

Ioannis Glaropoulos

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Profile

Accomplished embedded software engineer specialized in OS and network programming
Experienced researcher in wireless & IPv6 networking and the Internet of Things
3+ years in C/Embedded OS Development
Languages: Greek (native speaker), English (fluent), German, Spanish, Swedish (proficient)

Technical Skills

Networking

Internet Protocol Suite: IPv4/6, TCP/UDP, NDP, RIP, BGP, NAT64/DNS64, HTTP, RTP, P2P Solutions
Internet of Things: 6LoWPAN stack, RPL, RIPng, REST, CoAP
Wireless Networking: IEEE 802.11 operation standards, power-saving algorithms
IEEE 802.15.4 WPAN, ZigBEE, XBEE, Bluetooth

Embedded OS programming

Contiki OS development & support for ARM Cortex-M3/M4
MCU family, assembly-level optimizations
Network-aware application development
Software optimization for constrained applications
Open-source contributions for smart-home Internet of Things applications

C/C++ Programming

GCC cross-platform development: ARM Cortex-M3/M4, AVR, MSP
Peripheral driver development & optimization for embedded devices
USB, SPI, I2C, CDC, OneWire, Ethernet, Bluetooth
Firmware development for wireless 802.11 modules
Linux kernel: WiFi/Ethernet driver development, IPv6 stack enhancements
Network simulator development (NS2, Omnet++)
Embedded C++ programming suites: Arduino, Wire

Java Programming

Network application development, backend development for
Internet of Things cloud infrastructure
Network simulator programming

Analytics

Communication Systems Modeling & Optimization Expertise
Stochastic modeling for systems performance, protocol optimization
Network algorithms, complexity and scalability analysis

Tools

MATLAB, Visual Studio, Atmel Studio, Node.js, Eclipse, SVN, GIT, LaTeX, Maple

Patents

7/2013

"Power Saving for 802.11 Multi-Hop Communications" (110713)
Disney Docket No.: 13-DIS-179-CP-US-PRO, Status: filed
Inventors: Ioannis Glaropoulos, Stefan Mangold, Vladimir Vukadinovic

Professional History

12/2014 - present

Yanzi Networks AB, Stockholm Sweden

Embedded Software Developer

- Embedded OS software development on ARM cores (production software)
- 6LoWPAN stack programming for IoT resource-constrained platforms

5/2014 - 12/2014

Swedish Institute of Computer Science, Stockholm Sweden

Embedded Software Engineer, Researcher

- Embedded software and OS development for in-house projects (Internet of Things)
 - IPv6 (ND6, RPL, RIPng) stack enhancements for Contiki OS
- Link-layer model design & verification for wireless sensor networks
- Low-power WiFi optimizations for IoT product solutions
- Consulting for Yanzi Networks
 - Firmware & OS porting for ARM Cortex-M3 devices
 - Software developing for peripheral drivers for ARM Cortex-M CPUs
 - Test-bed design for smart-home applications

2013

Walt Disney Research, Zurich, Switzerland

Embedded Software Engineer, Researcher

- Enhanced 802.11x Networking for Internet of Things and Smart Toys
 - WLAN driver development for Qualcomm Atheros devices
 - 802.11 Low-power algorithm design & experimentation (Linux kernel/Embedded)
 - Firmware development for 802.11 radio modules
- Software integration & test-bed implementation, field experimentation, prototyping and patent writing

2009 - present

Access Linnaeus Centre, KTH, Stockholm

Researcher, PhD Candidate

- Advanced Topics in Wireless Networking in the 2-4GHz ISM band
 - Protocol design and optimization for energy efficiency in WLAN/WPANs
 - 802.11 stochastic channel usage models, and traffic characterization
 - Test-bed development and prototyping for smart & large-scale wireless solutions
- Leading M.Sc student thesis projects, lecturer for data communication & networking courses

2010

Laboratory for Sensor Networks and Embedded Systems, University of Rome, Rome, Italy

Visiting Researcher

- Cross-layer (link-layer, routing) optimization in IEEE802.15.4-based wireless sensor networks
- NS2 (C++) simulator development for business-case evaluation of mobile network operation models

Education

KTH, Royal Institute of Technology, Stockholm, Sweden

Ph.D. candidate in Electrical Engineering, 2015

Thesis (Spring'15): "Coexistence and Energy Efficiency in Wireless Networks"

- Analytic performance modeling & large-scale network optimization
- Protocol design & evaluation of energy-efficient 802.11/802.15.4-based ad-hoc networks

KTH, Royal Institute of Technology, Stockholm, Sweden

M.Sc. in Electrical Engineering, 2008

Majoring in Telecommunications. Specialization in Wireless Systems

Aristotle University of Thessaloniki, Thessaloniki, Greece

Diploma (M.S.c) of Electrical and Computer Engineering, 2005

Majoring in Electronics and Computers

References

Available upon request