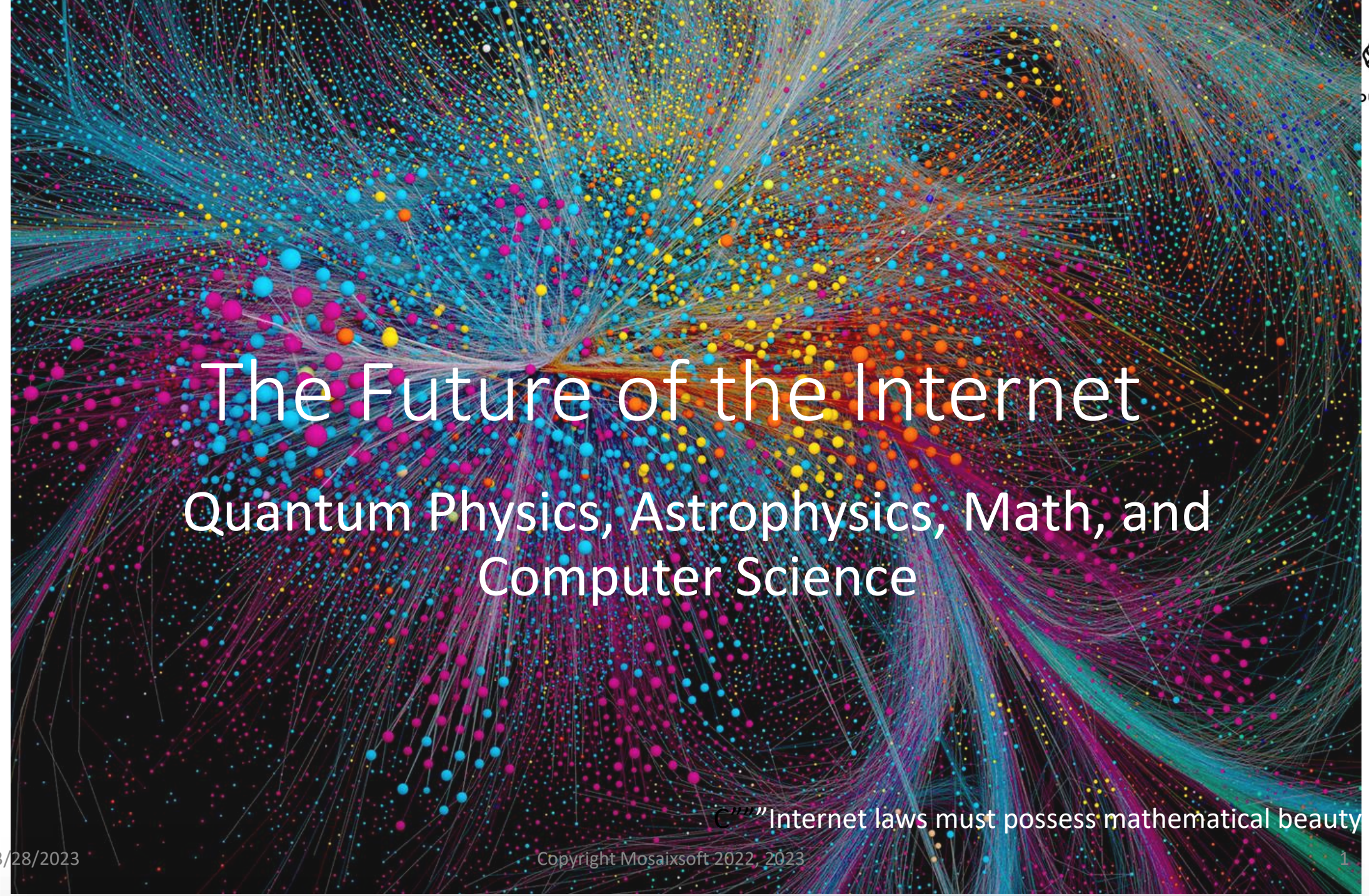


The Future of the Internet

Quantum Physics, Astrophysics, Math, and Computer Science

C""Internet laws must possess mathematical beauty

CLOUD OF CLOUDS

Who are these guys?

