

↑ home	Q search	≡ blog	Ø links	a feed	• elsewhere
Search					

2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023 2024

- 2024-12-30: Revealing peanut butter overheads with flame graphs.
- 2024-12-24: <u>Safety vs performance in C, C++, and Rust sort implementations.</u>
- 2024-12-19: Fetching RSS/Atom feeds respectfully with curl.
- 2024-12-19: Please stop citing TIOBE.
- 2024-12-17: Murder mystery: GCC builds failing after sbuild refactoring.
- 2024-12-16: OpenERV energy recovery ventilator.
- 2024-12-13: Things you never wanted to know about Golang interfaces.
- 2024-12-04: <u>Inheritance was invented as a performance hack in Simula.</u>
- 2024-12-04: <u>The Hoare cube.</u>
- 2024-12-04: OKLCH colour picker and converter.
- 2024-12-04: Egoless engineering.
- 2024-11-30: Compilation on the GPU? A feasibility study.
- 2024-11-30: Combining git repos with josh-filter.
- 2024-11-29: Slow networking between cloud VMs on the same host.
- 2024-11-29: Using Pandoc and Typst to produce PDFs.
- 2024-11-28: Wislist for Linux from the mold linker's POV.
- 2024-11-27: <u>if constexpr requires requires { requires } in C++.</u>
- 2024-11-27: Structured editing and incremental parsing.
- 2024-11-27: Offpunk: an offline-first command-line web browser.
- 2024-11-27: Chawan: a web browser for your terminal.
- 2024-11-26: A solution to the onion problem of J. Kenji López-Alt.
- 2024-11-25: Theory-building and why employee churn is lethal to software companies.
- 2024-11-23: copycat: intercept system calls using seccomp.
- 2024-11-22: <u>Syntax error recovery in parsing expression grammars (PEG parsers).</u>
- 2024-11-21: Modern hardware for future databases.
- 2024-11-21: Analytical anti-aliasing.
- 2024-11-20: Map keys and lifetimes in Rust.
- 2024-11-20: How did software get so reliable without proof?
- 2024-11-20: Nominal types for storing, structural types for manipulating.
- 2024-11-19: How many values does a boolean have?
- 2024-11-17: Styling Graphviz with CSS.
- 2024-11-11: Precise inference of expressive units of measurement types.
- 2024-11-11: Type inference for units of measure.
- 2024-11-10: Formalising graphs with coinduction in Agda.
- 2024-11-10: The principles of Mr. Harrison's longitude clock / maritime chronometer.
- 2024-11-09: Texture-less GPU text rendering.
- 2024-11-09: Known attacks and a primer on elliptic curve cryptography.
- 2024-11-08: The main features of CPL. (1963)
- 2024-11-08: The mechanical evaluation of expressions: Landin on the lambda calculus. (1964)
- 2024-11-08: CPL: failed venture or noble ancestor?
- 2024-11-06: Mimic: a fast System/370 simulator for the IBM RT PC. (1987)
- 2024-11-05: Resurrection: the journal of the Computer Conservation Society.

- 2024-11-05: The Autocode programs developed for the Manchester University computers. (1958)
- 2024-11-05: The official Aztec C online museum.
- 2024-11-05: In search of types.
- 2024-11-04: Macros, safety, and SOA (struct-of-arrays) in Rust.
- 2024-11-04: A Hamiltonian circuit for Rubik's Cube.
- 2024-11-04: C++, complexity, and compiler bugs.
- 2024-11-03: gcp: QUIC remote file copy.
- 2024-11-02: Why PostgreSQL pg_dump is amazing.
- 2024-11-02: The Lounge: a modern, responsive, cross-platform, self-hosted web IRC client in TypeScript.
- 2024-11-01: Emacs org mode syntax cheat sheet.
- 2024-11-01: ActivityBot: a simple ActivityPub bot server in PHP.
- 2024-11-01: CIL: C intermediate language, a front end for linters.
- 2024-11-01: ASCII control characters in the terminal.
- 2024-10-31: C++ ABI compatibility: the day the standard library died.
- 2024-10-29: TCP SYN spoofing attack directs abuse complaints at Tor relays.
- 2024-10-28: OpenZFS deduplication is good now and you shouldn't use it.
- 2024-10-28: Old MacDonald had a barcode, E-I-EICAR.
- 2024-10-28: What's new in POSIX 2024 XCU commands and utilities.
- 2024-10-27: A new git-repack algorithm shrunk Microsoft's Javascript monorepo git size by 94%.
- 2024-10-24: Why write a new RTOS for CHERIOT?
- 2024-10-23: Adding row polymorphism to Damas-Hindley-Milner.
- 2024-10-22: Rustls outperforms OpenSSL and BoringSSL.
- 2024-10-22: A Mathematica interpreter in Typescript.
- 2024-10-22: On the problem of naming things.
- 2024-10-21: Learn Rust the dangerous way.
- 2024-10-20: Better defunctionalization through lambda set specialization.
- 2024-10-20: The origins of the term "daemon" in computing.
- 2024-10-18: superlinker: a tool for reinterpreting ELF executables and shared libraries.
- 2024-10-18: The strange cases of consumer-grade routers on puny power supplies.
- 2024-10-17: C89 draft standard in HTML.
- 2024-10-12: The road to OCIv2 images: what's wrong with tar?
- 2024-10-11: Quantifying the Kevin Bacon game: a statistical exploration of Hollywood's most connected actors.
- 2024-10-09: <u>SQLite's use of Tcl.</u>
- 2024-10-08: Five times ICANN deleted a ccTLD, and what it means for .io
- 2024-10-08: The origins of PostScript.
- 2024-10-08: Tartufo searches through git repositories for high entropy strings and secrets.
- 2024-10-08: Z.200 CHILL: the ITU-T programming language.
- 2024-10-07: A general model for the origin of allometric scaling laws in biology.
- 2024-10-07: Big ball of mud: the de facto standard software architecture.
- 2024-10-07: AVX bitwise ternary logic and the Amiga blitter.
- 2024-10-07: Octothorpes: hashtags for the open Internet.
- 2024-10-06: The Gleam programming language is pragmatic.
- 2024-10-06: Playing with PostgreSQL and the BOLT linker layout optimizer.
- 2024-10-05: Towards standards for handwritten zero and oh: much ado about nothing (and a letter). (1967)
- 2024-10-04: Persi Diaconis: Why did Markov invent Markov Chains? (video)
- 2024-10-04: Blessed.rs: an unofficial guide to the Rust crates ecosystem.
- 2024-10-04: "A=B", a book about computer methods of discovery and proof of hypergeometric identities.
- 2024-10-03: Terminal colours are tricky.
- 2024-10-02: Height hunt: a quest to find and visit every possible road vehicle height restriction sign in the UK.
- 2024-10-02: TigerBeetle code style.
- 2024-10-02: An introduction to the Filament hardware design language.
- 2024-10-01: The case of the missing increment: Golden Cove twice as fast as expected?!
- 2024-09-30: Beyond multi-core parallelism in Rust: faster Mandelbrot with SIMD.
- 2024-09-29: A p-adic representation of the rational numbers for fast easy arithmetic. (1979)
- 2024-09-27: Malicious SHA-1.
- 2024-09-26: Attacking UNIX systems via CUPS.
- 2024-09-25: A brief history of microprogramming.
- 2024-09-24: A few secure random bytes in PostgreSQL without pgcrypto.

- 2024-09-23: "Truly hygienic" let statements in Rust.
- 2024-09-21: Questioning the criteria for evaluating non-cryptographic hash functions.
- 2024-09-21: The working archivist's guide to enthusiast CD-ROM archiving tools.
- 2024-09-21: The lost language extensions of MetaWare's High C compiler.
- 2024-09-19: Digital signatures and how to avoid them.
- 2024-09-19: 20 years later, real-time Linux makes it to the mainline kernel.
- 2024-09-18: <u>Use IDENTITY columns instead of SERIAL in PostgreSQL.</u>
- 2024-09-18: <u>Database replication design spectrum.</u>
- 2024-09-18: Handling 8kHz raw mouse input on Windows.
- 2024-09-18: Bézier curve arc length parametrizations.
- 2024-09-17: Ratchets in software development.
- 2024-09-17: The centrality of stupidity in mathematics.
- 2024-09-16: Ante: A low-level functional language with algebraic effects and safe shared mutability.
- 2024-09-15: <u>Turning disposable vapes into a fast charge power bank.</u>
- 2024-09-15: A time consuming vDSO pitfall for 32-bit code on arm64 Linux.
- 2024-09-14: Porting SBCL to the Nintendo Switch.
- 2024-09-12: smolweb HTML specification
- 2024-09-10: Signatures are like backups.
- 2024-09-09: Debunking CISC vs RISC code density.
- 2024-09-09: A low-level look at A-normal form.
- 2024-09-09: What is the best pointer tagging method?
- 2024-09-06: <u>Massachusetts Bodged Transistor Authority</u>: <u>How we turned MBTA Red Line equipment into a car speedometer.</u>
- 2024-09-04: LSP: the good, the bad, and the ugly.
- 2024-09-04: OptView2: inspect missed optimizations by LLVM clang.
- 2024-09-03: Is this Rust trait sealed or not?
- 2024-09-03: <u>Unmaking the Makefiles: exorcising the Rust compiler test suite one file at a time.</u>
- 2024-09-02: Parsing awk is tricky.
- 2024-09-01: A simple generic parallelism idiom and C++17 specifics.
- 2024-09-01: CHERIOT: a study in CHERI for RISC-V microcontrollers.
- 2024-08-31: Fortran dot/comma bug urban legend.
- 2024-08-29: Your immune system is not a muscle.
- 2024-08-29: Compiling JavaScript to Wasm: partial evaluation, weval, and the first Futamura projection.
- 2024-08-29: Air Con: pay \$1697 for an on/off switch, or fix the Android controller tablet?
- 2024-08-29: Two Turkish i dots too many.
- 2024-08-29: Rate limiting, ATM cells, and GCRA.
- 2024-08-29: Time-series compression algorithms, explained.
- 2024-08-29: What every computer scientist should know about floating-point arithmetic.
- 2024-08-27: 5000x faster CRDTs: an adventure in optimization.
- 2024-08-27: MiniJinja: learnings from building a template engine in Rust.
- 2024-08-27: Should scientific fraud and research misconduct be illegal?
- 2024-08-27: Emulating x86 / amd64 on RISC-V.
- 2024-08-26: Poor foundations in geometric algebra.
- 2024-08-26: Writing a Rust compiler in C?!
- 2024-08-25: Linux pipes are slow.
- 2024-08-25: Old buildings in Cambridge.
- 2024-08-24: Printing the web: HTML and CSS for paper books.
- 2024-08-24: Geometric search trees.
- 2024-08-23: We need visual programming. No, not like that.
- 2024-08-23: Ted Dunning on histograms vs quantile sketches.
- 2024-08-23: Speeding up serde json strings by 20%
- 2024-08-18: <u>How OCaml type checker works, or, what polymorphism and garbage collection have in common.</u>
- 2024-08-18: The door problem: what does a game designer do?
- 2024-08-18: <u>Techniques for safe garbage collection in Rust.</u>
- 2024-08-15: A history of orthogonal frequency division multiplexing (OFDM).
- 2024-08-14: Incremental TT munchers: perhaps the most powerful macro parsing technique in Rust macro rules.
- 2024-08-14: The medieval 'New England': a forgotten Anglo-Saxon colony on the north-eastern Black Sea coast.

