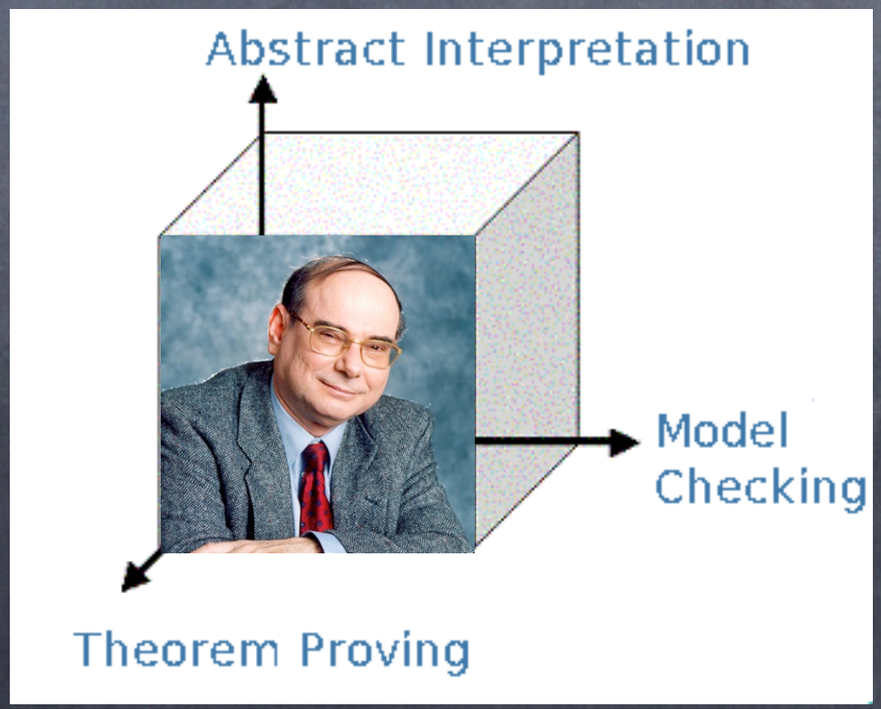
The Axis of ACSys



THE AXIS OF AWESOME

Analysis of Computer Systems Group

Mission

ACSys Home
People
Research
Publications
Tools
Courses
Events

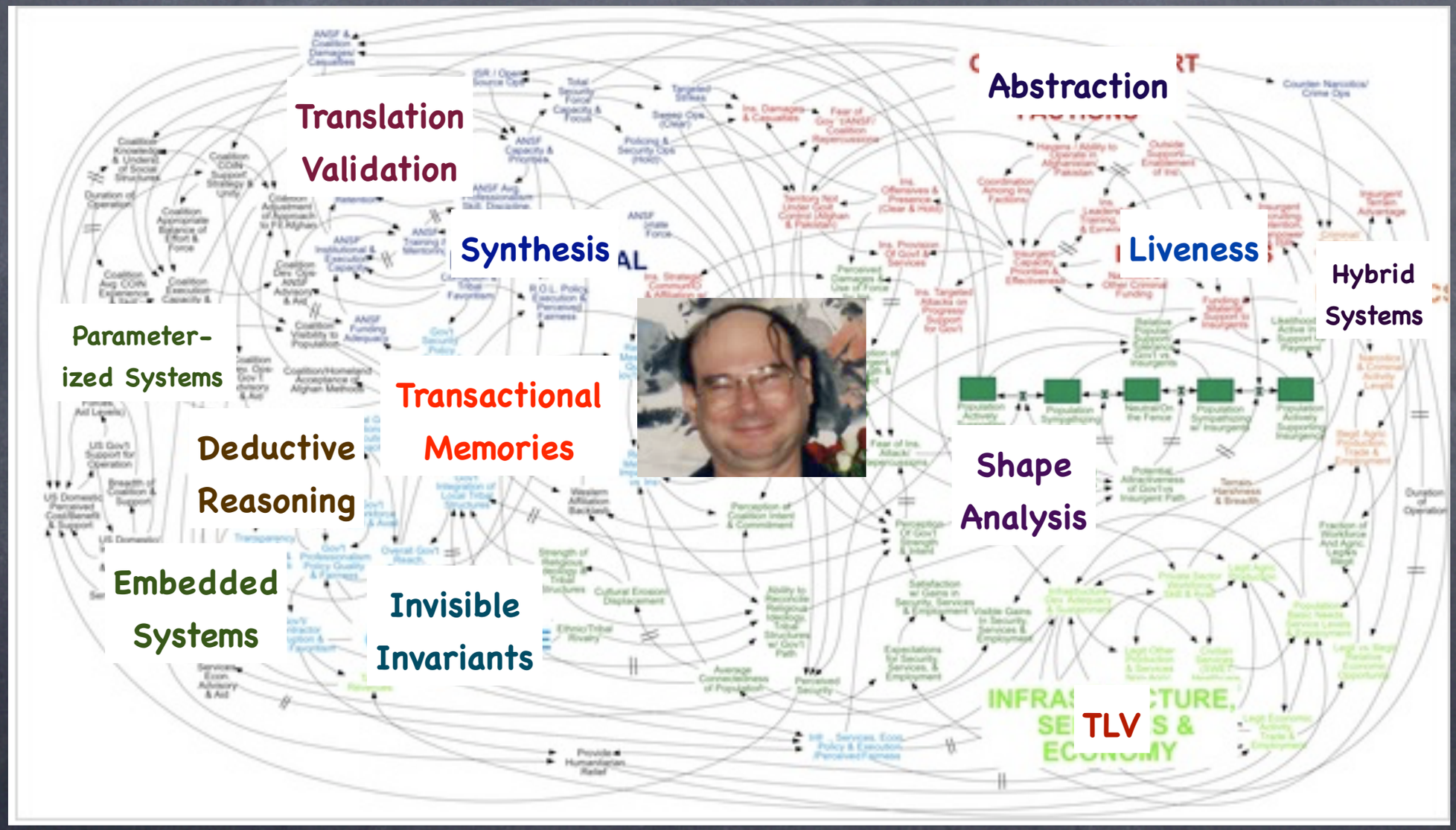
Ensuring provably correct,
reliable, and trustworthy
software and hardware designs.

