Refreshing a Curriculum in Systems Thinking and Social Systems Designing for Learners in a Graduate Program (Redux)

David Ing + Stephen Davies
OCAD University, Toronto, Canada

Workshop: Bridging the AI Gap
HICSS-59
January 6, 2026

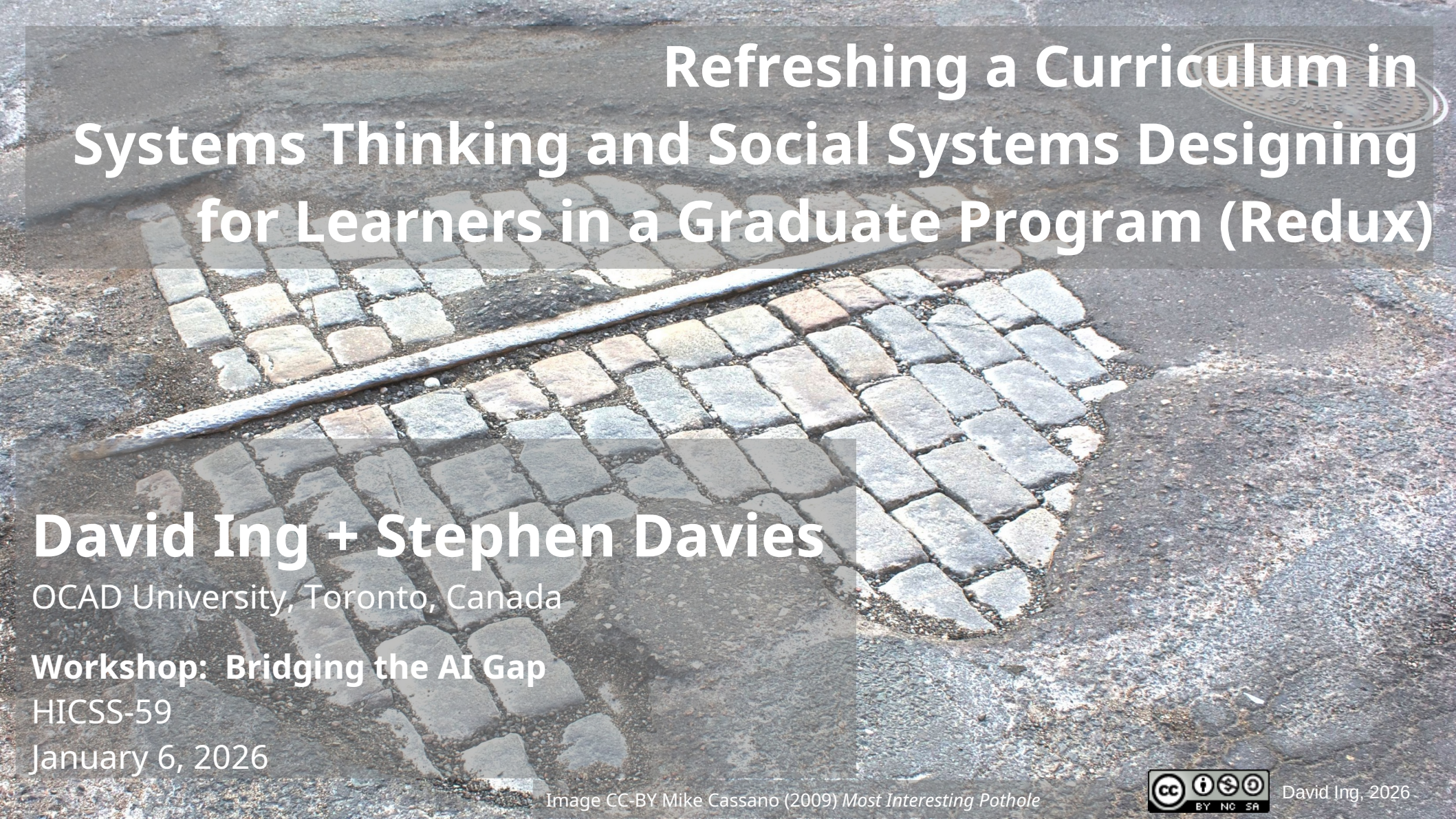
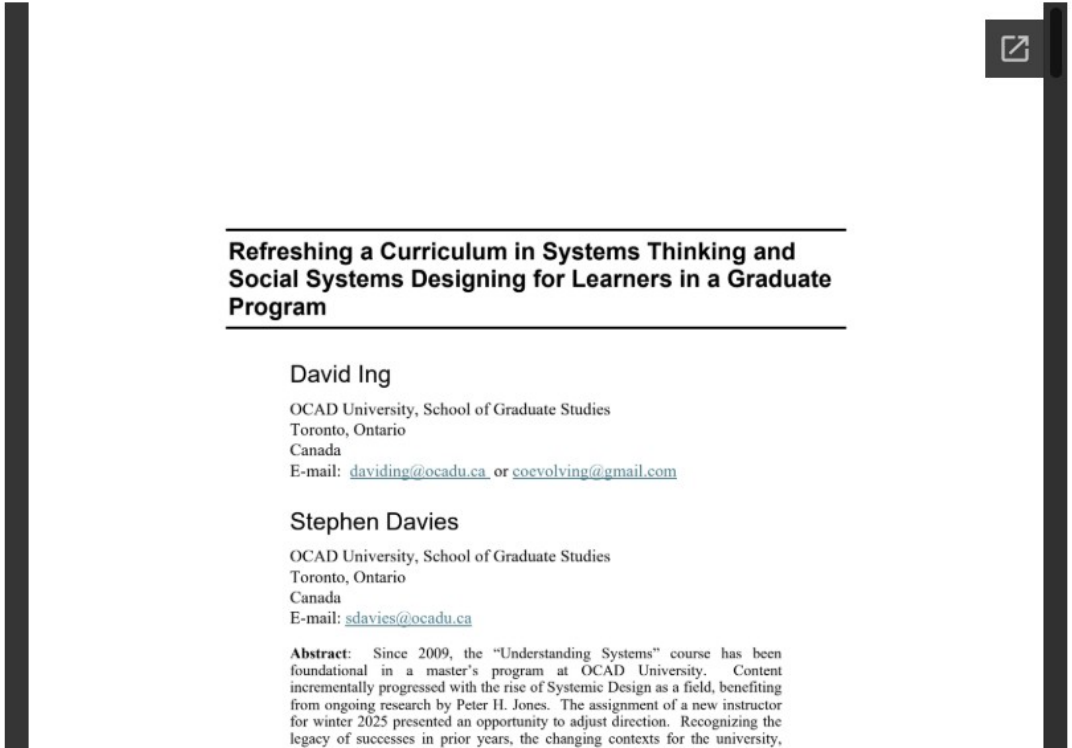