- 2024-08-14: Round in circles and back again: Max Roberts updated London Underground concentric circles and spokes map.
- 2024-08-13: Good retry, bad retry: an incident story.
- 2024-08-13: Division, modulus, and remainder for computer scientists.
- 2024-08-11: Rosie pattern language: modern text pattern matching to replace regex.
- 2024-08-10: Confusion attacks: exploiting hidden semantic ambiguity in Apache httpd.
- 2024-08-08: A better light source for scanning color negative film.
- 2024-08-07: A trilingual inscription at Behistun near Persepolis led to the decipherment of cuneiform.
- 2024-08-07: <u>Situated software.</u>
- 2024-08-06: Building rqlite 9.0: cutting disk usage by half.
- 2024-08-04: Helmut Schmidt Future Prize acceptance speech by Meredith Whittaker.
- 2024-08-04: Git credential: password store integration for git-over-https
- 2024-08-03: Where do debuggers find shared library paths in core dumps?
- 2024-08-03: <u>Primitive recursive functions for the working programmer.</u>
- 2024-08-02: Another variable-length integer encoding.
- 2024-08-01: What your web framework never told you about SQL injection protection.
- 2024-07-31: Where does the name "algebraic data type" come from?
- 2024-07-30: Quint: An executable specification language with delightful tooling based on the temporal logic of actions (TLA).
- 2024-07-30: Calculating the cost of a Google Deepmind paper, or, how to burn \$10,000,000 on an arXiv preprint.
- 2024-07-29: <u>How to build highly-debuggable C++ binaries.</u>
- 2024-07-27: <u>Unsafe read beyond of death: optimized short string SIMD load.</u>
- 2024-07-27: Counting bytes faster with SIMD, interleaving, and prefetching.
- 2024-07-26: CompilerFax: phone a compiler, fax it some code, it faxes back the results.
- 2024-07-26: Meta-Thunderbolt-Inception
- 2024-07-26: Rosemary Grant on the Galapagos finches: "Evolution happens much quicker than Darwin thought".
- 2024-07-25: An extensive benchmark of C and C++ hash tables.
- 2024-07-22: <u>Using algebra to refactor data types.</u>
- 2024-07-21: How not to use box shadows.
- 2024-07-19: Concerns about passkeys.
- 2024-07-19: NSCopyObject, the griefer that keeps on griefing.
- 2024-07-19: The GNU make jobserver Implementation.
- 2024-07-18: <u>Hash-based bisect debugging in compilers and runtimes.</u>
- 2024-07-18: Why Polars rewrote its Arrow string data type.
- 2024-07-17: XSS injection using undeclared charset encoding and ISO-2022-JP sniffing.
- 2024-07-16: How the Stream Deck rose from the ashes of the legendary Optimus Maximus keyboard.
- 2024-07-15: Pull requests via `git push`.
- 2024-07-15: Objective tests for aphantasia.
- 2024-07-13: git-pr: A new git collaboration service.
- 2024-07-12: Nine rules for successful power meetings.
- 2024-07-12: Beating the cache with value speculation.
- 2024-07-12: That afternoon headache is a sign of stale air.
- 2024-07-12: Are you sure you want to use mmap() in your database management system?
- 2024-07-11: Hash maps that don't hate you.
- 2024-07-11: First contact with SQLite.
- 2024-07-10: Towards reproducible rebuilds of Debian packages.
- 2024-07-09: Is prefix of string in table? A journey into SIMD string processing.
- 2024-07-08: On understanding data abstraction, revisited.
- 2024-07-06: Properly property testing concurrent data structures.
- 2024-07-04: The X window system at 40.
- 2024-07-04: <u>xsum: exactly-rounded summation of floating point values.</u>
- 2024-07-03: The sad state of property-based testing libraries.
- 2024-07-02: <u>BusyBeaver(5) is now proved to be 47,176,870.</u>
- 2024-06-29: POSIX 2024 changes.
- 2024-06-29: Bytecode breakdown: unraveling Factorio's Lua security flaws.
- 2024-06-29: <u>A eulogy for DevOps.</u>
- 2024-06-27: Valve.Computer: A modern 8 bit design, built using 1950s thermionic valves.
- 2024-06-27: OpenSSL CVE-2024-5535: `SSL select next proto` buffer overread.

- 2024-06-26: <u>Rigorous numerical integration in Arb.</u>
- 2024-06-26: <u>Profiling with ctrl-C.</u>
- 2024-06-25: <u>Re-creating early generative art: Schotter, by Georg Nees.</u>
- 2024-06-25: Sans I/O when the rubber meets the road.
- 2024-06-25: Network protocols, sans I/O.
- 2024-06-24: ChocoPy: a subset of Python 3 for teaching compiler construction.
- 2024-06-24: Resolving metastability issues during bootstrapping CLOS.
- 2024-06-23: How to design a CPU ISA (instruction set architecture).
- 2024-06-23: Why is AVX 512 useful for the RPCS3 PlayStation 3 emulator?
- 2024-06-23: A history of Psion and Symbian.
- 2024-06-22: Optimizing SQLite for servers.
- 2024-06-22: The simple essence of algebraic subtyping: principal type inference with subtyping made easy.
- 2024-06-21: <u>1/25-scale Cray C90 wristwatch.</u>
- 2024-06-21: Reflections on software performance.
- 2024-06-20: How to use the new counted by attribute in C and Linux.
- 2024-06-20: Avoiding the top 10 NGINX configuration mistakes.
- 2024-06-20: Public JavaScript CDNs are useless and dangerous.
- 2024-06-20: The full-source bootstrap: building from source all the way down.
- 2024-06-19: <u>Demystifying Rust's ? operator and Try trait.</u>
- 2024-06-18: Peak population projections.
- 2024-06-18: Avoiding Emacs bankruptcy.
- 2024-06-18: Equality has more than one meaning in mathematics.
- 2024-06-17: <u>Zig-style generics are not well-suited for most languages.</u>
- 2024-06-17: Making robots plan faster with SIMD and Rust.
- 2024-06-17: The ineffable types of Rust: how to make self-borrows safe.
- 2024-06-16: MicroMac, a 128k Macintosh emulated on an RP2040.
- 2024-06-16: There are only three frequencies: never, sometimes, always.
- 2024-06-16: Stupid TLS facts: session resumption.
- 2024-06-16: Reconstructing public keys from cryptographic signatures.
- 2024-06-16: The story of reformatting 100k source files at Google in 2011.
- 2024-06-15: Exponentially better rotations.
- 2024-06-13: Whose CIDR is it anyway? Scanning all of whois and rdap.
- 2024-06-13: Chaos in the medium: watercolour plotting.
- 2024-06-12: Bamboo can be as invasive as Japanese knotweed.
- 2024-06-12: <u>Inside Mexico's anti-avocado militias.</u>
- 2024-06-11: Characterizing the Raspberry Pi Pico RP2040 ADC.
- 2024-06-11: Forsp: a Forth+Lisp hybrid CBPV language.
- 2024-06-10: <u>Dangers of newlines in inline assembly.</u>
- 2024-06-09: <u>Using HDMI EMI for fast wireless data transfer.</u>
- 2024-06-09: A (draft) taxonomy of SIMD usage.
- 2024-06-09: <u>How many High Streets are there in London?</u>
- 2024-06-08: Towards federated key transparency.
- 2024-06-08: A fast alternative to the modulo reduction.
- 2024-06-08: Fibonacci hashing: the optimization that the world forgot (or: a better alternative to integer modulo).
- 2024-06-08: Compilers are (too) smart: a failed popcount optimization.
- 2024-06-07: What is PID 0?
- 2024-06-07: Leveraging Zig's allocators.
- 2024-06-07: Tom7's BoVeX typesetter with AI-assisted justified text.
- 2024-06-07: Speeding up rustc by being lazy.
- 2024-06-06: <u>lelwel</u>: a resilient <u>LL(1)</u> parser generator for Rust.
- 2024-06-06: <u>let rand = main as usize</u>;
- 2024-06-06: Shortcat: Manipulate macOS masterfully, minus the mouse.
- 2024-06-06: First steps with DHCPv6-PD on OpenBSD.
- 2024-06-06: Propagating bounds through bitwise operations in abstract interpretation.
- 2024-06-04: <u>Simple proofs with Z3Py.</u>
- 2024-06-04: Why do electronic components have such odd values? Renard numbers and ISO 3.
- 2024-06-04: Cloning-based context-sensitive pointer alias analysis using binary decision diagrams in bddbddb.
- 2024-06-04: bddbddb: using Datalog with binary decision diagrams for program analysis.

- 2024-06-04: Sound, precise, and fast abstract interpretation with tristate numbers.
- 2024-06-04: Bit-twiddling abstract addition with unknown bits.
- 2024-06-04: LL and LR in context: why parsing tools are hard.
- 2024-06-04: <u>automemcpy</u>: a framework for automatic generation of fundamental memory operations.
- 2024-06-02: <u>Tiny Tapeout: an educational project to get your designs manufactured on a real chip.</u>
- 2024-06-02: <u>Tock: an embedded operating system in Rust.</u>
- 2024-06-02: The borrow checker within Rust.
- 2024-06-02: Rust and dynamically-sized thin pointers.
- 2024-06-01: Rust regex engine internals as a library.
- 2024-06-01: Performance culture.
- 2024-06-01: X is justifiably slow?
- 2024-06-01: Electromagnetic linear clock.
- 2024-05-31: The greatest clock (and map) ever made.
- 2024-05-30: <u>Ultrasonic cold brew coffee</u>.
- 2024-05-30: Why, after 6 years, I'm over GraphQL.
- 2024-05-29: Recycling steel with cement in an arc furnace could produce zero-emissions concrete.
- 2024-05-29: Why rejecting invalid XML in the browser is a bad idea.
- 2024-05-28: A study of MAC address randomization in mobile devices and when it fails.
- 2024-05-28: Surveilling the masses with Wi-Fi-based positioning systems.
- 2024-05-28: <u>I've womansplained him to death.</u>
- 2024-05-28: The Cephes mathematical library.
- 2024-05-28: <u>TerminalTextEffects</u>: a visual effects engine for xterm-compatible terminal emulators.
- 2024-05-28: IPv6 link-local stunts: ping ff02::1 etc.
- 2024-05-28: <u>Programming pearls: Bumper sticker computer science.</u>
- 2024-05-28: Why software projects take longer than you think: a statistical model.
- 2024-05-28: <u>Doing is normally distributed, learning is log-normal.</u>
- 2024-05-28: Wasmi WebAssembly interpreter's new execution engine.
- 2024-05-27: <u>Reclaiming IPv4 Class E 240.0.0.0/4.</u>
- 2024-05-26: Statically typed functional programming with Python 3.12.
- 2024-05-26: RuSSH: a Rust SSH client and server library.
- 2024-05-26: Taming floating-point sums with Rust.
- 2024-05-21: vu128: Efficient variable-length integers
- 2024-05-21: Rust's iterators optimize nicely—and contain a footgun.
- 2024-05-19: I am too old to create a popular programming language.
- 2024-05-19: <u>How often is the wife taller than the husband?</u>
- 2024-05-19: AOT JS compilation by wevaling the wasms.
- 2024-05-19: <u>Compilers for free with weval, a wasm partial evaluator.</u>
- 2024-05-19: VirusTotal YARA has been rewritten in Rust as YARA-X.
- 2024-05-18: Why writing correct software is hard.
- 2024-05-18: Fix your video game's timestep!
- 2024-05-18: Fixing iterative damping interpolation in video games.
- 2024-05-18: TCP performance and the Mathis equation.
- 2024-05-18: <u>Practical third-party library sandboxing with RLBox.</u>
- 2024-05-17: <u>The rainbow hats puzzle.</u>
- 2024-05-17: Golang disables Nagle's algorithm, making it evil on shitty networks.
- 2024-05-17: A transport protocol's view of Starlink.
- 2024-05-17: What even is a pidfd anyway?
- 2024-05-16: History of the Italian electrical system.
- 2024-05-16: A look at the Mojo language for bioinformatics.
- 2024-05-16: Strings in Julia vs Rust: you probably don't need to validate UTF-8.
- 2024-05-16: <u>D3 in depth.</u>
- 2024-05-16: Understanding misunderstandings in C source code using IOCCC winners.
- 2024-05-16: Ebury is alive but unseen: 400k Linux servers compromised by the Windigo group.
- 2024-05-16: <u>Some notes on Rust, mutable aliasing, and formal verification.</u>
- 2024-05-15: <u>A tale of two sieves.</u>
- 2024-05-15: The creator of Magic: The Gathering knows exactly where it all went wrong.
- 2024-05-14: Optimizing the Roc parser/compiler with data-oriented design.
- 2024-05-14: A triad of factors that explain the nature of software.