New York University
Courant Institute of Mathematical Sciences
Computer Science Department

Warren Weaver Hall, Room 405
251 Mercer Street

« back | home | top ^

Amir's Roles in ACSys



How Amir Liked Things to Work

What we Really worked on

- Translation Validation
- Parameterized Systems
- Invisible Invariants
- Counter Abstraction
- Network Invariants
- Invisible Ranking

And also...

- Automatic Ranking
- Shape(less) Analysis
- Deductive Verification (for automation)
- Run-time Verification
- Synthesis
- TLV
- Testers (PSL)
- Transactional Memories

Things Didn't Always Come Easy

Things Didn't Always Come Easy

Task	Equipment	Time
Construction of Inductive Assertions	2 Professors of Computer Science	40 hours

Things Didn't Always Come Easy

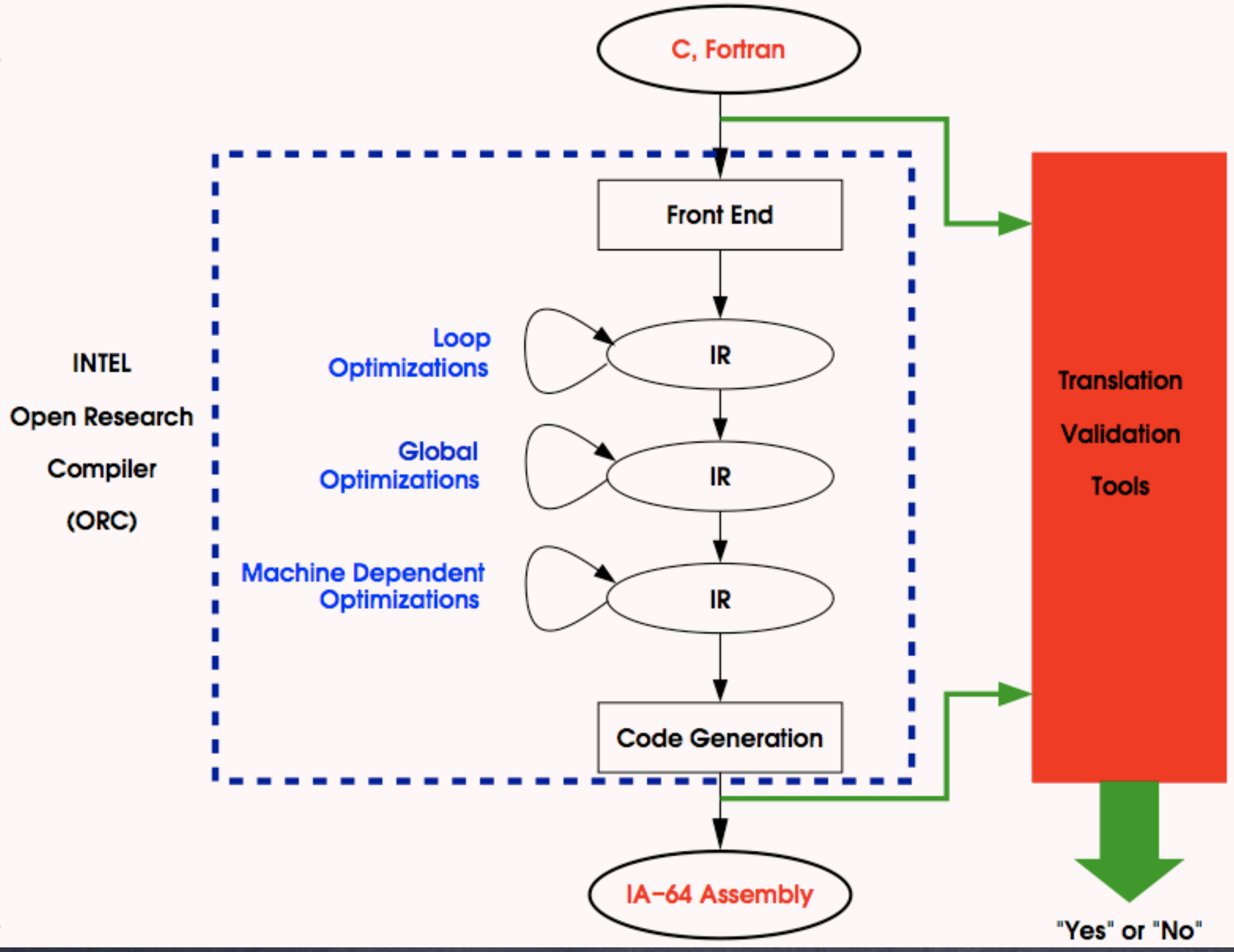
Task	Equipment	Time
Construction of Inductive Assertions	2 Professors of Computer Science	40 hours