Image CC-BY Mike Cassano (2009) *Most Interesting Pothole*

David Ing, 2026

2025/10/09 Refreshing a Curriculum in Systems Thinking and Social Systems Designing for Learners in a Graduate Program



Refreshing a Curriculum in Systems Thinking and Social Systems Designing for Learners in a Graduate Program

David Ing

OCAD University, School of Graduate Studies
Toronto, Ontario
Canada
E-mail: daviding@ocadu.ca or coevolving@gmail.com

Stephen Davies

OCAD University, School of Graduate Studies
Toronto, Ontario
Canada
E-mail: sdavies@ocadu.ca

Abstract: Since 2009, the "Understanding Systems" course has been foundational in a master's program at OCAD University. Content incrementally progressed with the rise of Systemic Design as a field, benefiting from ongoing research by Peter H. Jones. The assignment of a new instructor for winter 2025 presented an opportunity to adjust direction. Recognizing the legacy of successes in prior years, the changing contexts for the university,

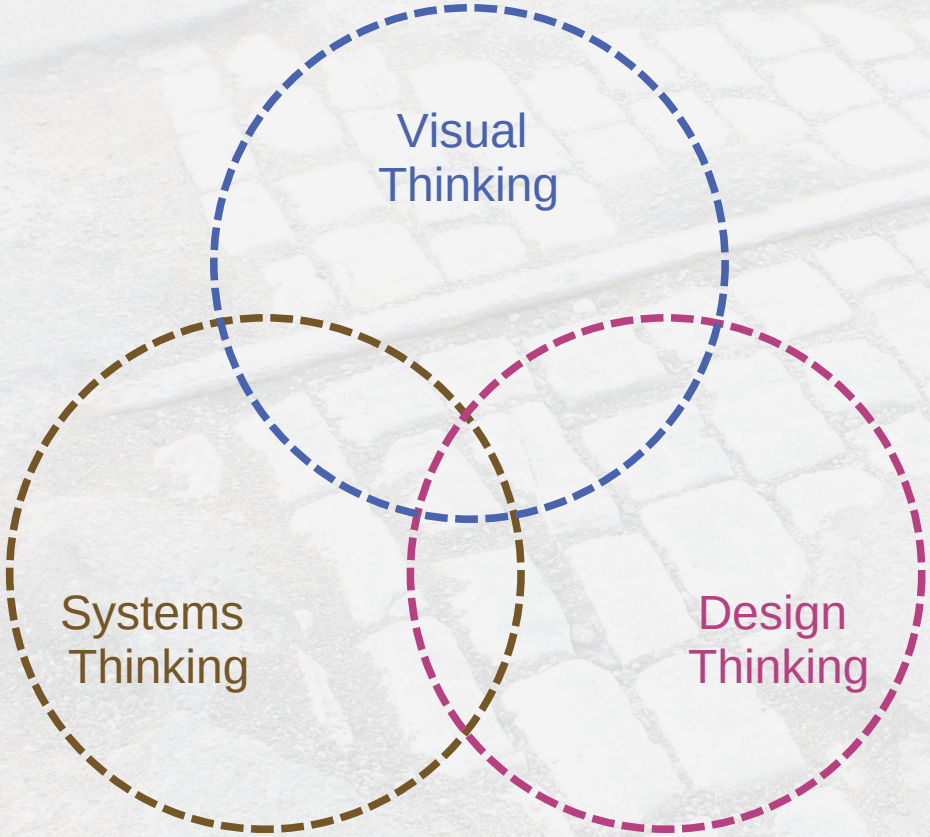
Search

Search ...

Publications

- 2025/10/29 Pacing Changes: Seeing Living Systems as Rhythms
- 2025/10/17 Where Do Systemic Designers Go To [BLANK]?
- 2025/10/09 Pacing Changes, Appreciating Approaches to Systems and Designing
- 2025/10/09 Refreshing a Curriculum in Systems Thinking and Social Systems Designing for Learners in a Graduate Program
- 2025/09/09 Rethinking Systems Thinking for Systems Changes Learning: Philosophizing, Theorizing, and Methodizing
- 2025/09/03 Pacing Changes with Living Systems: Rhythmic threads in

Since 2009, “Understanding Systems” is a 0.5-credit core in the 9-credit M.Des. in SFI (Strategic Foresight and Innovation) at OCADU



Systemic Design has coevolved with *Relating Systems Thinking and Design* Symposiums

- Design thinking complexity scale:
  - Design 1.0 e.g. logos, posters
  - Design 2.0 e.g. products, services
  - Design 3.0 e.g. organizations
  - Design 4.0 e.g. communities
- 2012 first RSD symposium, Oslo
- RSD4 Banff → Systemic Design book
- 2018 Systemic Design Association
- Gigamaps (Sevaldson 2011, 2018)
- Synthesis Maps (Jones, Bowes 2017)
- 2023 Design Council UK Framework for Innovation, Systemic Design Toolkit

David Ing, 2026

In January 2025, “Understanding Systems” content transitioned with a new course instructor + a research advisor

Systems foundations emphasized in articles sequenced earlier, toolkit later

- Systems learning via work products: (i) artifacts, (ii) methods, (iii) theory and history as supplemental
- Weeks 2-5: Idealized Design, System Dynamics, Soft Systems Methodology, Viable Systems Model, via Ramage & Shipp (2020) *Systems Thinkers*
- Week 8: Systemic Design, Intro to Synthesis Mapping
- Week 9: Critical Systems Practice
- Week 10: Systems Changes Learning
- Week 11: Language Action Perspective
- Omitted: Resilience and Panarchy
- Studio time, presentations, reflection paper

Graduate students learning as peers in group method talks

- Inverted classroom approach
- Teams of 3 to 5 individuals
- Full-time in 4 groups, part-time in 6 groups
- Ideal method talk:
  - System of interest
  - Typical artifacts
  - Methods applied
  - Theoretical foundations (if time)

Gen AI to augment lit reviews

- Try learning with Gen AI as experiment, not requirement
- Lecture review with ChatGPT, Copilot, LeChat, Claude, NotebookLM, Perplexity

David Ing, 2026

Online responses pooled, 54% of 24 part-time, 65% of 17 full-time

Course pace: About right 37.5%; Fast 50%; Too Fast 12.5%

Course difficulty, c.f. other courses: Average 33.3%; Difficult 58.3%; Very Difficult 8.3%