- 2024-05-13: <u>Submitting a Linux kernel patch with b4.</u>
- 2024-05-13: <u>Exploring GNU C extensions in the Linux kernel.</u>
- 2024-05-13: Parsing JSON is a minefield.
- 2024-05-12: The alternative programming language implementation problem.
- 2024-05-12: GPUs go brrr: how to keep the nVIDIA H100 tensor cores fed.
- 2024-05-12: <u>Functional semantics in imperative clothing in the Roc programming language.</u>
- 2024-05-12: <u>Can we make bicycle manufacturing sustainable again?</u>
- 2024-05-12: Emoji history: the missing years.
- 2024-05-12: Garbage collectors are scary.
- 2024-05-12: Breaking DKIM and BIMI in 2024 using the Debian OpenSSL bug CVE-2008-0166.
- 2024-05-11: In Rust, methods should be object safe.
- 2024-05-11: Why the CORDIC algorithm lives rent-free in my head.
- 2024-05-11: Thread: the wireless tech we can't use or teach.
- 2024-05-09: It's always TCP NODELAY. Every damn time.
- 2024-05-09: <u>Rust through the ages.</u>
- 2024-05-09: Scanners work fine over iSCSI.
- 2024-05-09: Needle: a DFA regex library that compiles to JVM bytecode.
- 2024-05-09: The await event horizon in JavaScript.
- 2024-05-08: B612: the Airbus cockpit display font.
- 2024-05-08: The C preprocessor iceberg.
- 2024-05-07: A 100x speedup with unsafe Python.
- 2024-05-07: Secure Randomness in Golang 1.22.
- 2024-05-07: Search has been put in the vibe space.
- 2024-05-06: <u>JTAG hacking with a Raspberry Pi: introducing the PiFex.</u>
- 2024-05-06: <u>How to successfully rewrite a C++ codebase in Rust.</u>
- 2024-05-06: <u>Decoding UTF8 with the pext parallel extract instruction.</u>
- 2024-05-06: <u>The C++ iceberg.</u>
- 2024-05-05: <u>An extended subtweet on power-over, vs power-with or power-to.</u>
- 2024-05-05: The Italian streets that don't exist on any map.
- 2024-05-05: Thinking is bad: implications of human error research for spreadsheet research and practice.
- 2024-05-05: How to build a \$20 billion semiconductor fab.
- 2024-05-05: Byte magazine August 1983: The C Language.
- 2024-05-05: Bit-stealing made legal: compilation for custom memory representations of algebraic data types.
- 2024-05-05: TypeID: type-safe, K-sortable, globally unique identifiers.
- 2024-05-05: <u>Understanding Stein's paradox in higher-dimensional statistics.</u>
- 2024-05-03: ECDH-OMR: elliptic curve Diffie-Hellman oblivious message retrieval.
- 2024-05-02: Hobby's algorithm for aesthetic Bézier splines.
- 2024-05-02: Piccolo: a stackless Lua interpreter in Rust.
- 2024-05-02: TestResult: a Rust error type that panics early.
- 2024-05-02: Unwind considered harmful?
- 2024-05-02: The world's loudest Lisp program, for tunnel evacuation.
- 2024-05-02: PaperWM.spoon: tiled scrollable window manager for Hammerspoon on MacOS.
- 2024-05-01: It's time to stop recommending Clean Code.
- 2024-04-30: Rink: an open source unit-aware calculator.
- 2024-04-30: iRRAM: exact arithmetic in C++.
- 2024-04-30: PostgreSQL supported platforms over time.
- 2024-04-30: <u>Bytecode VMs in surprising places.</u>
- 2024-04-30: PowerShell monad manifesto.
- 2024-04-30: <u>State of the terminal.</u>
- 2024-04-30: A random walk through the Ada programming language.
- 2024-04-29: So, you want to write an unsafe crate in Rust?
- 2024-04-29: <u>fend: an arbitrary-precision unit-aware calculator.</u>
- 2024-04-29: <u>The space bar stabilizer problem.</u>
- 2024-04-29: <u>FreeBee: AT&T 3B1 UNIX PC emulator.</u>
- 2024-04-29: Bloat busters: pg_repack vs pg_squeeze.
- 2024-04-29: <u>Importing ECMAscript modules with require() in node.js.</u>
- 2024-04-29: WireGuard endpoints and IP addresses.
- 2024-04-29: Simple NDP proxy to route your IPv6 VPN addresses.

- 2024-04-28: The invention of the integrated circuit recorded in Jean Hoerni's patent notebook.
- 2024-04-28: Synth wars: The story of MIDI, the one interface that ruled them all.
- 2024-04-28: Building an IBM 3270 terminal controller.
- 2024-04-27: Tasks are the wrong abstraction for async Rust.
- 2024-04-26: Captain Zilog crushed! The story of the Z8000.
- 2024-04-26: Passkeys: a shattered dream.
- 2024-04-25: The weird world of Windows file paths.
- 2024-04-24: <u>How web bloat impacts users with slow devices.</u>
- 2024-04-24: So you want to learn to break ciphers?
- 2024-04-24: Digitized continuous magnetic recordings of the Carrington event from Greenwich and Kew.
- 2024-04-23: Inside the Super Nintendo cartridges.
- 2024-04-23: The bubble sort curve.
- 2024-04-23: No one buys books.
- 2024-04-22: Manual for Larry Tesler's PUB markup language. (1971)
- 2024-04-19: A history of parsers of the Ruby programming language.
- 2024-04-19: Cable maintenance ships: The invisible seafaring industry that keeps the internet afloat.
- 2024-04-19: Raw flux streams and obscure formats: Further work around imaging 5.25-inch floppy disks.
- 2024-04-18: Formal methods: just good engineering practice?
- 2024-04-18: <u>A domino computer.</u>
- 2024-04-17: Feathers are one of evolution's cleverest inventions.
- 2024-04-17: Will we have a negative leap second?
- 2024-04-17: The hardest problem in web design: centering things.
- 2024-04-16: Some useful types for database-using Rust web apps.
- 2024-04-16: Etak Navigator: how they made a mapping computer in the 1980s.
- 2024-04-15: Five little languages and how they grew: Dennis Ritchie's talk at HOPL on the history of C.
- 2024-04-14: <u>Sandboxing all the things with Flatpak and BubbleBox.</u>
- 2024-04-14: sotrace: show hidden dependencies in Linux binaries.
- 2024-04-13: Transcript of Martha Wells' Jack Williamson Lecture 2024, on MurderBot.
- 2024-04-11: The simple beauty of XOR floating point time series compression.
- 2024-04-11: A simple derivation of sin and cos by stacking triangles.
- 2024-04-10: BatBadBut: You can't securely execute commands on Windows.
- 2024-04-09: Halbach magnetic array.
- 2024-04-09: The link between abortion and crime.
- 2024-04-09: path.join considered harmful, or openat() all the things.
- 2024-04-09: An introduction to jump threading optimizations in gcc.
- 2024-04-09: Concurrency vs paralellism.
- 2024-04-09: The server chose violence: error handling in the Hubris embedded OS.
- 2024-04-08: It's time for operating systems to rediscover hardware.
- 2024-04-08: Putting out the hardware dumpster fire.
- 2024-04-05: The state of time in Rust: leaps and bounds.
- 2024-04-05: Features I wish PostgreSQL had as a developer.
- 2024-04-05: The case against self-closing tags in HTML.
- 2024-04-05: Switching to the meow modal editing system from evil emacs.
- 2024-04-04: Conway's Game of Life through time.
- 2024-04-04: The V8 sandbox.
- 2024-04-04: HTTP/2 CONTINUATION flood denial of service vulnerability.
- 2024-04-04: Putting an xz backdoor payload in a valid RSA key.
- 2024-04-03: Cowgol: an experimental, Ada-inspired language for 8 bit micros.
- 2024-04-03: <u>Diff modulo base, for comparing rebased branches.</u>
- 2024-04-03: Multiple cursors for emacs.
- 2024-04-01: The Wi-Fi only works when it's raining?!
- 2024-04-01: When concurrency matters: behaviour-oriented concurrency.
- 2024-04-01: The muscular imagination of Iain M. Banks: a future you might actually want to live in.
- 2024-03-31: A kinematically coupled piezo nanometer-resolution microscope focus stage.
- 2024-03-31: Countering trusting trust.
- 2024-03-31: A systematic analysis of the Juniper Dual EC DRBG backdoor.
- 2024-03-30: <u>Basic things to support your software project.</u>
- 2024-03-30: The "not rocket science" rule of continuous integration (and the story of monotone and bors).

