hadronic kaon-argon interaction cross section” - INSS 2017 (Poster), <i>Fermilab, IL</i> “A study of the inclusive hadronic kaon-argon interaction cross section” 	Upcoming Nov 2017 Oct 2017 May 2017 Jan 2017 May 2016 August 2017 August 2017

- ICHEP 2016 (Poster), *Chicago, IL* August 2016
"A MC study of kaon identification sensitivity in MicroBooNE"
- ICHEP 2016 (Poster), *Chicago, IL* August 2016
"Study of the positive kaon total interaction cross section on Ar in LArIAT"
- TAUP2015 (Talk), *Turin, Italy* September 2015
"Studies of cosmogenic background to nucleon decay in MicroBooNE"
- New Perspectives 2015 (Talk), *Fermilab, IL* June 2015
"LArIAT - Liquid Argon In A Testbeam"
- CIPANP2015 (Talk), *Veil, CO* May 2015
"LArIAT - Liquid Argon In A Testbeam"

Outreach & Interpersonal Skills I regularly participate in outreach activities: to see some of my contributions, please visit www.elenagramellini.com/outreach.

- MicroBooNE tour guide 2015-ongoing
- Ask-A-Scientist participant for the 2017 Fermilab Open House September 2017
- Speaker at the TechSavvy initiative for middle school girls in STEM March 2017
- PechaKucha Speaker at the Batavia PechaKucha night Vol.6 February 2017
- Participant to the DUNE outreach initiative "We are DUNE " February 2017
- Virtual Reality tour guide for the Fermilab Family Open House February 2017
- Fermilab tour guide for the National Society of Black Physicists conference October 2016
- Panelist for Discussion with Students from Rwanda (ICHEP2016) August 2016
- Presenter for Wicked Science "STEM and Girls" initiative June 2016
- Participant to the Fermilab outreach initiative "Why I love Neutrinos " December 2015
- Facilitator in the Yale Physics Olympics for high school students April 2014
- Tour guide for the exposition "The energy of the void" (INFN) January 2013
- Professional basketball player 2005-2006

Programming & Computing Skills

- Programming languages: C/C++, Python.
- Simulation packages: GEANT4, Genie.
- Data analysis: ROOT (C++), PyROOT, Art & LArSoft, Samweb.
- Other Software: L^AT_EX, Mathematica, Photoshop.
- Data base experience with MySQL, xml.
- Operating systems: Linux and Unix-based Operating Systems.