

Juri Lelli

SENIOR SOFTWARE ENGINEER · KERNEL HACKER

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Summary

Working on operating system support for next-generation ARM technology in the **OS power management** team at ARM: **Linux kernel** support for big.LITTLE, including **kernel scheduler** support and existing Linux power management frameworks. **Maintainer** of the **SCHED_DEADLINE Linux scheduling class**. Well known in the Linux kernel development community with 5+ years of experience.

Work Experience

ARM Ltd.

SENIOR SOFTWARE ENGINEER

Cambridge, UK

Jul. 2014 - PRESENT

- Operating system support for big.LITTLE and next-generation ARM technology.
- **Linux kernel** support and development for **scheduler and power management** frameworks.
- **Maintainer** of the **SCHED_DEADLINE Linux scheduling class**.
- Workload **power and performance analysis** (kernel level) on **Linux/Android**.
- Collaborated with the **Google Android kernel team** for the release of the **Pixel Android phone**.

Retis Lab (Scuola Superiore Sant'Anna of Pisa)

RESEARCHER

Pisa, IT

Jan. 2011 - Apr. 2011

- **Linux kernel** developer.

Library of Veterinary Medicine (University of Pisa)

LIBRARIAN

Pisa, IT

Jun. 2009 - Nov. 2009

- Loan officer.

Faculty of Engineering (University of Pisa)

TUTOR

Pisa, IT

Feb. 2009 - May 2009

- Tutor of 1st year students.

Faculty of Engineering (University of Pisa)

LINUX/WINDOWS OPERATING SYSTEMS ANALYST/ADMINISTRATOR

Pisa, IT

Apr. 2007 - Jul. 2007

- Software/Hardware maintenance, systems configuration.

Admissions Office (University of Pisa)

ADMINISTRATIVE STAFF ASSISTANT

Pisa, IT

Nov. 2005 - Feb. 2006

- Filing clerk, students tutor.

Events & Talks

RT-Linux mini summit 2011

ATTENDED

Prague, Czech Republic

Oct. 2011

- Participated to the discussions.

7th Workshop on Operating Systems Platforms for Embedded Real-Time Applications (OSPRT11)

PRESENTER

Porto, Portugal

Jul. 2011

- Presented "An efficient and scalable implementation of global EDF in Linux".

8th Workshop on Operating Systems Platforms for Embedded Real-Time Applications (OSPRT12)

PRESENTER

Pisa, Italy

Jul. 2012

- Presented "PRACTISE: a framework for PeRformance Analysis and Testing of real-time multicore SchEdulers for the Linux kernel".

Linux Plumbers Conference 2012

PRESENTER

San Diego (CA), USA

Sep. 2012

- Attended and presented at the scheduling micro-conf.

Embedded Linux Conference 2013

ATTENDED

San Francisco (CA), USA

Feb. 2013

- Participated to talks and discussions.

Linux Kernel Summit 2013

ATTENDED

- Participated to the discussions.

Edinburgh, UK

Oct. 2013

15th Real Time Linux Workshop (RTLWS15)

PRESENTER

- Presented "Design and Implementation of the Multiprocessor Bandwidth Inheritance Protocol on Linux".

Lugano, Switzerland

Oct. 2013

4th Annual International Conference on Energy Aware Computing Systems & Applications (ICEAC13)

PRESENTER

- Presented "On the Energy-Aware Partitioning of Real-Time Tasks on Homogeneous Multi-Processor Systems".

Istanbul, Turkey

Dec. 2013

Linux Plumbers Conference 2014

ATTENDED

- Attended and participated to RT, scheduling and power management micro-confs.

Düsseldorf, Germany

Oct. 2014

Linux Plumbers Conference 2015

PRESENTER

- Participated to scheduling and power management mirco-confs.
- Presented scheduler driven CPU frequency scaling solution.

Seattle, USA

Aug. 2015

Linaro Connect 2015 (SF015)

ATTENDED

- Participated to scheduling and power management discussions and hacking sessions.
- Discussed the scheduler driven CPU frequency scaling solution and the Energy Aware Scheduling implementation.
- Participated to partners meetings.

San Francisco, USA

Sep. 2015

Embedded Linux Conference 2015

PRESENTER

- Presented "SCHED_DEADLINE: a status update": Slides (<https://goo.gl/OVspul>).

San Diego, USA

Apr. 2015

Linaro Connect 2016 (BKK16)

ATTENDED

- Participated to scheduling and power management discussions and hacking sessions.
- Discussed the Energy Aware Scheduling implementation.
- Participated to partners meetings.

Bangkok, Thailand

Mar. 2016

Linaro Connect 2016 (LAS16)

PRESENTER

- Participated to scheduling and power management discussions and hacking sessions.
- Presented "Walkthrough of the EAS kernel adaptation to the Android Common Kernel": Slides/Video (<https://goo.gl/FXCdAX>).
- Participated to partners meetings.

Las Vegas, USA

Sep. 2016

Linux Plumbers Conference 2016

PRESENTER

- Participated to scheduling, power management and Android mirco-confs.
- Joint presentation with Google Android kernel team about work done to land the Energy Aware Scheduling solution on the Android Common Kernel.

Santa Fe, USA

Nov. 2016

Education

Scuola Superiore Sant'Anna

PHD IN COMPUTER ENGINEERING (INNOVATIVE TECHNOLOGIES, EMBEDDED SYSTEMS)

- **Quality of Service** control for soft real-time systems.
- Analysis, design and development of **multiprocessor real-time scheduling and synchronization** solutions.
- Design and development of **embedded and real-time systems**.
- Linux kernel **SCHED_DEADLINE patchset maintainer** (real-time deadline scheduling) - merged in mainline since Linux 3.14.

Pisa, Italy

Nov. 2010 - Sep. 2014

University of California at Santa Cruz - Sytems Research Group

RESEARCH SCHOLAR

- Design and development of **real-time scheduling mechanisms** for the **Linux kernel**.

Santa Cruz (CA), USA

Sep. 2012 - Mar. 2013

University of Pisa - Faculty of Computer Engineering

MASTER'S DEGREE IN COMPUTER ENGINEERING

- Thesis: "Design and Development of Deadline Based Scheduling Mechanisms for Multiprocessor Systems".

Pisa, Italy

Mar. 2007 - Jun. 2010

University of Pisa - Faculty of Computer Engineering

BACHELOR'S DEGREE IN COMPUTER ENGINEERING

- Thesis: "Concurrent C++ code generation from UML statecharts".

Pisa, Italy

Sep. 2002 - Jun. 2006

"G. Marconi" High School

SCIENTIFIC HIGH SCHOOL DEGREE

- General scientific preparation.

Grosseto, Italy

Sep. 1997 - Jul. 2002

Writing

A Guide for Developers in Start-up

FOUNDER & WRITER

- Drafted daily news for developers in Korea about IT technologies, issues about start-up.

Facebook Page

Jan. 2015 - PRESENT

AhnLab

UNDERGRADUATE STUDENT REPORTER

- Drafted reports about IT trends and Security issues on AhnLab Company magazine.

S.Korea

Oct. 2012 - Jul. 2013

Skills

Programming	Python, Node.JS, C/C++, Scala, JAVA, OCaml, LaTeX
Web	Django, Express, Redux, React, HTML5, LESS, SASS
Languages	Korean, English, Japanese, Chinese