- 2024-03-30: Xz format inadequate for long-term archiving.
- 2024-03-29: A new provisioning tool built with mgmt.
- 2024-03-28: TCP is an underspecified two-node consensus algorithm and what that means for your proxies.
- 2024-03-28: Binary Fuse Filters: fast and smaller than xor filters.
- 2024-03-26: Preventing cross-service UDP loops in QUIC.
- 2024-03-25: Interval parsing grammars for file format parsing.
- 2024-03-23: <u>Unexplanations: SQL is syntactic sugar for relational algebra. (not!)</u>
- 2024-03-21: <u>Progressing towards the redefinition of the second based on an optical frequency standard.</u>
- 2024-03-21: A giant leap for the leap second. Is humankind ready?
- 2024-03-19: The invention of fuzz testing.
- 2024-03-15: <u>JESK56</u>: a diodeless keyboard matrix derived using graph theory.
- 2024-03-13: Mu-Ency: the encyclopedia of the Mandelbrot set.
- 2024-03-12: <u>Identifying software: supply chain security with GNU Guix.</u>
- 2024-03-12: <u>yet-another-cad-viewer</u>: <u>display OCP/CadQuery/Build123d models in a web browser</u>.
- 2024-03-11: Staged generic programming.
- 2024-03-10: Do Be Do Be Do, or, Frank: a strict functional programming language with algebraic effects.
- 2024-03-10: Compiling without continuations.
- 2024-03-10: Kinds are calling conventions.
- 2024-03-09: <u>Call-by-push-value</u>: <u>decomposing call-by-value</u> and <u>call-by-name</u>.
- 2024-03-09: <u>Call-by-push-value</u>. (1999)
- 2024-03-09: I'm betting on call-by-push-value.
- 2024-03-09: SuperC: parsing all of C by taming the preprocessor.
- 2024-03-09: The SuperC parsing framework.
- 2024-03-08: A flexible and economical UTF-8 decoder.
- 2024-03-08: <u>USAF computer security technology planning study: memory safety bugs in 1972.</u>
- 2024-03-07: <u>CAP twelve years later: how the "rules" have changed.</u>
- 2024-03-07: The CAP theorem: the bad, the bad, and the ugly.
- 2024-03-06: Conway's Law: the only unbreakable law.
- 2024-03-05: <u>The "missing" graph datatype already exists</u>. It was invented in the 1970s: relational algebra and <u>datalog</u>.
- 2024-03-05: <u>Behind F1's velvet curtain.</u>
- 2024-03-04: The hunt for the missing graph data type.
- 2024-03-04: Migrating from Emacs lsp-mode to Eglot.
- 2024-03-04: Motion blur all the way down.
- 2024-03-04: Kubernetes failure stories.
- 2024-03-03: The case against geometric algebra.
- 2024-03-03: 50 years ago: the new Cambridge University Press printing house.
- 2024-02-26: <u>Tracing the baseband: cellphone modems.</u>
- 2024-02-26: What is the "God Mode" folder in Windows 10, and how do I enable it?
- 2024-02-25: Beware of -ffast-math and -Ofast.
- 2024-02-24: Really large git repositories.
- 2024-02-22: What modern NVMe storage can do, and how to exploit it: high-performance I/O for high-performance storage engines.
- 2024-02-22: A security kernel based on the lambda calculus.
- 2024-02-18: Ten Python datetime pitfalls, and what libraries are (not) doing about it.
- 2024-02-18: Smoothed asymptotics: from number theory to quantum field theory.
- 2024-02-14: Thomas Rokicki's survey of algorithms for Conway's Game of Life.
- 2024-02-13: Conway's Game of Life is omniperiodic.
- 2024-02-07: jj init: an introduction to the jujutsu version control system.
- 2024-02-06: RCL: A reasonable configuration language.
- 2024-02-03: Pkl: a programming language for configuration.
- 2024-01-29: <u>VA OPT</u> minutiae.
- 2024-01-29: Recursive macros with C++20 VA OPT
- 2024-01-17: Passing nothing is surprisingly difficult: empty slices in C, C++, and Rust.
- 2024-01-15: MULTIPLY: the Francis Hookham collection of hand held electronic calculators.
- 2024-01-15: When random isn't.
- 2024-01-14: <u>QMK and keyboards.</u>
- 2024-01-08: niri: A scrollable-tiling Wayland compositor.

- 2024-01-08: How to stop Linux threads cleanly.
- 2024-01-06: <u>Vectrex reborn: How a chance encounter gave new life to a dead console.</u>
- 2024-01-05: Speed up your code: don't pass structs bigger than 16 bytes on AMD64.
- 2024-01-04: Golang: what we got right, what we got wrong.
- 2024-01-04: An overview of the Starlark programming language.
- 2024-01-03: Spatial Shell: a window layout assistant for i3 and sway.
- 2024-01-03: newm-atha: a touchpad and touchscreen centric wayland compositor.
- 2024-01-03: SIEVE is simpler than LRU.
- 2024-01-02: What I've learned about flow fields for generative art.
- 2024-01-02: A CAP tradeoff in Kubernetes.
- 2023-12-30: Git commit signing is kinda wack.
- 2023-12-27: A national evil: how iodized salt banished the curse of the goitre from Switzerland.
- 2023-12-26: What is a parser mismatch vulnerability?
- 2023-12-26: Lotus 1-2-3 for Linux.
- 2023-12-26: Reptar: an Intel x86 microcode bug.
- 2023-12-21: How to find secure hash collisions.
- 2023-12-16: Why aren't we SIEVE-ing? A new cache eviction algorithm.
- 2023-12-15: Forcy McForceFace: building a keyboard switch force tester out of an old 3D printer.
- 2023-12-13: Unauthenticated Bluetooth keystroke-injection in Android, Linux, macOS, and iOS.
- 2023-12-11: Compiling to categories.
- 2023-12-11: Cutting out continuations.
- 2023-12-10: Lambda to SKI, semantically.
- 2023-12-08: A brief history of keyboard encoding.
- 2023-12-05: A branchless quicksort partition algorithm.
- 2023-12-05: Stop stealing sheep, and find out how typography works.
- 2023-12-04: You don't need JavaScript for that.
- 2023-11-29: Why is Rust slower to read a file than Python?
- 2023-11-29: Destructing trees safely and cheaply.
- 2023-11-28: It's About Time! Accurate clocks in distributed systems.
- 2023-11-27: The largest number representable in 64 bits.
- 2023-11-24: FullControl: unconstrained gcode design for 3D printers.
- 2023-11-23: Wasmtime and Cranelift in 2023.
- 2023-11-23: Commercial flights driven off course by GPS spoofing attacks.
- 2023-11-22: Why does the moon change size when you snipe it in GTA?
- 2023-11-21: How I (kind of) killed Mercurial at Mozilla.
- 2023-11-21: Lessons from METAFONT.
- 2023-11-21: Drawing diagrams for TeX with MetaPost.
- 2023-11-20: A close encounter with false sharing in Rust.
- 2023-11-20: Friends don't let friends make bad graphs.
- 2023-11-20: setenv() is not thread safe and C doesn't want to fix it.
- 2023-11-19: Checking Rust crate semver stability in the presence of doc(hidden) items.
- 2023-11-17: Oops! We Automated Bullshit.
- 2023-11-17: Why you need a "WTF notebook".
- 2023-11-16: <u>Can your static type system handle linear algebra?</u>
- 2023-11-16: C++ std::source location is broken.
- 2023-11-16: We don't do DST at this company.
- 2023-11-16: A subtle Python SIGPIPE bug.
- 2023-11-15: Popcount walks: next, previous, toward and nearest.
- 2023-11-14: Let's be real about dependencies.
- 2023-11-14: Replacing HLS/DASH with Media over QUIC.
- 2023-11-13: <u>37 is the median value for the second prime factor of an integer.</u>
- 2023-11-12: A quick look at register allocation with destination-driven code generation.
- 2023-11-12: Space Invaders street art mosaics.
- 2023-11-09: Interesting JavaScript bugs caught by no-constant-binary-expression in ESLint.
- 2023-11-08: <u>Surprising facts about new CSS selectors.</u>
- 2023-11-07: Reducing Raspberry Pi 5's power consumption by 140x.
- 2023-11-07: Can solar and wind power Britain? An update of David MacKay's numbers.
- 2023-11-07: Jezebel and the question of women's anger.

- 2023-11-05: A proposed fix for C/C++ relaxed atomics in practice.
- 2023-11-03: Avoiding fallback and cold paths.
- 2023-10-23: Y2038: why Steam started picking a random font.
- 2023-10-23: Protomaps: an open source map of the world, deployable as a single static file.
- 2023-10-21: The not-so-glamourous origins of standard railway track gauge.
- 2023-10-21: <u>Analyzing data 180,000x faster with Rust.</u>
- 2023-10-20: <u>How to mitigate the Hetzner/Linode XMPP.ru MitM attack.</u>
- 2023-10-20: TLS MITM attack against a Russian XMPP / Jabber service.
- 2023-10-20: <u>ANSI terminal security in 2023 and finding 10 CVEs.</u>
- 2023-10-20: Mandelbrot deep zoom theory and practice.
- 2023-10-19: Stop your (business rules) engines!
- 2023-10-19: The road to hell is paved with good intentions and C++ modules.
- 2023-10-17: Higher quality random floats.
- 2023-10-15: Faster compile times from simpler dependency graphs in Rust.
- 2023-10-14: Open Props: sub-atomic CSS.
- 2023-10-13: <u>Thumb calendar.</u>
- 2023-10-13: Conical Slicing: A different angle of 3D printing.
- 2023-10-10: <u>Text showdown: gap buffers vs ropes.</u>
- 2023-10-10: ECC RAM on AMD Ryzen 7000 desktop CPUs.
- 2023-10-09: <u>UK postal address oddities.</u>
- 2023-10-05: ROCkN: Providing GPS-quality timing accuracy with portable optical atomic clocks.
- 2023-10-05: Report ITU-R TF.2511-0 (10/2022): Content and structure of time signals to be disseminated by radiocommunication systems and various aspects of current and potential future reference time scales, including their impacts and applications in radiocommunication.
- 2023-10-05: The Terminal Escapes: Engineering unexpected execution from command line interfaces.
- 2023-10-03: <u>The 300% production problem.</u>
- 2023-10-03: x86 amd64 SIMD instruction list: SSE to AVX512.
- 2023-10-03: Arm64 SIMD instruction list: SVE instructions.
- 2023-10-02: <u>32 MiB working set on a 64 GiB machine.</u>
- 2023-10-02: The Marvin attack: Bleichenbacher returns, again.
- 2023-09-29: Who really invented the alphabet?
- 2023-09-29: A plot of all objects in the universe.
- 2023-09-27: ARM LDM and STM are Turing complete.
- 2023-09-25: The invisible problem with editing text on phones.
- 2023-09-24: Introducing geometric algebra to software developers: a computational thinking approach.
- 2023-09-23: Polonius revisited, part 1.
- 2023-09-21: Speeding up the JavaScript ecosystem: polyfills gone rogue.
- 2023-09-19: Making Gaussian Splats smaller.
- 2023-09-19: EPDiy: an ESP32-based driver board for e-Paper / E-ink displays.
- 2023-09-18: Oglaf search index.
- 2023-09-18: Resilient LL parsing tutorial.
- 2023-09-14: Pagefind and URL search parameters.
- 2023-09-13: George Gorton Machine Co engraver typefaces.
- 2023-09-12: Hacking the Book8088 for better accuracy.
- 2023-09-12: What's the smallest variety of CHERI?
- 2023-09-11: HDMI ISA graphics card for vintage PCs by improving the Graphics Gremlin.
- 2023-09-11: Pure Wasm Life 2: optimizing webassembly and canvas with WebGL.
- 2023-09-11: The Carrington Event of 1859 disrupted telegraph lines. A "Miyake Event" would be far worse.
- 2023-09-10: Adding Wi-Fi to the Macintosh Portable.
- 2023-09-09: Black-box concurrent data structures for NUMA architectures.
- 2023-09-09: Good performance is not just big O.
- 2023-09-02: Spoofing certificates with MD5 collisions in 2022.
- 2023-09-01: A deep dive into Single Pair Ethernet.
- 2023-08-31: Ad-hoc polymorphism erodes type-safety.
- 2023-08-31: Co-dfns versus BQN's implementation.
- 2023-08-31: <u>The mystery of the Bloomfield bridge.</u>
- 2023-08-29: <u>Grave flaws in BGP error handling.</u>
- 2023-08-26: I made a Typewriter out of Drums!

