

Essential Calculus
With Applications

Once my girlfriend came over to my dorm to visit from back home. She was older. “Help me,” I asked, and handed her the book, “you've studied it before.”

She read aloud: “First you'll be exposed to ideas you find strange and abstract, filled with mostly unfamiliar facts, facts that it could be difficult to suppose

have much to do with our life on earth. And, just like learning music, practice is required to master the calculus, a mathematics of change. It's worth

taking the time to develop a language in which relationships can be explained.”

Singularity

Karl Schwarzschild was a good German Jew. When,
to calculate the trajectories for artillery shells,
Kaiser Wilhelm called for mathematicians,
Karl, past forty, more hair in his mustache than
on his head, left wife, post, Potsdam's bells;

from his scope, the commandant barked numbers
while Karl jotted furiously then called angles out
to the men who cranked up the hulking guns. Thunder
over the Somme and the Marne the guns made, shots
whistling in ideal parabolas of a Euclidean geometer.

Sent in 1915 to trenches at the Russian front, Karl read,
in between bombardments, Einstein's General Relativity,
and first saw that its ten equations for space said
that, in this universe, the relentless force of gravity
is a power from which even light can't get free.

Then his body formed antibodies against desmoglein
the glue that binds together our skin. In decline
as his blistered epidermis sloughed into sores, infected,
lost to fever and pain, he returned to Potsdam, died.
Schwarzschild's equations revealed a horizon line—

a black hole's outer skin. To later mathematicians
was left to find that infinite singularity within.

Continuous Integration

Memo

To: All Developers

From: Operations

Subject: Best Practices/Continuous Integration

It is incumbent on developers in a team
to try to merge one's code hourly,
(that's what this process means)

or at least one should strive hard to be
committing to the baseline
once a working day,

and build your program every time,
in a self-testing way,
so to avoid integration hell,

and on one's feature branch
a programmer will do well
first to write one's tests,

and then to let them fail.
So our lord savior blessed
each driven nail.

Last Words

Last words
in cockpits
before a crash
are comforting
to read, somehow.

One pilot: "Sorry."
No profanity,
transcript politely
excised "O, God!"
or name gasped.

Just regret
that nothing in him
is enough
to push the plane
from its stall.

In another, says
pilot to his co-
"Cleared the Cessna?"
"Sure hope so,"
wink unwritten.

Then sounds marked
"impact," "crash."
You and I, our
last words
un-transcribed,

only evidences
are final, smiling
snapshots. Your
eyes say nothing,
or that nothing

is left to fear.

Night Journey

Cold hangs around my neck as I walk
through pale phantoms of my own breath
involuntarily shivering in lamplit dark

on Baltimore and 40th and heading west
not from chill but from the naked stumps
for legs of the old woman in a wheelchair

I passed, pushed forward by a Russian kid
in red fleece buttoned up against the air.
"Alif, lam, mim," a paper scrap begins

"the truth of this book is crystal clear"
at rest at the foot of a tulip tree near to
the mosque, where Rob had gas siphoned

twice from his car. This empty lot's mid-way
to the Thrifty where I hope I will find
flowers and ice cream at this hour to say

sorry for failing to give measure full
to the unassailable warnings of your signs.