# CURRICULUM VITAE

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## Personal Data

- Name: Mr Tigran Aivazian

- Age: 52

- Location: London

- Work experience: 1994–Present

- Nationality: British Citizen (UK resident since January 1994)

- Other citizenships: Italian and Armenian

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- WWW: http://www.bibles.org.uk

- LinkedIn: https://tinyurl.com/tigran-linkedin

- ResearchGate: https://tinyurl.com/tigran-rg

- GitHub: https://github.com/tigran123

- Latest version of CV: http://www.bibles.org.uk/cv.pdf

# Higher Education

- Yerevan State University: a) MSc in Theoretical Physics, b) MSc in Computer Science, both *with dictinction* (in USSR called "red" diploma). Thesis: *Thermonuclear burning on the surface of an accreting neutron star.* Supervisor: Prof. Armen Sarkissian (the same person who became the Prime Minister of Armenia and later the President of Armenia).

In Theoretical Physics I specialized in General Relativity, but my interests always included foundations of Quantum Mechanics.

At Yerevan State University I was one of the nine students chosen into the special group "for exceptionally gifted" and remained in this group for the whole duration of University studies (NB: the membership in this group was re-evaluated at the end of each semester). Normally, graduation from a former-USSR University is equivalent to the Western MSc degree, but being in this group implied that we have studied many additional subjects and thus, when I was invited to the UK in 1993 by Kingston University and University of London (QMW), my qualifications were recognized as equivalent to "**two** MSc degrees: one in Theoretical Physics and one in Computer Science".

# Professional Experience

- **Sep 2006–Present** Self-employed, providing Linux consultancy to IT companies, writing opensource and scientific software, publishing papers in theoretical physics and scholarly editions of the Bible in ancient languages and other books. For details see **Publications** and **Open-source Contributions** sections below.

- **Apr 2000–Sep 2006** Senior Linux Kernel Architect at Symantec (formerly VERITAS)
  My responsibilities included (in no particular order):

  – Developed from scratch `libtcpcap` — an extremely efficient TCP packet capturing engine. It was about 6000 times lighter on the CPU load than `tcpdump(8)`, which was based on the

standard `libpcap` library. It was incorporated in a large software performance monitoring system developed by Israel's PSS (an APM leader bought by VERITAS in August 2003).

- – Maintain Linux kernel mods required for VERITAS commercial products (VxFS, VxVM, etc) and push them to the official kernel tree.

- – Maintain modifications to debugging tools used internally by VERITAS (kgdb, etc).

- – Teach Linux Kernel Internals internally.

- – Make improvements to the Linux kernel which would also benefit VERITAS' commercial products.

- – Develop from scratch an embedded operating system (VxOS) based on the Linux kernel which was to be used in VERITAS storage appliance products.

- **Mar 1998–Apr 2000** Senior Escalations Engineer at SCO.
  Fixing bugs in SCO UnixWare kernel as a senior member of Kernel Escalations Group. During the last few months at SCO I have developed a Linux distribution from scratch, which was internally christened "SCO Linux".

- **Jun 1994–Mar 1998** Software Engineer at DST International
  Porting a large financial application (HiPortfolio) from DOS to various flavours of Unix (IBM AIX, Sequent DYNIX/ptx, SCO Unix, Digital OSF/1, SunOS, Solaris, etc etc). The application was written in COBOL, but I wrote extensions of MF COBOL runtime system in C (for many Unix flavours), which provided capabilities lacking in the native environment, such as reliable signal handling, low-level transaction processing system (via intercepting i/o-related system calls), virtual shared terminals, etc. Also, it is at this time that I began to learn the internals of the UNIX kernel and of the implementation of TCP/IP protocols, as sometimes a supposed bug in the application turned out to be due to the quirks in the operating system.

# Languages

- Modern (fluent): English, Russian, Armenian

- Ancient (with various degrees of fluency): Hebrew, Greek, Aramaic, Syriac, Latin, Slavonic, Grabar (ancient Armenian)

# Publications

1. **T. Aivazian, "Covariant Nonlocal Statistical Mechanics"**, 2018, https://tinyurl.com/rg-cov-stat

2. **T. Aivazian, "Quantum Mechanics in "Kinematic" Representation"**, 2018, https://www.researchgate.net/publication/327720963

3. **T. Aivazian, "Extended Hilbert Phase Space and Dissipative Quantum Systems"**, 2017, https://arxiv.org/abs/1702.07746

4. **T. Aivazian, "On the link between Shrödinger and Vlasov Equations"**, 1996, http://arxiv.org/abs/gr-qc/9606009

5. **T. Aivazian, "Cosmological Solution To Einstein-Vlasov System"**, 1996, http://arxiv.org/abs/gr-qc/9605045

6. **T. Aivazian, "Linux Kernel 2.4 Internals"**, This book of mine was translated (by others) into several languages and was cited in many standard textbooks on the operating systems, e.g. Deitel/Deitel. http://www.tldp.org/guides.html#lki

7. **T. Aivazian (ed.), The British Study Edition of the Urantia Papers** http://www.bibles.org.uk/study-edition.html

8. **T. Aivazian (ed.), Classical Armenian Bible: The Zohrab Bible**, 2019. On Amazon: https://tinyurl.com/amazon-zohrab and in many other shops.