- 2023-08-24: FreeBSD on Firecracker.
- 2023-08-23: ROMRAM: using QSPI RAM with RP2040's SSI in read-write mode.
- 2023-08-23: USB HID device class definition.
- 2023-08-23: USB HID usage tables.
- 2023-08-22: Building and customizing a Kyria wireless ergonomic keyboard.
- 2023-08-21: Designing a PCB for the RP2040 Microcontroller | Microcontroller Tutorials
- 2023-08-21: Normal incidents.
- 2023-08-18: PolymurHash: a 64 bit universal hash function.
- 2023-08-13: <u>Symmetry in Chaos.</u>
- 2023-08-13: Virtualizing uxn.
- 2023-08-07: Reverse Z in 3D graphics (and why it's so awesome).
- 2023-08-06: Why does libvirt support only 14 hot-plugged PCIe devices on x86-64?
- 2023-08-04: The physics of readable code.
- 2023-08-02: Why Python is terrible.
- 2023-08-02: Akin's laws of spacecraft design.
- 2023-08-02: MIT engineers create an energy-storing supercapacitor from cement and carbon black.
- 2023-07-31: <u>The Fibonacci matrix.</u>
- 2023-07-31: What John von Neumann really did at Los Alamos.
- 2023-07-30: Workarounds for C11 Generic().
- 2023-07-29: <u>LPython: novel, fast, retargetable Python compiler.</u>
- 2023-07-22: Managing kitchen fruit flies with a Little Shop of Horrors.
- 2023-07-22: <u>Linear-time parser combinators.</u>
- 2023-07-21: HP-1973: an HP calculator emulator.
- 2023-07-19: Local async executors should be the default in Rust.
- 2023-07-17: Appreciating RFC 8927 JSON type definition.
- 2023-07-16: Penrose: create beautiful diagrams by typing notation in plain text.
- 2023-07-11: salty: Ed25519 for ARM microcontrollers.
- 2023-06-26: <u>Ideal dimensions for PCB breakaway tabs.</u>
- 2023-06-24: No vehicles in the park: a game about content moderation.
- 2023-06-22: <u>57 different scripts descended from Egyptian hieroglyphs.</u>
- 2023-06-09: Monongahela: a design for a balanced ternary computer.
- 2023-06-06: Wiio's laws of human communication
- 2023-06-04: BRR: A new line drawing method for the cycle savvy.
- 2023-06-04: Calculating position from raw GPS data.
- 2023-05-31: Hacking my "smart" toothbrush.
- 2023-05-30: Futex-likes on non-Linux systems.
- 2023-05-29: ITU News Magazine: The future of Coordinated Universal Time.
- 2023-05-29: <u>SectorC: A C Compiler in 512 bytes.</u>
- 2023-05-28: Bcrypt at 25: a retrospective on password security.
- 2023-05-23: <u>Unpacking 5 billion varints in only 4 billion CPU cycles.</u>
- 2023-05-22: Wrench: an embedded interpreter.
- 2023-05-19: bilge: a bit fiddling proc macro for Rust.
- 2023-05-17: Logs said it was DNS, it looked like DNS, it had to be DNS, it wasn't DNS.
- 2023-05-14: rxv6: a Rust rewrite of MIT'S xv6 teaching OS.
- 2023-05-13: Building a baseline JIT for Lua automatically.
- 2023-05-12: <u>PS-HTTP</u>: a web server written in PostScript.
- 2023-05-11: Building an anycast secondary DNS service.
- 2023-05-11: Building the Micro Mirror free software CDN.
- 2023-05-10: Semantics and scheduling for machine knitting compilers.
- 2023-05-08: On custom-width integer types.
- 2023-05-07: Mysteries of the Griffin iMate and the Apple Extended Keyboard II.
- 2023-05-07: The tale of -mrtd in GCC and Clang.
- 2023-05-07: Prolly trees: Merklizing the key/value store for fun and profit.
- 2023-05-07: On numbering hegemonies and namespace monopolies.
- 2023-05-05: Science Fiction Movie Lettering
- 2023-05-03: I want to talk about WebGPU.
- 2023-05-02: Flattening ASTs with arena allocation.
- 2023-05-01: A mirror for Rust: compile-time reflection.

- 2023-05-01: First clean water, now clean air.
- 2023-05-01: Perfect hashing for strings with PEXT.
- 2023-04-30: Basics of space flight: orbital mechanics.
- 2023-04-29: gefs: a good enough filesystem for Plan 9.
- 2023-04-26: You could have invented futexes.
- 2023-04-22: The magic of DC-DC voltage conversion.
- 2023-04-22: Escheresque parquet deformations of an aperiodic monotile.
- 2023-04-21: n2: an alternative ninja implementation in Rust.
- 2023-04-16: The time Bell Labs brought the Statue of Liberty under its roof (literally).
- 2023-04-16: Registration desk process engineering at a furry convention.
- 2023-04-13: Mac keyboard layout configuration with hidutil.
- 2023-04-10: Night of the living brain fog, or how I hacked my sleep apnea better thanks to open source software.
- 2023-04-10: <u>Can you trust a compiler to optimize (even vectorize) your code?</u>
- 2023-04-10: nsss: a secure NSS-like implementation for static linking.
- 2023-04-10: <u>Using RP2040 PIO to drive a poorly-designed display.</u>
- 2023-04-09: Modular errors in Rust.
- 2023-04-08: <u>Database "sharding" came from Ultima Online?</u>
- 2023-04-07: The longest straight line in Great Britain (without crossing a public road).
- 2023-04-06: CAN Injection: keyless car theft.
- 2023-03-30: Mozilla XUL layout is gone from Firefox.
- 2023-03-15: <u>Infra-red in-situ (IRIS) inspection of silicon.</u>
- 2023-03-15: No more DSLs: Implement and deploy a distributed system with a single program.
- 2023-03-14: Generating aerial imagery with your iPhone's LiDAR sensor.
- 2023-03-12: How we knew space is a vacuum.
- 2023-03-10: \Device\Afd: what makes async Rust and libuv work on Windows.
- 2023-03-09: The Quest for Netflix on Asahi Linux.
- 2023-03-08: The linguistic registers of Rust.
- 2023-03-08: Historical notes on computer word and byte sizes.
- 2023-03-08: How Discord stores trillions of messages.
- 2023-03-07: How UC Davis medical school became remarkably diverse.
- 2023-03-03: Atkinson hyperlegible font.
- 2023-02-28: HOTscript: higher-order TypeScript, a library for type-level madness.
- 2023-02-05: Where is the most densely populated square kilometre in the UK?
- 2023-02-03: Weird things I learned while writing an x86 emulator.
- 2023-01-31: Adding comments to your static blog with Mastodon.
- 2023-01-30: Coloring for colorblindness.
- 2023-01-29: The 12-bit rainbow palette.
- 2023-01-29: Elektročas HH3: the most accurate pendulum clock on the planet.
- 2023-01-28: C needs a new type qualifier: it's time for null pointer safety.
- 2023-01-27: Netheads vs. bellheads redux: the strange victory of SIP over the telephone network.
- 2023-01-27: Reverse engineering the original Lytro lightfield camera.
- 2023-01-26: What time is it on the Moon?
- 2023-01-25: <u>Do not taunt happy fun branch predictor.</u>
- 2023-01-24: Bounded flexible arrays in C.
- 2023-01-19: <u>Huge pages are a good idea.</u>
- 2023-01-18: XLR V3: Guinness world record holder for fastest quadcopter drone.
- 2023-01-17: BetterDisplay: extra configuration options for macOS.
- 2023-01-08: User-level implementations of RCU (read copy update).
- 2023-01-08: The DIY scientist, the olympian, and the mutated gene.
- 2023-01-08: Production Twitter on one machine?
- 2023-01-05: <u>Reflecting on transducers in Scheme.</u>
- 2023-01-01: How to get Xfinity Stream to work on Linux: a tale of Widevine, Chrome OS, and a patched glibc.
- 2023-01-01: Better binary search in Haskell.
- 2022-12-27: Reasons to ditch LastPass.
- 2022-12-26: <u>Verifying concurrent memory reclamation algorithms with grace.</u>
- 2022-12-26: <u>Hyaline: snapshot-free, transparent, and robust memory reclamation for lock-free data structures.</u>
- 2022-12-26: NBR: neutralization based reclamation.
- 2022-12-21: Deriving a bit-twiddling hack: signed integer overflow.

- 2022-12-20: How to draw ugly lines really fast.
- 2022-12-12: The golden age of PL research.
- 2022-12-08: Goodbye to the C++ implementation of Zig.
- 2022-12-06: Is Moore's Law really dead?
- 2022-12-04: Building a virtual machine inside ChatGPT.
- 2022-11-30: Counting unique web site visitors without using cookies, UIDs, or fingerprinting.
- 2022-11-30: Any Game of Life pattern can be constructed from just 15 gliders.
- 2022-11-30: The huge Game of Life caterpillar spaceship.
- 2022-11-26: The EU eIDAS regulation and QWAC x.509 certificates.
- 2022-11-23: Takahē: An efficient multi-domain ActivityPub server.
- 2022-11-23: <u>Takahē</u>: An efficient multi-domain ActivityPub server.
- 2022-11-23: microblog.pub: A self-hosted, single-user, ActivityPub powered microblog.
- 2022-11-23: <u>If multicast is the answer, what was the question?</u>
- 2022-11-23: <u>Building the fastest Lua interpreter.</u>, automatically!
- 2022-11-22: A jq255 elliptic curve specification, and a retrospective.
- 2022-11-21: Why the OpenSSL punycode vulnerability was not detected by fuzz testing.
- 2022-11-21: <u>Is wine fake?</u>
- 2022-11-20: From culinary dud to stud: how Dutch plant breeders built a brussels sprouts boom.
- 2022-11-20: Literature Clock
- 2022-11-19: <u>GitOpper: GitOps without Kubernetes.</u>
- 2022-11-19: C23 implications for C libraries.
- 2022-11-19: The truffle industry is a big scam. Not just truffle oil, everything.
- 2022-11-18: LEGO rolling ball clock.
- 2022-11-18: Will we have a negative leap second?
- 2022-11-17: A guide to error handling in Rust.
- 2022-11-17: Who controls the Internet? A survey of authoritative DNS server diversity.
- 2022-11-16: Who first thought of the notion of polynomial time? (featuring the Columbus principle)
- 2022-11-16: git-absorb: git commit --fixup, but automatic.
- 2022-11-16: Absorbing commit changes in Mercurial 4.8.
- 2022-11-14: psyche-c: automatic compilation of partially-available sources.
- 2022-11-14: Rust and C++ interoperability.
- 2022-11-14: Canary in the kernel mine: exploiting and defending against same-type object reuse.
- 2022-11-11: Seeing through hardware counters: a journey to threefold performance increase.
- 2022-11-10: BRAVO: biased locking for reader-writer locks.
- 2022-11-10: Scalable reader-writer locks.
- 2022-11-10: Cloning the Linux kernel in under a minute with gitoxide.
- 2022-11-10: Why is Apple Rosetta 2 fast?
- 2022-11-09: What is PostgreSQL commitfest?
- 2022-11-09: The influence of Self.
- 2022-11-08: <u>C isn't a programming language anymore.</u>
- 2022-11-06: The SAFe delusion.
- 2022-11-05: The longest periods of British Summer Time.
- 2022-11-03: Comparing TCP and QUIC.
- 2022-11-03: Sugar substitutes surprise.
- 2022-10-27: Contention on multi-threaded regex matching in Rust.
- 2022-10-26: Where else in London are there pylons?
- 2022-10-26: Time is an illusion, Unix time doubly so...
- 2022-10-24: <u>Buffers on the edge: Python and Rust.</u>
- 2022-10-18: Maidenhead locator system map (with small squares).
- 2022-10-15: <u>Announcing Algol 68 Genie 3.0</u>
- 2022-10-14: Make your QEMU 9p server 10 times faster with this one weird trick.
- 2022-10-14: Modes considered harmful.
- 2022-10-10: The Google plasma globe USB keystroke injection attack.
- 2022-10-08: Slides from a lecture series on algebraic geometry for computer graphics.
- 2022-10-07: Hard mode Rust.
- 2022-10-07: On the DeepMind AlphaTensor new matrix multiplication algorithms.
- 2022-10-06: <u>In-place construction for Rust.</u>
- 2022-10-05: Introduction to low level bit twiddling hacks.