Task	Equipment	Time
Construction of Inductive Assertions	1 non Professor of Computer Science	4.578s generate .1s prove

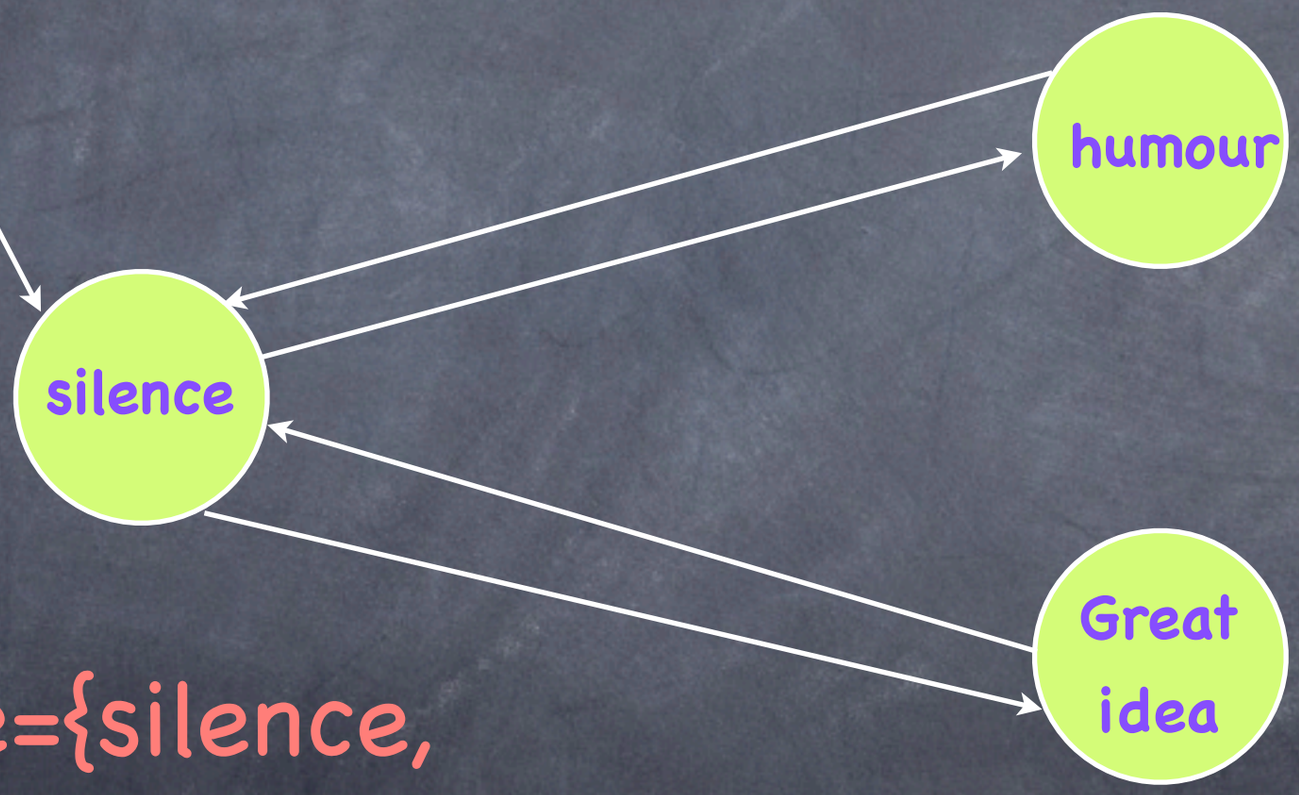
ACSys in Action: TV

- Amir: Initial Basic Vision
- Ben: Compiler Knowledge
- Yi: Initial Implementation
- Ying: Loop Optimizations
- Clark: Theorem Proving
- Ittai: WWW-ing
- (Lenore: Cracking the Whip)

