

The Atlas

A Plain English Guide to the Map of All the Maps

Featuring: the three kinds of wall, why the Halting Problem is different from the Riemann Hypothesis, and what haemoglobin has to do with any of this

SFVFS™ · Segment 8 of 12 · Companion to the Academic Paper · M. Craig · March 2026 · itvoids.com

The Map of Maps

By the time you reach Segment 8 of 12, you have already seen the framework applied to some very specific things: the Riemann Hypothesis, fluid turbulence, Saturn's hexagon, ocean circulation, fusion reactors. Each one got its own document.

The Atlas steps back and shows you that all of those specific documents are actually examples of the same thing. It is the map of how the maps work. It asks: is there a single formal language that covers all of these cases?

The answer the framework gives is: yes. They all sit at a void. The void has a type. And the type determines whether any approach to crossing it is even in principle possible.

Three Kinds of Stuck — Revisited

The Cartographer (Segment 3) introduced three kinds of wall. The Atlas formalises them with a number — the Ω -function — and applies that number to everything.

| Ω | Name | Plain English |
|----------|--------|---|
| 0 | Wall | The barrier is provably, absolutely impenetrable. Not just difficult — proved impossible. Stopping thinking about this one is the mathematically correct response. |
| 1 | Mirror | The problem is perfectly symmetric. Both sides look identical. No asymmetry to exploit. Not proved impossible — but no way in has been found and the symmetry is the reason why. |
| 2 | Door | There is a mechanism. It's partial, directional, one-way — like a ratchet or a valve. The door exists. It hasn't been opened. But the search for the key is structurally justified. |

| Ω | Name | Plain English |
|-------------|----------|--|
| \emptyset | Resolved | Solved. No wall, no mirror, no door. The problem is done. Outside the classification entirely. |

The Seven Hardest Problems in Mathematics

The Clay Mathematics Institute has offered one million dollars for each of seven unsolved problems. One has been solved. Here is what the framework says about all seven.

| Problem | Ω | Plain English position |
|------------------------------|-------------|--|
| Riemann Hypothesis | 1 | Mirror. The primes and the zeros are perfect equals. The Pinch: no interior. |
| Navier-Stokes | 2 | Door. Viscosity is a one-way smoothing mechanism. Wall moved March 2026. Door located. Not yet opened. |
| P vs NP | 1 | Mirror (probably). Checking an answer is fast; finding one is slow. No structural asymmetry found. |
| Yang-Mills Mass Gap | 2 | Door. Asymptotic freedom provides a partial mechanism. Low-energy mass gap open. |
| Hodge Conjecture | 2 | Door. Constructive direction exists for simpler cases. |
| Birch and Swinnerton-Dyer | 2 | Door. Modularity (Wiles 1995) provided a partial mechanism. Rank-L-function gap remains. |
| Poincaré Conjecture — SOLVED | \emptyset | Resolved. Perelman solved it in 2003. This is what $\Omega = 2 \rightarrow \emptyset$ looks like. |

Eight Things That Are Already Solved

One of the stranger sections of the academic document lists eight solved problems from chemistry, biology, and physics, and shows that the same geometric signature appears at the threshold of each one. The signature is $(l, \Lambda) = (1, 1)$: at the critical threshold, two different measures of the system's state both lock to exactly 1.

| System | What locks to 1 at the threshold |
|-----------------------|--|
| BCS Superconductivity | The ratio $2\Delta(0)/kT_c = 3.52$ is universal across all conventional superconductors. When normalised, $\Delta/\Delta_0 = 1$ at the critical temperature. |

| System | What locks to 1 at the threshold |
|------------------|--|
| Haemoglobin | At half-saturation the oxygen binding is exactly symmetric — $Y = 0.5$. The T/R conformational equilibrium = 1. |
| Laser threshold | At the lasing onset, gain exactly equals loss: gain/loss ratio = 1. |
| Action potential | The sodium-to-potassium conductance ratio $g_{Na}/g_{K} = 1$ at the firing threshold. |

What Changes When You Have This Map

For $\Omega = 0$ (Wall): Stop. The barrier is proved impenetrable. Effort should go into understanding what can be done within the boundary.

For $\Omega = 1$ (Mirror): The search for an asymmetric mechanism is the right direction. If you find one, Ω reclassifies to 2. The Riemann Hypothesis has had 167 years of people looking. None found.

For $\Omega = 2$ (Door): The mechanism is located. The work is to push it all the way through. For Navier-Stokes, the Calderón-Zygmund circularity is the specific thing that needs to be broken. The Corner Theorem provided new infrastructure.

"The needle's eye is tight. The thread travels far. The map shows where. The proof is external."

Art Until Proven Otherwise.