- 2022-10-04: <u>C++ chrono-compatible low-level date algorithms.</u>
- 2022-10-04: <u>Illuminating synchronization edges for ThreadSanitizer.</u>
- 2022-10-02: The first RISC: John Cocke and the IBM 801.
- 2022-10-01: Adversarial collaboration.
- 2022-10-01: 9 puzzles to convince you you don't understand dependence.
- 2022-09-30: Querying PostgreSQL tables from DuckDB.
- 2022-09-30: The thorny problem of keeping the Internet's time.
- 2022-09-29: How to build a personal webpage from scratch.
- 2022-09-28: <u>Linux kernel</u> is constexpr macro.
- 2022-09-28: What is PL research and how is it useful?
- 2022-09-27: The web site performance golden rule.
- 2022-09-26: Zen4's AVX512 teardown.
- 2022-09-26: The curious design of skateboard trucks.
- 2022-09-18: An X11 apologist tries Wayland.
- 2022-09-18: GCC's new fortification level: The gains and costs.
- 2022-09-18: Finding a second bug in glibc's condition variable with TLA+.
- 2022-09-18: Geometric algebra: what is the inverse of a vector?
- 2022-09-17: Qiwi: A quick, emulation-focused launcher for QEMU.
- 2022-09-12: Ladybird: A new cross-platform browser from the SerenityOS project.
- 2022-09-09: Parallel curves of cubic Béziers.
- 2022-09-08: bstr: A byte string library for Rust.
- 2022-09-07: Programming with union, intersection, and negation types.
- 2022-09-06: Someone's been messing with Python's floating point subnormals!
- 2022-09-06: What's the smallest variety of CHERI? A 32 bit RISC-V CHERI.
- 2022-09-05: <u>USB</u>, <u>Thunderbolt</u>, <u>DisplayPort</u>, and docks.
- 2022-09-04: The as-if infinitely ranged (AIR) integer model.
- 2022-09-04: Reviving the coolest film scanner you've never heard of.
- 2022-09-04: I ran the worlds largest DDoS-for-Hire empire and CloudFlare helped.
- 2022-08-31: Commodore 64 Theremin.
- 2022-08-30: Packed structs in Zig make bit/flag sets trivial.
- 2022-08-29: CSS classes considered harmful.
- 2022-08-28: Weird monitor bugs people sent me in the last 5 years.
- 2022-08-26: The Jupyter+git problem is now solved.
- 2022-08-23: VS Code: What's the deal with the telemetry?
- 2022-08-20: <u>Faster zlib/DEFLATE decompression on arm64 and x86.</u>
- 2022-08-15: Retrofitted parallelism considered grossly sub-optimal.
- 2022-08-14: Getting the world record in HATETRIS.
- 2022-08-11: Brimar thermionic products great British valve project.
- 2022-08-08: High precision Maidenhead locators.
- 2022-08-07: Computing Adler32 checksums at 41 GB/s.
- 2022-08-04: The original social network: other people's websites.
- 2022-08-04: C99 doesn't need function bodies: VLAs are Turing complete.
- 2022-08-03: How I do (and don't) prepare a talk for a tech conference.
- 2022-08-02: <u>A new `impl Trait` for Rust.</u>
- 2022-07-31: Linux kernel lock engineering principles.
- 2022-07-29: A simplified implementation of TypeScript's type system written in TypeScript's type system.
- 2022-07-29: Actually Portable Executables with Rust and Cosmopolitan libc.
- 2022-07-29: Stop aggregating away the signal in your data.
- 2022-07-28: execline: a small scripting language.
- 2022-07-27: Twenty years of Valgrind.
- 2022-07-25: It's time to leave the leap second in the past.
- 2022-07-22: Why the NRO is defending AFRINIC.
- 2022-07-22: <u>Formal CHERI: rigorous engineering and design-time proof of full-scale architecture security properties.</u>
- 2022-07-21: The origin of "Cry uncle!"
- 2022-07-19: Gaussian blue noise.
- 2022-07-19: CORE-MATH: open source mathematical functions with correct rounding.
- 2022-07-13: Intel floating point reference sheet.

- 2022-07-07: <u>UDDSketch: a C implementation of DDSketch with a better uniform collapsing strategy.</u>
- 2022-06-20: A closer look at CVSS scores.
- 2022-06-19: Advancing the state of the art for C++ std::unordered map implementations.
- 2022-06-14: STxP70 / STHORM / P2012: ST's secret microcontroller.
- 2022-06-04: Remembering Ned Freed (1959-2022).
- 2022-05-30: How read-intensive is Linux's use of RCU? (And what is its latency?)
- 2022-05-29: Thoughts on FORTH programming.
- 2022-05-29: <u>RFC 3339 vs ISO 8601</u>
- 2022-05-27: <u>Searching 32 million academic papers for obscene acronyms hidden in the titles.</u>
- 2022-05-25: You CAN average percentiles (if you know what you are doing).
- 2022-05-25: Modern programming languages require generics.
- 2022-05-22: Happy 10th birthday to Godbolt's Compiler Explorer!
- 2022-05-20: <u>Logging C function calls with cosmopolitan libc.</u>
- 2022-05-17: <u>DevOps inspiration from Toyota Production System and Lean considered harmful.</u>
- 2022-05-12: Fuzzing an eBPF implementation in Rust.
- 2022-05-10: Hardening snmalloc.
- 2022-05-09: Agile and the long crisis of software.
- 2022-05-07: Xilem: an architecture for UI in Rust.
- 2022-05-07: Identity crisis: sequence vs UUID as primary key.
- 2022-05-07: <u>Shaving is too expensive.</u>
- 2022-05-06: A mystery of unnecessary Rust crate recompilation.
- 2022-04-30: <u>Implementing a safe garbage collector in Rust.</u>
- 2022-04-29: Pražský Orloj: Prague astronomical clock simulator.
- 2022-04-27: <u>SELinux is unmanageable</u>; just turn it off if it gets in your way.
- 2022-04-26: The problem with mechanical keyboard switch reviews.
- 2022-04-25: Why LSP? On two-sided markets and N*M.
- 2022-04-25: Low-latency high-throughput garbage collection.
- 2022-04-21: <u>Coherence and crate-level where-clauses in Rust.</u>
- 2022-04-20: Changing llvm libc++ std::sort() at Google and beyond.
- 2022-04-18: Locales, encodings, Unicode, and C++.
- 2022-04-18: <u>It's always DNS . . . except when it's not: A deep dive through gRPC, Kubernetes, and AWS networking.</u>
- 2022-04-18: Exponentially better rotations.
- 2022-04-16: Why I avoid async/await in JavaScript.
- 2022-04-11: Pointers Are Complicated III: pointer-integer casts exposed. (strict provenance in Rust)
- 2022-04-10: Rust's unsafe pointer types need an overhaul.
- 2022-04-10: The struggle of using native emoji on the web.
- 2022-04-10: Abstraction: not what you think it is.
- 2022-04-10: The design of the RELAX NG XML schema language.
- 2022-04-10: Beyond bufferbloat: End-to-end congestion control cannot avoid latency spikes.
- 2022-04-10: So you want to study mathematics...
- 2022-04-10: Authenticated bootstrapping of DNSSEC delegations.
- 2022-04-04: Horrible edge cases to consider when cataloguing music.
- 2022-04-01: Laura Kuenssberg's time as BBC Political Editor has been a catastrophic, systemic failure.
- 2022-04-01: DDC OLED: how to drive a tiny display from an HDMI port.
- 2022-04-01: Three big myths about Covid Omicron.
- 2022-03-31: Moderating content supports the principles of free speech.
- 2022-03-30: The British Empire was much worse than you realize.
- 2022-03-30: <u>GPT-3 can run code (ish).</u>
- 2022-03-28: 3D printed Portal turret build guide.
- 2022-03-28: "You build it, you run it" playbook.
- 2022-03-27: n2: revisiting the ninja build tool.
- 2022-03-24: DNSSEC algorithms for TLDs (and everyone else).
- 2022-03-21: Lanai (the Myrinet CPU architecture) in LLVM.
- 2022-03-19: **BOOTP** and ARP history.
- 2022-03-18: Random number generator enhancements for Linux 5.17 and 5.18..
- 2022-03-17: <u>C isn't a programming language anymore.</u>
- 2022-03-16: <u>Daylight saving time gripe assistant tool.</u>

