Contact

vahagn@instigatedesign.com

vahagnpoghosyan (LinkedIn)

Patents

Scheduling and communication in computing systems

Modifying a design to reveal the data flow of the design in order to create a more favorable input for block placement

Scheduling and communication in computing systems

Vahagn Poghosyan
Ph.D

Summary

Parallel Systems Development

—

Experience

e-Hayq cjsc
CEO
December 2017 - Present
Yerevan, Armenia

e-government, ERP, document processing, state and enterprise security SW and HW development, networking, mesh & peer-to-peer solutions, next-generation internet: Global Giant Graph, Web 3.0, LinkedData platform development and application for e-government, corporate ERP and social networking solutions with strong emphasis on authentication, privacy, trust-chains, at the same time excluding anonymous public and private communication and attacks.

Real School Foundation
Founder and CEO
September 2016 - Present
Yerevan, Armenia

Developing modern college system for Armenia. Accelerated bachelors program based on real projects sponsored by industrial organizations, social startups, IT and high-tech industry. Vision: twenty first century enterprise should combine production, research and internship program to be able to compete in high-tech/creative/disruptive economies.

Leviathan CJSC
Co Founder and technical advisor
January 2015 - Present
Yerevan, Armenia

Peer-to-peer trading platform, targeting first of all news and niche music distribution, resilient towards net neutrality attacks and towards power usurpation by the authorities and corporations which are trying to bypass the legal system to enforce censorship, unfair competition, filtering traffic.

Yerevak Technology cjsc
Co founder and technical advisor
May 2014 - Present Yerevan,
Armenia

Set-top-box platform connected to web/mobile back-end infrastructure. Video coding technologies for age of 8K TV. Other applications related with video processing.

Instigate Robotics CJSC
Co-founder and technical advisor
October 2013 - Present Yerevan,
Armenia

Development of industrial automation systems, UAV's, CS/EE education systems.

NairiLab - robotics laboratory based on CNC/3d-printing/laser cutter devices, robotic kits, and unique methodology to facilitate interest in CS/EE education in intermediate schools, professional IT/EE/CS education in high schools, involve universities in developing educational and industrial platforms.

UAV-based control system learning kits, facilitating education of PID, and L1 based control systems.

UAV-based solutions for industrial automation.

ProximusDA
GM of the subsidiary in Armenia
November 2011 - Present
Yerevan, Armenia

Design center of ProximusDA GmbH

ProximusDA
Co-Founder
September 2008 - Present Munich,
Germany

ProximusDA offers parallel computing technology for High Performance Computing, with special focus on EDA (ESL, TLM Modeling, Acceleration of SystemC/TLM simulation using parallel/distributed computing). It includes distributed computing scheduler and memory manager, which is scalable from mobile multi-CPU systems to high-performance compute clusters.

The technology is based on combining classical methodologies from HW- Design, Distributed Computing, Multi-processor OS scheduling into unique simple, but very generic and powerful methodology.

The solution was built and validated since 2006 by Instigate, a design service and consulting company with unique experience in design, modeling, verification and validation of parallel, heterogeneous, reconfigurable systems with distributed memory architectures, ranging from SoC to heterogeneous compute clusters combining multi-core/multi-node NUMA machines, multiple GPGPU devices from NVIDIA and AMD/ATI, as well as FPGA boards and other compute resources/platforms, and providing single design environment and abstraction layer for all these systems.

Real School Educational and Cultural Foundation
Founder and CEO
2016- Present

Instigate cjsc
Co-founder and Technical Advisor
2006 - Present

EDA, Design Services (R&D, QA, Applications engineering)

Software Acceleration design services:
- parallel programming for desktop machines/clusters using specifics of NUMA architecture and special libraries for parallel/distributed programming
- acceleration of applications using GPGPU technologies from NVIDIA and AMD/ATI: CUDA, CAL/Brooks+, OpenCL

System Level Design (ESL) services.
Modeling digital systems (SystemC/TLM, C/C++, SystemVerilog).
Development of simulators and TLM for reconfigurable devices.
Programming/configuration of massive parallel reconfigurable devices.

Development of SW in GNU/Linux, Mac OSX and Windows.

SW application framework for rapid development of EDA applications. QA of

EDA tools (ESL, front-end, back-end).

Code maintenance, integration, support.

ProximusDA

September 2008 - October 2011 (3 years 2 months) Munich,
Germany

ProximusDA is developing Proximus ESL design tool, spun-off by Instigate cjsc, in
2008.

Proximus is a system design tool, focused on programming of massive parallel
heterogenous systems and modeling / simulation of not-yet-existing platforms, for
early hardware-software trade-off.

Amtokay cjsc
CEO
2007 - 2010 (4 years)

BOT Subsidiary of M2000/AboundLogic in Armenia (FPGA P&R software R&D and
SQA)

Element CXI
SW Engineer
2005 - 2006 (2 years)

Development of TLM simulator for massive parallel reconfigurable device.

Development of DSP algorithms for massive parallel reconfigurable device.

Management of remote R&D team.

Synopsys
Senior R&D Manager
2004 - 2005 (2 years)

Design & implementation of Analog/mixed-signal tool: layout editor, DRC.

Management of remote R&D team.

Monterey Design Systems
4 years

R&D Director
2004 - 2004 (1 year)

Floorplanning: Hierarchy restructuring/partitioning, block placement, quick
standard-cell placement for size estimation, floorplan compaction, legalization.

Management of remote R&D team.

R&D Manager
2003 - 2003 (1 year)

Development of EDA applications (physical design / design planning).
Management of the remote R&D team located in the Armenian design center of
the company.

SW Engineer
2001 - 2003 (3 years)

Development and maintenance of EDA algorithms: layout compaction,
legalization, floor-planning.

Arset
SW Engineer
1999 - 2001 (3 years)

EDA back-end: floorplan legalization, compaction and standard cell partitioning
& placement tools.

INET Global, Yerevan branch
SW Engineer
1998 - 1999 (2 years)

Development of tele-com protocol description tool (SS7)

Armsoft
SW engineer
1996 - 1997 (2 years)

Accounting automation for small, medium and large enterprises: R&D,
Applications Engineering, Customer Support.

Institute of Geology, NAS, RA
SW engineer
1995 - 1996 (2 years)

Mapping, plotting SW.

Education

Yerevan State University
Ph.D, Computer Science · (2000 - 2002)

Yerevan State University
MS, Applied Mathematics · (1994 - 1999)