Geoff Hinton

John Hopfield

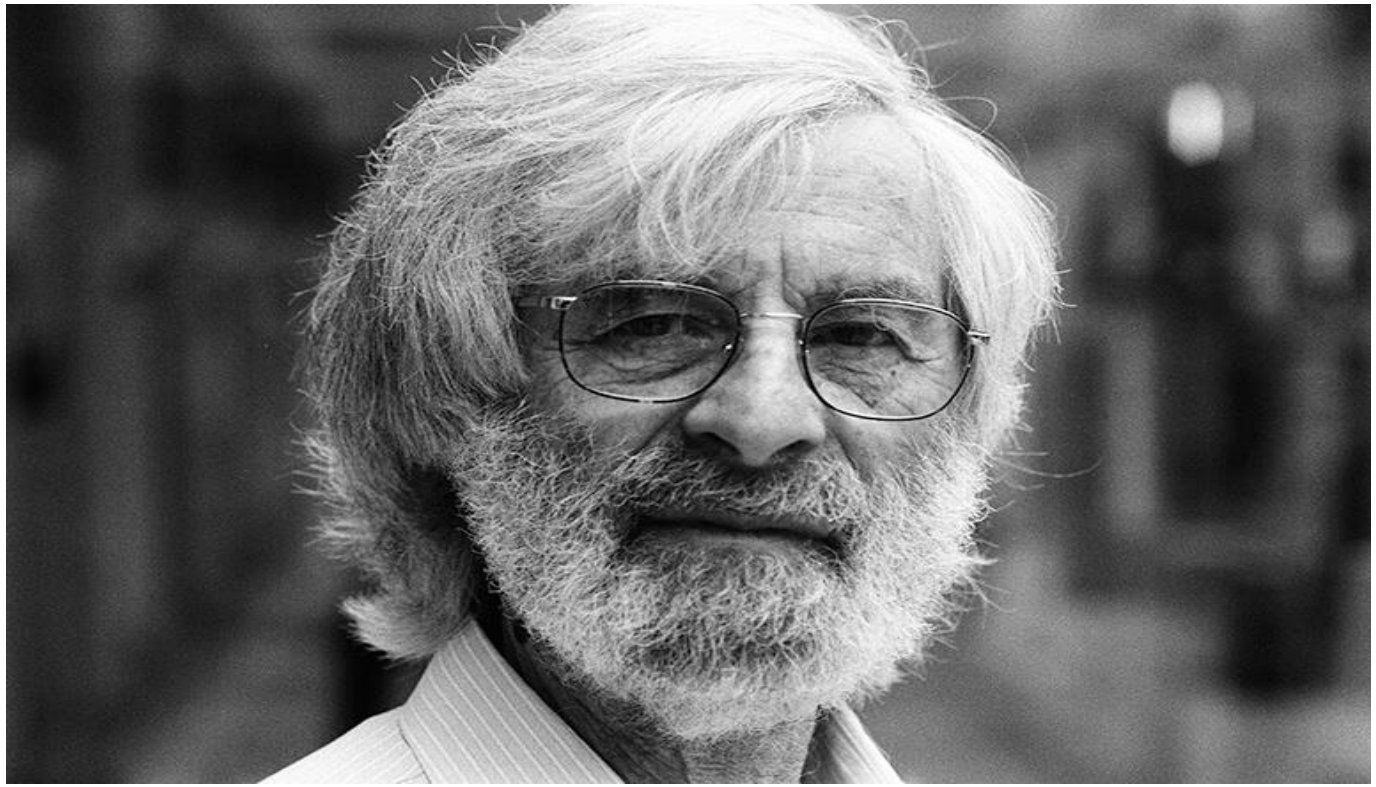
CLOUD OF CLOUDS

How about this guy?

David Deutsch

CLOUD OF CLOUDS

And this guy?