9. **Jesus: A New Revelation**, 2024. Edited and typeset by T. Aivazian. Available on Amazon: https://tinyurl.com/janr-book

10. **A.S. Eddington, "Mathematical Theory of Relativity"**, 2022, 3$^{\text{rd}}$ Ed. with a Foreword by T. Aivazian. https://tinyurl.com/rg-mtor

11. **T. Aivazian, "Geometrical Nature of Mass and the Fifth Dimension of Kaluza-Klein Theory"**, 2000, https://tinyurl.com/geom-mass

12. **T. Aivazian, "The Higher Dimensions of Space: From Einstein to Jesus"**, 2012, https://tinyurl.com/higher-dim

13. **T. Aivazian, "On the Meaning and Value of Music"**, 2019, https://tinyurl.com/mmusic2

I served as a *Technical Reviewer* for the book "Hands-On System Programming with Linux" by Kaiwan N. Bilimoria, published by Packt in 2018. This involved advising the author on the best ways of low-level programming in Linux and verifying all examples, etc. The book is available on Amazon: https://tinyurl.com/linux-book

Many more of my publications are listed in the Books section of my website: http://www.bibles.org.uk/books.html

# Open-source Contributions

- Linux kernel: BFS filesystem driver (sole author and maintainer: https://en.wikipedia.org/wiki/Boot_File_System)

- Linux kernel: Intel Microcode Update driver (sole author and original maintainer, recently I relinquished the maintainer's position for this as it was taking too much of my time).

- Linux kernel: various SMP improvements and bugfixes (too many to list them all here). See this article about my Linux kernel contributions done during employment by SCO at Groklaw.net: https://tinyurl.com/tigran-linux

- Linux kernel: iBCS2 improvements (execution of UnixWare and OpenServer binaries under Linux)

- Linux kernel: /proc/kcore improvements.
  See `kcore.c` source https://tinyurl.com/linux-kcore

- Linux kernel: BCP — Boot Command Processor for Linux. This was prior to the days of Grub2 (in the early days of LILO) and was used for passing kernel parameters when booting from a floppy disk via bare boot sector.

- Urantia Book Explorer: A Web Application in PHP and jQuery for exploring and searching the texts in multiple languages, see the github repository:
  https://github.com/tigran123/urantia-book-explorer

- libdjvu: A DjVu viewer used in the Hanlin V3 (in Russia known as Lbook V3) eInk device. Other programs (kindlepdfviewer) directly borrowed from my libdjvu implementation as it was the most efficient and complete. See https://github.com/tigran123/libdjvu.

- kindlepdfviewer: a PDF and DjVu reader for Kindle eInk devices. I was one of the top two developers working on this project, see: https://tinyurl.com/tigran-kpdf Later kindlepdfviewer was renamed to koreader.

- Bible Typesetting System: X$_{\text{E}}$LaTeX-based typesetting engine for producing scholarly critical editions in many languages, etc. The presentation I gave at Chicago IT Leadership Roundtable in 2010: http://bibles.org.uk/typesetting-complete.pdf

- Python programs using matplotlib, scipy, numpy and PyFFTW for Spectral Split Propagator solver of Quantum Mechanics equations, see the github repository:
  https://github.com/tigran123/quantum-infodynamics

Also, I am mentioned in the "List of Famous Armenians" here: http://wiki-linki.ru/Page/1366874

# Skills

- Linux kernel programming (in C)

- Unix/Linux system programming (in C)

- Designing an embedded Linux-based system from scratch

- Linux performance tuning, debugging etc.

- TCP/IP protocols internals (IPv4)

- Python scientific and general programming. Hackerrank Python (Advanced) Certificate at: <https://tinyurl.com/pythcertif>

- Python web programming (mostly Streamlit)

- Data Analysis using Pandas, Matplotlib, Numpy.

- Theoretical physics research (QM and GR)

- Typesetting books in many languages (in LaTeX)

- Translation of complex philosophical books from English to Russian, see:
  <https://tinyurl.com/urantia-ru>

- PHP and jQuery: developed the most efficient UB search engine
  <http://urantiaexplorer.org>

- Bash scripting, Makefiles, Github, etc.

- PyQt5 with matplotlib integration. For example, see:
  <https://tinyurl.com/gh-psim>)

- MySQL database design and optimisation (developed a large library management application in PHP and jQuery for books and other media).

- Wolfram Mathematica programming.

- 3D modelling and animations using Blender.

# Hobbies

- Reading books on Philosophy, Religion, Music, History of Science and many other subjects. There are 2500+ physical printed books and about 4 million electronic books in my library. One day I hope to train a neural network model based on all this wealth of knowledge.

- Listening to and composing music.