- 2022-03-14: RP2040 Doom.
- 2022-03-12: Marginalia web search engine.
- 2022-03-12: The life of an optimization barrier in Rust and Wasm.
- 2022-03-11: Implementing network time security (NTP NTS) at the hardware level.
- 2022-03-10: A Redis Lua sandbox escape on Debian and its derivatives.
- 2022-03-04: Dennis Meadows on the 50th anniversary of the publication of The Limits to Growth.
- 2022-03-02: <u>Using DNAME for reverse DNS of inter-RIR transferred IP address ranges.</u>
- 2022-02-26: Curious lack of sprintf scaling.
- 2022-02-23: <u>A cursed RDMA bug.</u>
- 2022-02-22: A collection of GPS disciplined oscillator designs.
- 2022-02-19: Jujutsu: A Git-compatible DVCS that is both simple and powerful.
- 2022-02-19: Destroy all values: designing deinitialization in programming languages.
- 2022-02-19: Mergers ruin everything.
- 2022-02-19: Building an intelligent Emacs.
- 2022-02-19: How a Saudi woman's iPhone revealed NSO Group's hacking.
- 2022-02-19: Bacon: background Rust code checker.
- 2022-02-17: PX-1000Cr: Deliberate weakening of a cryptographic algorithm by the NSA.
- 2022-02-15: <u>Upgrading an iPod in 2022.</u>
- 2022-02-15: A decade of major cache incidents at Twitter.
- 2022-02-15: Journeying into XDP: Fully-fledged DNS service augmentation.
- 2022-02-06: lon lat or lat lon?
- 2022-02-03: Yes, I can query a SQLite database in CSS.
- 2022-02-03: Optimizing GoAWK with a bytecode compiler and virtual machine.
- 2022-02-01: Async embedded Rust vs FreeRTOS + C showdown!
- 2022-01-30: <u>Uninitialized memory: unsafe Rust is too hard.</u>
- 2022-01-29: <u>An update on rust/coreutils.</u>
- 2022-01-28: Lights at sea: a map of lighthouses.
- 2022-01-28: <u>Summary of the USA federal government's zero-trust memo.</u>
- 2022-01-27: Magic-trace: Diagnosing tricky performance issues easily with Intel Processor Trace.
- 2022-01-27: Non-lazy futures considered harmful in Rust.
- 2022-01-27: <u>Stop brainstorming.</u>
- 2022-01-26: Machine readable specifications at scale.
- 2022-01-25: World of constellations: a multicultural star map.
- 2022-01-25: The truth about inflation.
- 2022-01-18: <u>Dun, Dun Duuun! Where did pop culture's most dramatic sound come from?</u>
- 2022-01-18: GPS.
- 2022-01-18: arXiv.org reaches a milestone and a reckoning.
- 2022-01-17: Why Macron's use of the French swear word 'emmerder' is so hard to translate.
- 2022-01-16: Covid-19 will never become endemic.
- 2022-01-14: Are you sure you want to use mmap() in your database management system?
- 2022-01-14: Nominative determinism in hospital medicine.
- 2022-01-13: Hate leap seconds? Imagine a negative one!
- 2022-01-13: Ghost in the ethernet optic.
- 2022-01-13: PCIe 6 overview.
- 2022-01-13: Async Rust in ScyllaDB: performance, pitfalls, profiling.
- 2022-01-09: Matthew Somerville's Inky dashboard.
- 2022-01-09: Will Britain survive?
- 2022-01-09: How to check you're in the initial pid namespace?
- 2022-01-03: Hacking a VW Golf power steering ECU.
- 2022-01-03: On recurrences converging to the wrong limit in finite precision, and some new examples.
- 2022-01-01: A brief history of Dell Unix.
- 2022-01-01: Susie Dent's guide to swearing.
- 2021-12-31: Some sanity for C and C++ development on Windows.
- 2021-12-28: Why Pascal is Not My Favorite Programming Language. (troff source)
- 2021-12-28: <u>Software Tools in C++</u>.
- 2021-12-27: What if the Flu isn't "just the Flu?"
- 2021-12-26: State of Valhalla, part 1: value types for the JVM.
- 2021-12-23: fg: jg for binary formats.

- 2021-12-23: <u>Spotting fake face masks.</u> (<u>FFP2/N95/KN95</u>)
- 2021-12-18: <u>age-plugin-yubikey: YubiKey plugin for age encryption.</u>
- 2021-12-18: untwister: a PRNG seed recovery tool.
- 2021-12-18: PostgreSQL is a great pub/sub and job server.
- 2021-12-17: A brutally effective hash function in Rust.
- 2021-12-17: <u>How not to learn Rust.</u>
- 2021-12-16: <u>gRPC best practices.</u>
- 2021-12-16: Cranelift progress report: a look back at 2021.
- 2021-12-15: The Muppet Christmas Carol is the best adaptation of A Christmas Carol.
- 2021-12-15: IPv4 address markets.
- 2021-12-05: Tips on adding JSON output to your command line utility.
- 2021-12-05: Async cancellation in Rust.
- 2021-12-05: Securing updates for GNU Guix.
- 2021-12-05: Rclone syncs your files to cloud storage.
- 2021-12-05: restic: backups done right!
- 2021-12-03: Don't make my mistakes: common infrastructure errors i've made.
- 2021-12-02: Why movie dialogue has become more difficult to understand.
- 2021-12-02: <u>Ideal monitor rotation for programmers</u>.
- 2021-12-02: <u>Tvix: we are rewriting Nix.</u>
- 2021-12-01: <u>libtree</u>: <u>ldd as a tree saying why a library is found or not.</u>
- 2021-12-01: This shouldn't have happened: A vulnerability postmortem.
- 2021-12-01: An illustrated guide to elliptic curve cryptography validation.
- 2021-11-29: <u>Improving over-constrained Rust APIs.</u>
- 2021-11-29: <u>Stack safety for free?</u>
- 2021-11-29: What SRE is not.
- 2021-11-28: Amethyst: an automatic tiling window manager for macOS.
- 2021-11-28: kmonad: an advanced keyboard manager.
- 2021-11-26: The return of JavaScript for Mac OS automation, instead of AppleScript.
- 2021-11-24: <u>IDEs and macros and Rust.</u>
- 2021-11-21: <u>DwarFS: A fast high compression read-only file system.</u>
- 2021-11-21: elfshaker stores binary objects efficiently; designed for manyclangs.
- 2021-11-21: Dell XPS13 RAM upgrade.
- 2021-11-18: <u>Support for IPv6 link local addresses in browsers.</u>
- 2021-11-18: Getting started with Rust on a Raspberry Pi Pico.
- 2021-11-18: <u>Understanding HKDF.</u>
- 2021-11-18: Vulnerabilities show why STARTTLS should be avoided if possible.
- 2021-11-18: Mononym: type-level named values in Rust.
- 2021-11-14: <u>Debugging memory corruption on Windows: who the hell writes "2" into my stack?!</u>
- 2021-11-14: Tests aren't enough: adding type hints to Python urllib3.
- 2021-11-13: The weirdest QNX bug I've ever encountered.
- 2021-11-13: <u>It's now possible to sign arbitrary data with your SSH keys.</u>
- 2021-11-12: Overview of the Rust compiler.
- 2021-11-11: <u>Speed of Rust vs C.</u>
- 2021-11-04: An oral history of Bank Python.
- 2021-11-01: C++ coroutines do not spark joy.
- 2021-10-26: Comparing open source BGP stacks.
- 2021-10-26: austral: a systems language with linear types.
- 2021-10-26: bitbottle: an archive file format (in Rust).
- 2021-10-25: <u>blamer.el</u>: A git blame plugin for emacs inspired by VS Code's GitLens plugin.
- 2021-10-24: Measuring C++ std::unordered map badness.
- 2021-10-23: Raspberry Pi 3 fastboot in less than 2 seconds.
- 2021-10-23: Can we trust Microsoft with Open Source?
- 2021-10-23: A cool Rust optimization story.
- 2021-10-23: <u>Coding for non-programmers: we need better web GUI automation tools.</u>
- 2021-10-21: <u>Stupid tricks with io uring: a server that does zero syscalls per request.</u>
- 2021-10-21: <u>Context-preserving error handling in Rust.</u>
- 2021-10-21: <u>Function pipelines: Building functional programming into PostgreSQL using custom operators.</u>
- 2021-10-21: <u>Did the Big Bang begin from a singularity? Not anymore.</u>

- 2021-10-21: Making slow Rust code fast.
- 2021-10-21: Social media doesn't turn people into assholes, and everyone's wrong about echo chambers.
- 2021-10-20: I couldn't debug the code because of my name: unicode pathname bugs in JetBrains IDEs.
- 2021-10-18: Serialization-based undo with zstd compression.
- 2021-10-18: What every software engineer should know about search.
- 2021-10-18: The undocumented Microsoft "Rich" PECOFF header.
- 2021-10-16: Pink Floyd's Young Lust telephone signalling explained.
- 2021-10-13: <u>Kathleen Stock, TERF.</u>
- 2021-10-13: <u>A plug-compatible 100 MHz FPGA 6502.</u>
- 2021-10-13: The problem with function namespaces and Lisp macros.
- 2021-10-11: MMP at 25: how proportional representation changed New Zealand forever.
- 2021-10-11: Better operator precedence.
- 2021-10-11: Benchmarking oksh (OpenBSD Korn shell) with lots of C compilers.
- 2021-10-09: Finding bugs in database systems via query partitioning.
- 2021-10-06: <u>How ISO C became unusable for operating system development.</u>
- 2021-10-04: <u>CBMC: C bounded model checker.</u>
- 2021-10-03: OpenHaystack: tracking your Bluetooth devices with Apple's "Find My" network
- 2021-10-03: <u>R, OpenMP, MKL, disaster.</u>
- 2021-10-02: Clarifying the structure and nature of left-wing authoritarianism.
- 2021-09-30: <u>squawk</u>: a linter for PostgreSQL, focused on migrations.
- 2021-09-30: JSON in PostgreSQL: how to use it right.
- 2021-09-30: Lessons learned building an Oracle to PostgreSQL migrator.
- 2021-09-30: Second software release for CHERI-RISC-V and Arm Morello capability architectures.
- 2021-09-30: Rust for the polyglot programmer.
- 2021-09-30: The Biggest Churches in the World: Anglo-Norman eleventh-century cathedrals.
- 2021-09-27: Dealing with the Roman Calendar.
- 2021-09-26: <u>A history of library hand.</u>
- 2021-09-21: HIBA: Host Identity Based Authorization for SSH.
- 2021-09-21: <u>Index, a history of the</u>.
- 2021-09-21: Google Docs in a clean-room browser.
- 2021-09-21: There was no formal methods winter.
- 2021-09-21: <u>A giant space rock demolished an ancient Middle Eastern city and everyone in it, possibly inspiring the Biblical story of Sodom.</u>
- 2021-09-19: How does Ouroboros relate to RINA, the Recursive InterNetwork Architecture?
- 2021-09-19: <u>Can you see the Republic of Ireland from England?</u>
- 2021-09-18: The Negro Subversive on Critical Race Theory.
- 2021-09-17: Hacking CloudKit: How I accidentally deleted your Apple Shortcuts.
- 2021-09-17: TRIPOS historical sources.
- 2021-09-16: Exploring 120 years of timezones.
- 2021-09-16: Go to sleep little iPhone: lost broadcasts on WiFi.
- 2021-09-15: DART: the Disability Attitude Re-adjustment Tool.
- 2021-09-15: Freedom of Information as a tool for making cycle routes more accessible.
- 2021-09-15: Taking legal action on inaccessible cycleway barriers.
- 2021-09-15: <u>Single-pass online statistics algorithms.</u>
- 2021-09-14: An existential crisis resolved: type inference for first-class existential types.
- 2021-09-14: logos: create ridiculously fast lexers in Rust.
- 2021-09-14: HTTP Cache-Control recommendations.
- 2021-09-14: Type-checked keypaths in Rust.
- 2021-09-14: A tale of making a company-wide psqlrc to use with pgbouncer.
- 2021-09-14: OLAP != OLAP Cube.
- 2021-09-14: Ora2PG now supports oracle fdw to increase data migration speed.
- 2021-09-14: Emulating AMD approximate arithmetic instructions on Intel.
- 2021-09-12: Okhsv and Okhsl: two new color spaces for color picking.
- 2021-09-09: Server traffic shaping on Linux with CAKE.
- 2021-09-09: Kill It With Fire: dealing with legacy systems. (book review)
- 2021-09-06: <u>Computational hierarchy of elementary cellular automata.</u>
- 2021-09-05: Why are a billion years of rock missing from the geological record?
- 2021-09-05: Notes from a 1984 trip to Xerox PARC.