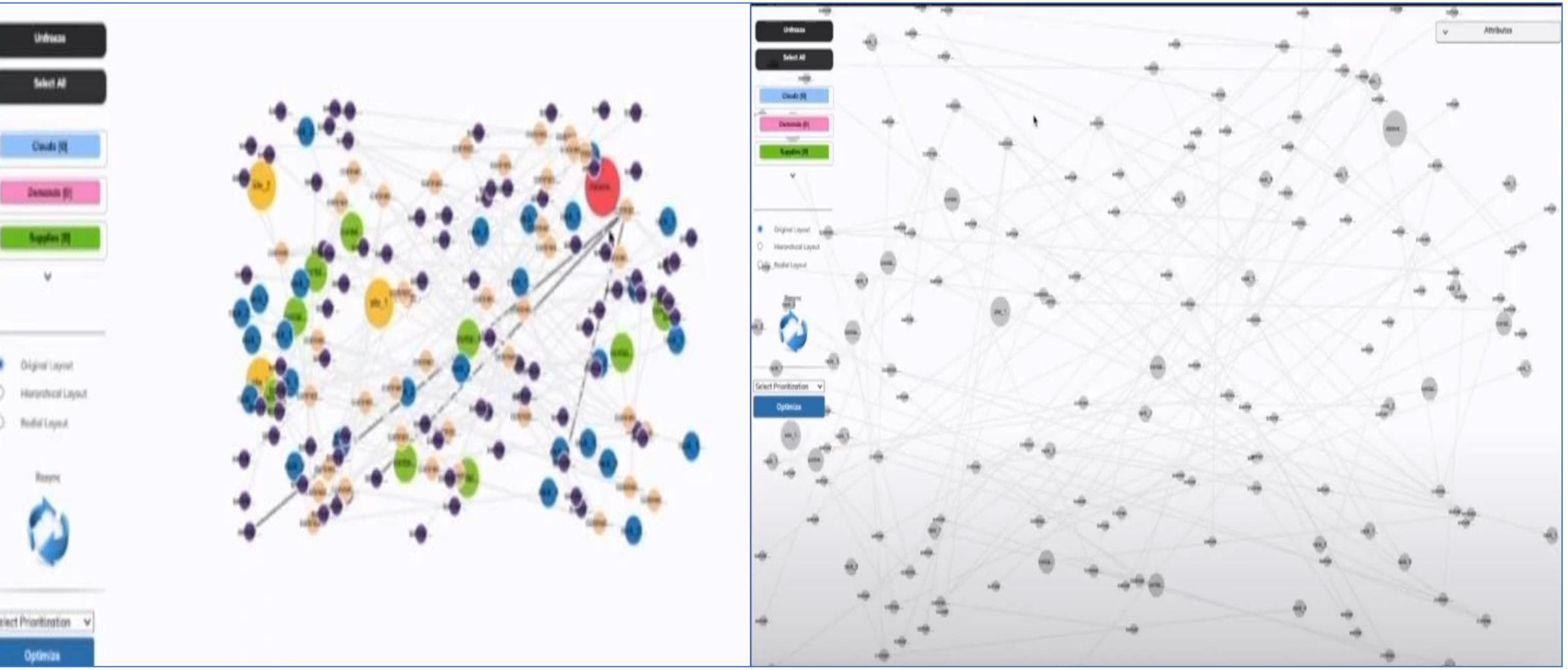
Leslie Lamport

Why don’t computer scientists learn math?