Overview of an Ideal TVOC

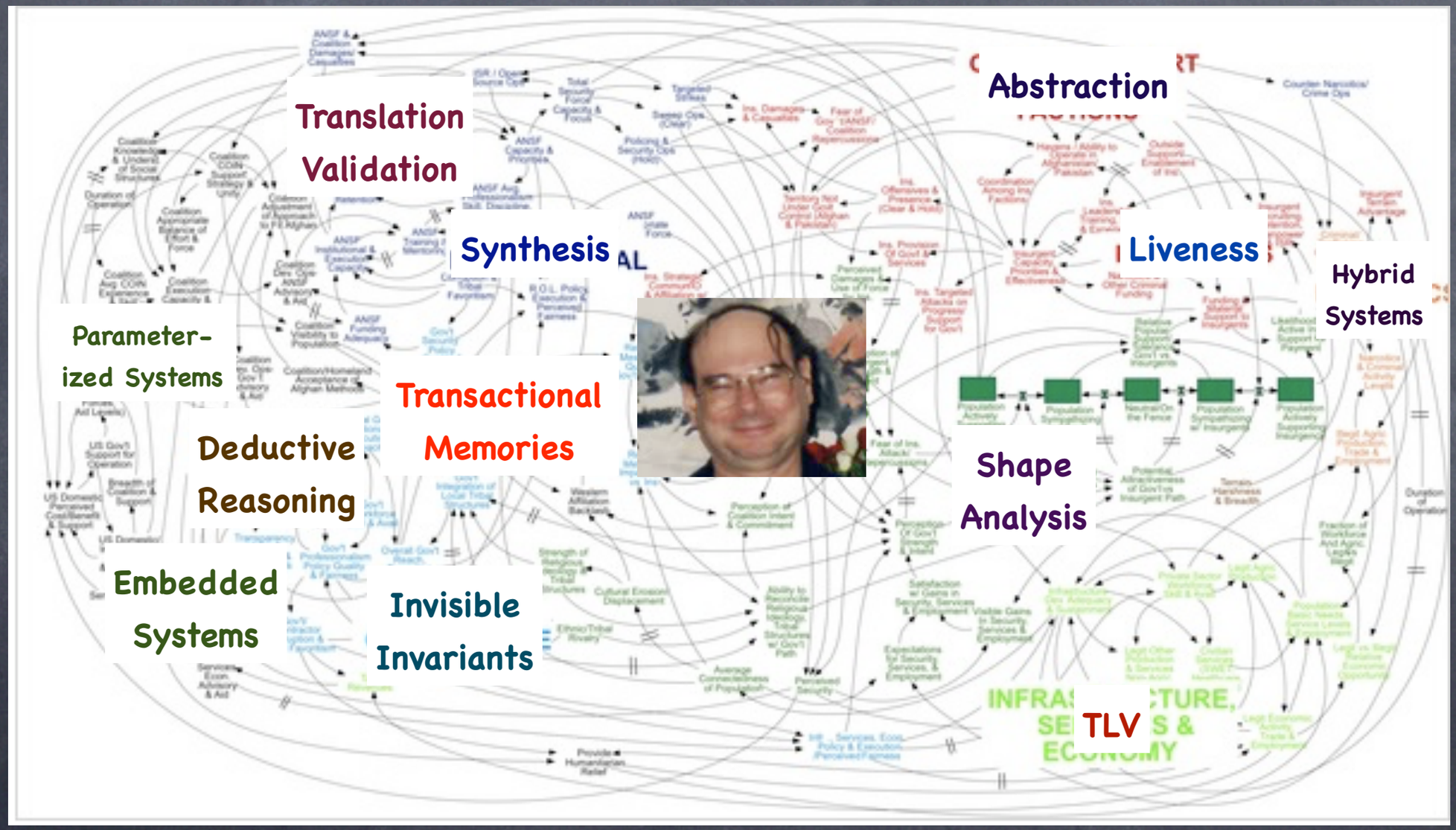


A Fair Transition System



Justice={silence,
humour,
great idea}

Amir's Roles


Translation
Validation
Abstraction
Synthesis
Liveness
Hybrid
Systems
Parameter-
ized Systems
Transactional
Memories
Deductive
Reasoning
Shape
Analysis
Embedded
Systems
Invisible
Invariants
TLV