

# Elena Lucherini

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M.Sc Student, *Scuola Superiore Sant'Anna*  
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RESEARCH INTERESTS	Operating systems, real-time systems, distributed systems, computer architecture.
EDUCATION	<div><div><b>Scuola Superiore Sant'Anna, University of Pisa</b>2014 - <i>present</i></div><div>M.Sc. in Embedded Computing Systems<ul style="list-style-type: none"><li>• <i>Thesis</i>: Improving predictability of real-time applications on multicore platforms with software cache-partitioning method <i>page coloring</i> (<i>ongoing</i>).</li><li>• <i>Advisors</i>: <a href="#">Giorgio Buttazzo</a> (SSSUP) and <a href="#">Björn Brandenburg</a> (MPI-SWS).</li></ul></div><div><b>University of Pisa</b>2011 - 2014</div><div>B.Sc. in Computer Engineering<ul style="list-style-type: none"><li>• <i>Thesis</i>: Web interface for air quality index monitoring system <a href="#">MonIQA</a>.</li></ul></div></div>
EXPERIENCE	<div><div><i>Research Intern</i>Dec. 2016 - <i>present</i></div><div><b>Max Planck Institute for Software Systems</b>Kaiserslautern, Germany</div><ul style="list-style-type: none"><li>• <i>Advisor</i>: Björn Brandenburg.</li><li>• As part of my Master's thesis, I am implementing a software-based cache partitioning mechanism, called <i>page coloring</i>, on Linux PREEMPT-RT. In order to reduce interference caused by shared caches on multicore platforms, a portion of the last-level cache is exclusively dedicated to real-time applications, effectively improving their predictability. To achieve a higher degree of isolation compared to previous implementation efforts, kernel processes use an exclusive LLC partition, as well.</li></ul></div>
SELECTED PROJECTS	<div><div><b><a href="#">BeaCube: An Event-Triggering System with iBeacon</a></b><ul style="list-style-type: none"><li>• Noise filtering, event logging, and possibility of seamlessly adding custom third-party events. Developed in Node.js.</li></ul></div><div><b><a href="#">Snow Level And Avalanche Monitoring: A Scaled Distributed Application</a></b><ul style="list-style-type: none"><li>• Developed in C on Contiki OS, network simulated with Cooja.</li></ul></div><div><b><a href="#">MonIQA: Air Quality Index MONitoring</a></b><ul style="list-style-type: none"><li>• Web interface for the visualization of official data about the quality of the air in Italy (<i>Bachelor's thesis</i>).</li></ul></div></div>
ACHIEVEMENTS	<ul style="list-style-type: none"><li>• Press coverage on Bachelor's thesis at national level, on online and printed newspapers such as <a href="#">La Nazione</a>, <a href="#">Repubblica.it</a>, and <a href="#">Yahoo! Sport</a> (all links are in Italian). Coverage on <a href="#">UniPi's official news page</a>.</li><li>• Recipient of a merit-based part-time collaboration opportunity with UniPi in 2015, chosen among the students of the university.</li><li>• <i>BeaCube</i> chosen as best project for the Spring 2016 <i>Industrial Applications</i> class at UniPi.</li></ul>