CLOUD OF CLOUDS

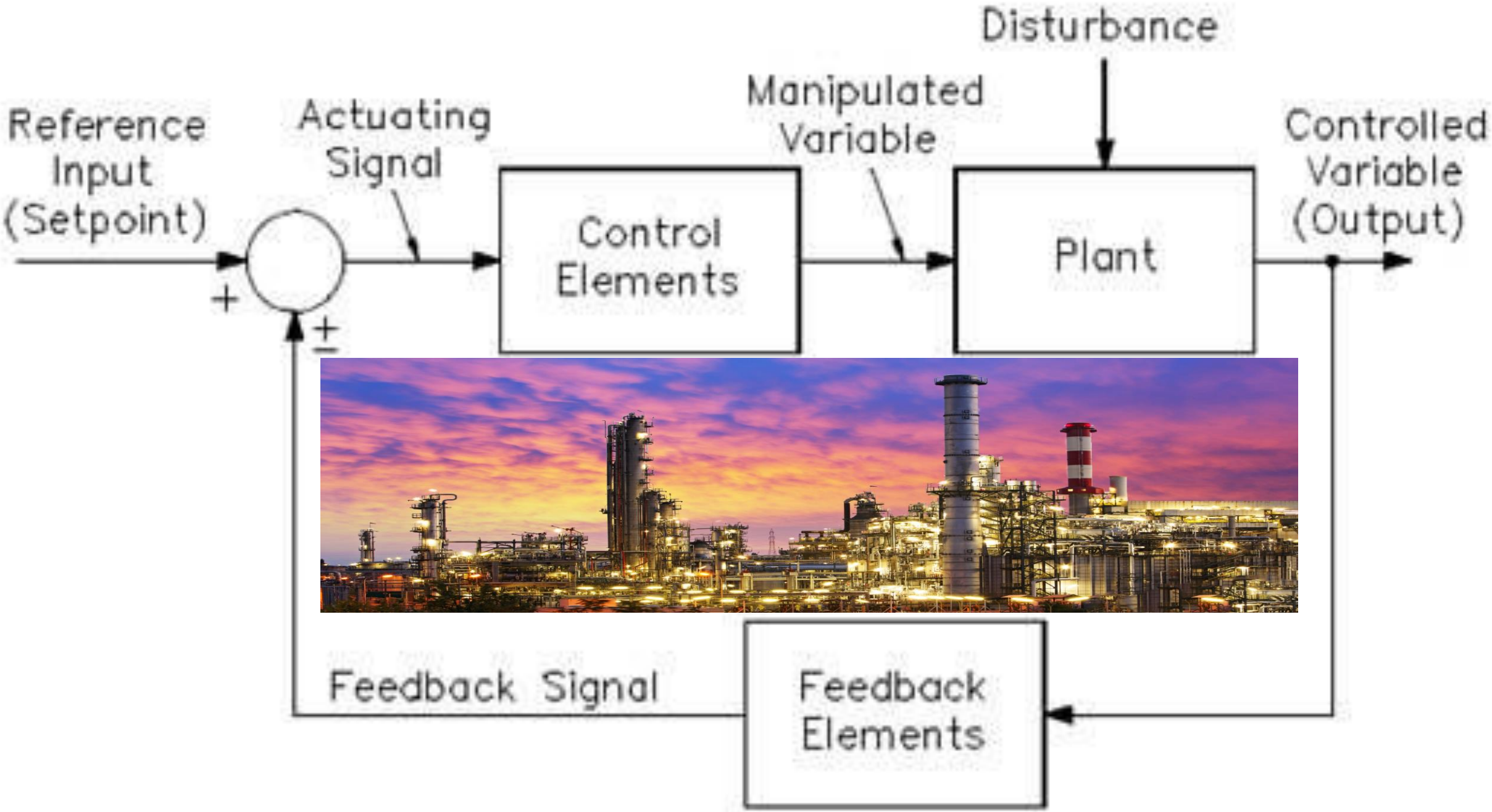
CLOUD OF CLOUDS

Multicloud Computational Field



CLOUD OF CLOUDS

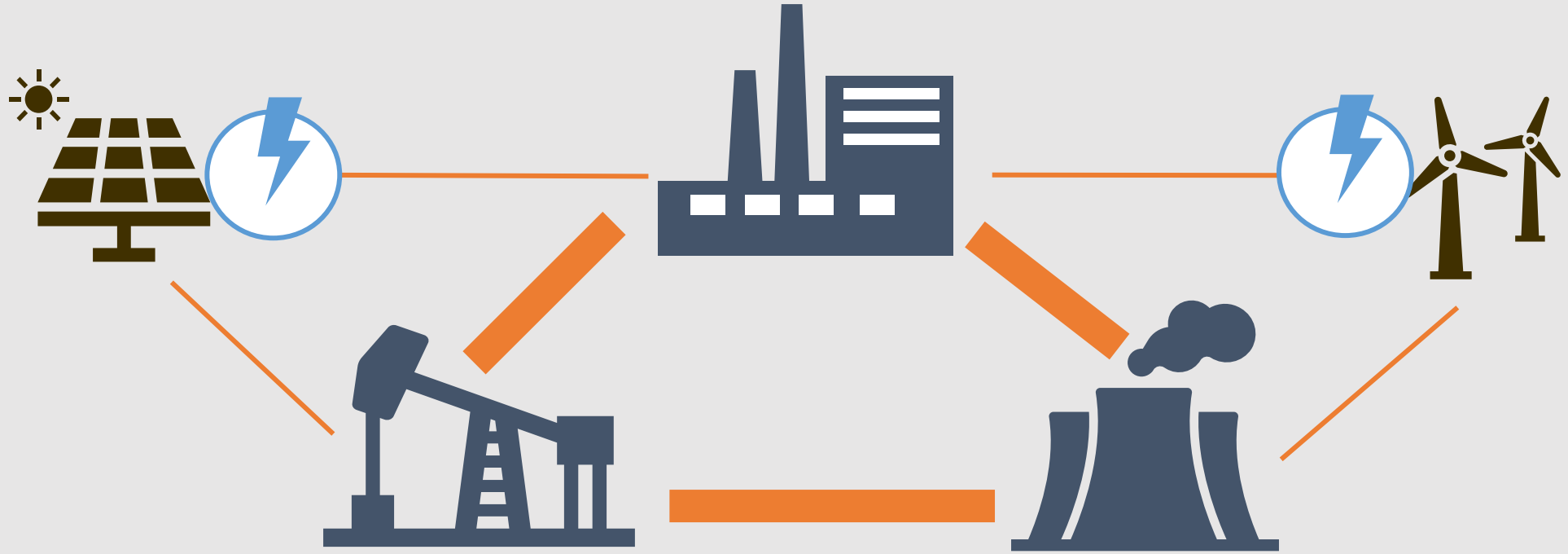
(petro)Chemical Plants
We know how to control these damn complicated things


Disturbance
Reference Input (Setpoint)
Actuating Signal
Manipulated Variable
Controlled Variable (Output)
Control Elements
Plant
+
+
−
Feedback Signal
Feedback Elements