Course workload, c.f. other classes: Average 54.2%; Heavy 37.5%; Very Heavy 8.3%

Students appreciated systems

- "new way of viewing the world"
- "thinking more critically about the interconnectivity of things"
- "a disciplined approach to continuous learning"
- "the cheat code for life"
- "appreciate … students do ... instruction"
- "do not have students present ... material"
- "methodological approach … more practical compared to just learning theory"
- "focus on methodology to be incredibly helpful for my development as a designer"

AI mostly welcomed

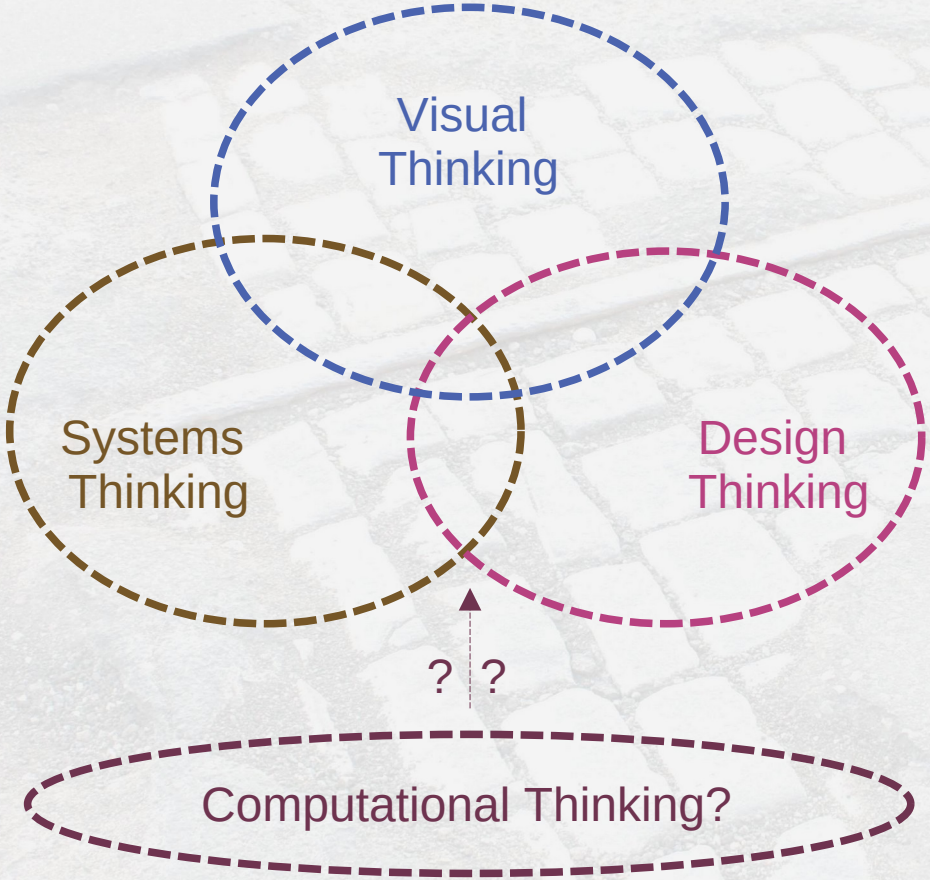
- "keeping up with the times by embracing AI"
- "using AI to summarize readings is a really good … before ... whole text
- "great tool especially for non English speaking students"
- "I use genAI reluctantly and did not change attitude"
- "don't rely on it to do work for you"

Content sequencing + focus could be improved

- Week 11 "Conversation for Design" better as Week 1
- Opens up week for Panarchy and Social Ecological Systems
- Week 2 instructor lecture could better articulate sequencing in Method Talks (artifacts first)

David Ing, 2026

For winter 2026, will M.Des. students accept *Computational Thinking*? *Vibe Coding* diagrams ⟹ HTML-level editing capabilities?



Show-and-Tell lectures

- Researching with RAG (closed system) vs. GPT (open system)
- Inquiring Systems + Assumptional Analysis
- Object Process Methodology
- Vibe Coding Object Process Language + Object Process Diagrams
- Vibe Coding with SVG (Scalable Vector Graphics) or Mermaid
  - (not bitmaps, e.g. Stable Diffusion Image Generation)
- Augmented Intelligence Researching → Vibe Coding Slides or Posters

David Ing, 2026



Image CC-BY Mike Cassano (2009) *Most Interesting Pothole*