- 2021-09-04: Linux tmpfs inode corruption: introducing inode64.
- 2021-09-04: A nasty bit of implicit timezone behavior in Golang.
- 2021-09-03: The scandalous history of the last rotor cipher machine.
- 2021-09-02: Netflix audio description style guide.
- 2021-09-01: Moiré no more: using FFT to remove halftone patterns.
- 2021-09-01: Moiré no more: using FFT to remove halftone patterns.
- 2021-09-01: In defense of blub studies.
- 2021-08-31: APOLLO 68080: high performance 68k processor on FPGA.
- 2021-08-31: The demise of the once mighty Cambridge and District Co-operative Society.
- 2021-08-30: Most information about disinformation is misinformation.
- 2021-08-29: Why is the S combinator an S?
- 2021-08-29: Four months with Ada.
- 2021-08-28: jsc: JavaScript on the macOS command line.
- 2021-08-26: <u>Inko: Friendship ended with the garbage collector.</u>
- 2021-08-26: Flexible microprocessor could enable an 'internet of everything'.
- 2021-08-26: PragmatIC Semiconductor made a flexible 6502 in two weeks.
- 2021-08-25: Hiding images in plain sight: an acrylic magic window that can project a picture.
- 2021-08-24: Life before Unicode in Russia.
- 2021-08-23: One does not simply calculate the absolute value.
- 2021-08-21: <u>Index 1,600,000,000 keys with finite state automata and Rust.</u>
- 2021-08-21: Tesla Dojo: a custom chip for very high capacity AI training.
- 2021-08-20: Encoding of immediate values on AArch64.
- 2021-08-20: Monks Wood Wilderness: 60 years ago, scientists let a farm field rewild; here's what happened.
- 2021-08-20: Mutable statics in Rust have scary superpowers! Do not use them!
- 2021-08-20: Patterns in confusing explanations.
- 2021-08-19: The quest to recreate a lost and 'terrifying' medieval mead.
- 2021-08-18: Exploring Clang/LLVM optimization on a programming horror.
- 2021-08-17: The Wendelstein 7-X fusion stellarator proves its efficiency.
- 2021-08-17: Behind the scenes at South Kensington tube station's escalator replacement project.
- 2021-08-17: <u>Speeding up `atan2f` by 50x.</u>
- 2021-08-16: Namespaced De Bruijn indices.
- 2021-08-15: Classical data structures that can outperform learned indexes.
- 2021-08-14: <u>Emacs development charts</u>, 10×10%.
- 2021-08-14: Preprint déjà vu: a FAQ about the arXiv.
- 2021-08-14: A probabilistic solution to the three-body problem.
- 2021-08-11: Why is tech illustration stuck on repeat?
- 2021-08-11: <u>A little bit about PRNG stuff in Rust.</u>
- 2021-08-09: How BCPL evolved from CPL.
- 2021-08-09: The rise of Meson.
- 2021-08-08: Edward Luper's 36 Views of the BT Tower.
- 2021-08-07: A USB adapter for a Depraz mouse.
- 2021-08-07: The tao of Unicode sparklines.
- 2021-08-06: <u>HTTP/2 desync attacks.</u>
- 2021-08-03: <u>Unix for TOPS-20 users. (1987)</u>
- 2021-08-03: Choosing properties for property-based testing.
- 2021-08-03: Making reasonable use of computer resources.
- 2021-07-31: strcpy: a niche function you don't need.
- 2021-07-30: <u>B-tree path hints.</u>
- 2021-07-30: One tenth of a second.
- 2021-07-29: Monkey Island PC speaker music player.
- 2021-07-29: One lost methyl group = huge amounts of food production.
- 2021-07-28: <u>Cryptanalysis of Meow Hash.</u>
- 2021-07-28: The fall of the SKI civilization.
- 2021-07-27: Why neoliberalism needs neofascists.
- 2021-07-21: Keyboard rollover and lockout.
- 2021-07-18: <u>Inserting one billion rows into SQLite in under a minute.</u>
- 2021-07-16: The development of Chez Scheme.
- 2021-07-13: <u>CMake: the dark arts.</u>

- 2021-07-13: <u>Updating the Golang memory model.</u>
- 2021-07-11: Ribbon filter: Practically smaller than Bloom and Xor.
- 2021-07-11: It's not always iCache.
- 2021-07-11: Inline in Rust.
- 2021-07-10: <u>Against SQL.</u>
- 2021-07-09: How Intel financialized and lost leadership in semiconductor fabrication.
- 2021-07-09: A survey of approaches to securing BGP and inter-domain routing.
- 2021-07-09: mull: Practical mutation testing for C and C++.
- 2021-07-08: Compiling Rust is NP-hard: the pattern match exhaustiveness checker as a SAT solver.
- 2021-07-08: Dumping and extracting the SpaceX Starlink user terminal firmware.
- 2021-07-07: Programming language memory models.
- 2021-07-07: Extensions are moving away from the macOS kernel.
- 2021-07-07: Hacker News folk wisdom on visual programming.
- 2021-07-07: rustviz: interactive visualization of ownership and borrowing.
- 2021-07-06: How Black handles comments when Python's grammar ignores them.
- 2021-07-05: GitHub Copilot is not infringing your copyright.
- 2021-07-05: <u>TCP Fast Open? Not so fast!</u>
- 2021-07-04: Electron tube new automatic computer: a homemade valve computer.
- 2021-07-04: The dawn of formalized mathematics.
- 2021-07-04: Ode to a world-saving idea: attribution error and cognitive empathy.
- 2021-07-03: wasm2ps: compile a small subset of WebAssembly to PostScript. (using wasm2wat)
- 2021-07-03: <u>Phase-in codes.</u>
- 2021-07-01: Hardware memory models.
- 2021-06-30: Where there's a grille: the hidden portals to London's underworld.
- 2021-06-29: British flag protocol: flying the union jack.
- 2021-06-29: Reinventing the automobile: the first skateboard platform for electric vehicles.
- 2021-06-29: <u>Temporal: getting started with JavaScript's new date time API.</u>
- 2021-06-28: How to evaluate Emacs Lisp in regex search and replace.
- 2021-06-27: <u>systemd</u>, <u>10 years later</u>: a historical and technical retrospective.
- 2021-06-27: Why did we ever think the first programming language didn't matter?
- 2021-06-26: <u>pydantic</u>: <u>data validation and settings management using Python type annotations.</u>
- 2021-06-22: Async Rust: futures, tasks, wakers; oh my!
- 2021-06-22: What is CapTP, and what does it enable?
- 2021-06-21: Accidentally exponential behavior in Apache Spark.
- 2021-06-21: git undo: We can do better.
- 2021-06-21: Expanding TeX's \newif.
- 2021-06-20: What do you call a Rust pointer we stole the high bits off? An ointer.
- 2021-06-18: Eliminating data races in Firefox with Thread Sanitizer.
- 2021-06-17: Speeding up message parsing by 3x to 10x by switching from serde to nom in Rust.
- 2021-06-16: Introducing cap-std, a capability-based version of the Rust standard library.
- 2021-06-15: When graphs are a matter of life and death.
- 2021-06-15: Celebrating 30 years of Europe's first root name server.
- 2021-06-14: Let's port Doom to an IKEA TRÅDFRI lamp!
- 2021-06-13: A few thoughts on Fuchsia security.
- 2021-06-13: How to handle secrets on the command line.
- 2021-06-12: <u>Do you really need Redis? PostgreSQL does queuing, locking, and pub/sub.</u>
- 2021-06-11: Can memcpy be implemented in LLVM IR?
- 2021-06-11: cap: an allocator that can track and limit memory usage in Rust.
- 2021-06-11: schemars: generate JSON schema from Rust code.
- 2021-06-11: Time and date syntax used by systemd.
- 2021-06-11: Don't feed the thought leaders.
- 2021-06-11: Behavior inheritance in Rust.
- 2021-06-08: Kerckhoffs's law for security engineers.
- 2021-06-07: Using a SmartCard HSM for DNSSEC with BIND, Knot DNS, and LDNS/NSD.
- 2021-06-06: Ordnance Survey height benchmark locations.
- 2021-06-05: <u>From Julia to Rust.</u>
- 2021-06-05: Integer log10: make your lookup table do more.
- 2021-06-04: Anatomy of a Linux DNS lookup.

- 2021-06-04: Firefox Proton UI userChrome.css fixes.
- 2021-06-04: Firefox 89 tab appearance fixes with userchrome.css.
- 2021-06-04: <u>Handling global associative arrays in PostgreSQL.</u>
- 2021-06-03: A new Protocol Buffers generator for Golang.
- 2021-06-03: Design issues in LLVM IR.
- 2021-06-03: How malloc broke Serenity's JPGLoader, or: how to win the lottery.
- 2021-06-02: Leading through writing in software engineering.
- 2021-06-02: Practical Reed-Solomon for programmers.
- 2021-06-01: <u>How to test your code.</u>
- 2021-05-31: PostGIS at 20: the beginning.
- 2021-05-29: Joseph Weizenbaum's original ELIZA.
- 2021-05-28: A year in the Nakagin tower's metabolist future of 1972.
- 2021-05-27: An introduction to Jorvik, Ada's new tasking profile.
- 2021-05-27: Of donkeys, mules, and horses: data structures for network prefixes in Rust.
- 2021-05-27: Reciprocals in Rust: baseline implementations should be predictable.
- 2021-05-25: Jerikan: a configuration management system for network teams.
- 2021-05-25: RefinedC: automating the foundational verification of C code with refined ownership types.
- 2021-05-24: <u>Counterexamples in type systems.</u>
- 2021-05-23: rustc codegen gcc can now run libcore's tests and pass most of them!
- 2021-05-23: GhostCell: separating permissions from data in Rust.
- 2021-05-20: <u>Language compilation speed comparison.</u>
- 2021-05-14: Benchmarking division and libdivide on Apple M1 and Intel AVX512.
- 2021-05-12: Getting random rows very much faster with tablesample in PostgreSQL.
- 2021-05-10: Better performance for dynamic linking with -fno-semantic-interposition.
- 2021-05-08: <u>The byte order fiasco.</u>
- 2021-05-06: EverParse: Hardening critical attack surfaces with formally proven message parsers.
- 2021-05-05: Linear Clock: Solar.
- 2021-05-04: Fully automated bootstrapping from source.
- 2021-05-03: Dissecting the Apple M1 GPU, part IV.
- 2021-05-02: Hosting SQLite databases on Github Pages (or any static file hoster).
- 2021-05-02: The honest troubleshooting code of conduct.
- 2021-05-02: Handling time when programming.
- 2021-05-02: Query engines: push vs. pull.
- 2021-04-29: An interview with Linus Torvalds on Linux and Git.
- 2021-04-28: <u>Internal consistency in streaming systems.</u>
- 2021-04-26: Plan 9 history in git, from 1992-09-21 to 2015-01-10.
- 2021-04-26: Let's build a new service manager for Alpine Linux!
- 2021-04-25: Parsing protobuf at 2+GB/s: how I learned to love tail calls in C.
- 2021-04-24: The mystery of AS8003 and legacy US DoD IPv4 address space.
- 2021-04-22: Earth Restored: newly retouched photographs from the Apollo lunar missions.
- 2021-04-21: Exploiting vulnerabilities in Cellebrite UFED and Physical Analyzer from Signal's perspective.
- 2021-04-19: Dissecting the Apple M1 GPU, part III.
- 2021-04-17: <u>Lars Wirzenius would like to review your README.</u>

Tony Finch <dot@dotat.at>