CLOUD OF CLOUDS

Energy Grid Should Have an Architecture Analogous to the Internet

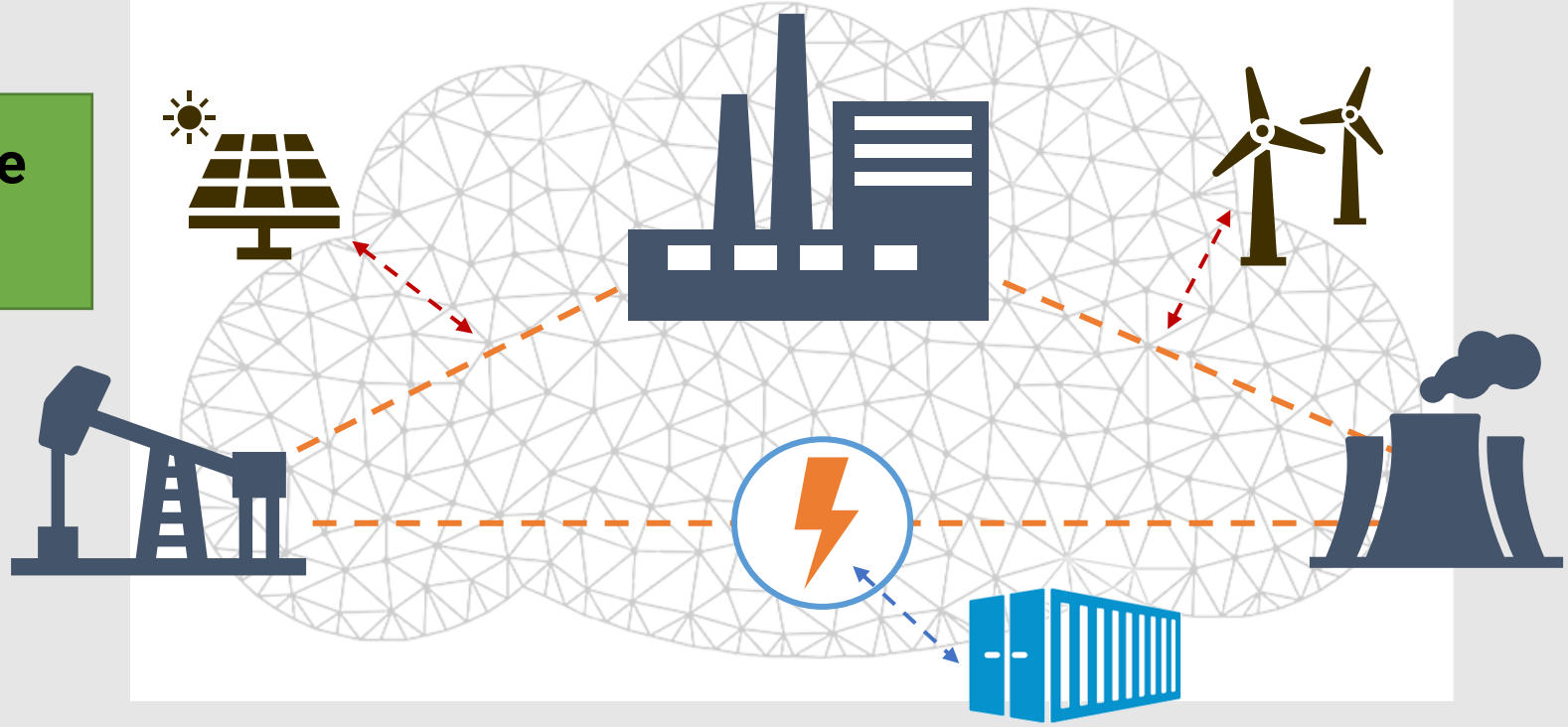
- Today the energy grid is static, transmission line expensive, centralized
- Proliferation of renewables makes the grid unstable (frequency, load)
- Curtailing sometimes generates a significant waste of energy



Distributed Generation Of Energy With Dynamic Architecture

- Electric grid: a network of networks with ability of dynamic migration and plug-and-play of load/generators
- Generates electricity and data: Internet/cloud architecture
- Energy grid: load balancing, autoscale, catalyst for renewables

eInternet – hardware
eCloud – software



CLOUD OF CLOUDS

Thank you

- The Future of Internet is still discovered in the past
- The Future of the Internet depends on converging math, physics and computer science into a “beautiful system”
- And, please learn about and promote the forefathers of computer science: it is a matter of erudition.

Nelu Mihai
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