

# Curriculum Vitae

## Chae-Shick Chung

### Personal Information

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Name	Chae-Shick Chung
Date of birth	1961. 5. 30.
Gender	Male
Affiliation	Sogang University, Department of Economics
Title	Professor
Specialty	AI Finance / Financial Markets
Office address	1 Sinsu-dong, Mapo-gu, Seoul (Tel. 705-8704)
Home address	101-dong 1406-ho, 24dagil, Yeouidae-bang-ro, Dongjak-gu, Seoul (Tel. 010-3743-0549)

### Education

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- 1998 — Ph.D. in Economics, Duke University
- 1984 — B.A. in Economics, Sogang University

### Experience

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- 2010. 9 – Present: Professor, Department of Economics, Sogang University
- 2025. 12 – Present: Outside Director, Jeonbuk Bank
- 2020. 3 – 2024. 3: Outside Director, JB Financial Group
- 2013. 1 – 2018. 12: Outside Director, Yuanta Savings Bank
- 2021. 7 – Present: Auditor, Telco Management Research Institute
- 2003. 9 – 2005. 9: Advisory Professor, Bank of Korea
- 1999. 12 – 2001. 6: Advisory Professor, Ministry of Finance and Economy (Korea)
- 2013. 6 – 2017. 2: Advisory Professor, Financial Supervisory Service (Korea)

### Awards

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- 2019: Best Paper Award, Korean Finance Association
- 2019: Sogang Economics Award
- 2020: Selected for the Byuksan Professorship, Sogang University

# Research Profile

**Chae-Shick Chung:** *AI-Driven Financial & Policy Systems*

## Key Expertise

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- LLM & knowledge graph integration for macro/policy
- Self-improving RL & evolutionary finance systems
- Spectral/network risk analytics & temporal leakage detection

## Key Achievements

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- **SelfEvolve Portfolio AI:** Self-improving trading oracle (27.7% annual return, Sharpe 1.62)
- **Korean Financial LLMs:** 4 deployed models on Hugging Face (finance & fiscal domain)
- **EconLLM (AI-Fed):** Ongoing — LLM-based central bank reasoning engine

## Flagship Systems (URLs available upon request)

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- Worldwide sector rotation (US, KRX, China, Japan, India, Hong Kong)
- Global macro shock propagation system (68 countries, 6 variables)
- Global risk prediction system
- US-KRX sector propagation system
- KRX research platform
- Risk-attitude-based portfolio (including active ETF)

## Working Papers (single author if not specified) — by category

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### **Theme 1: Knowledge Graphs for Economic Analysis**

- G-Designer — Knowledge Graphs for Federal Reserve Communications (2026)
- Impulse Response Analysis via Knowledge Graphs and LLMs (2024)
- Temporal Knowledge Graph for FRB Districts (2025)

### **Theme 2: Financial Machine Learning & Trading Systems**

- AlphaEvolve — Deep Generative Model with GRPO (2025)
- OpenEvolve: Program-centric evolution with MAP-Elites (2025)

### **Theme 3: Evolutionary AI & Self-Improvement**

- DGM Reinforcement Learning Architecture (2025)
- AlphaEvolve: LLM-enhanced mutations for strategy discovery (2025)
- ALITA System: 4-pillar multi-model ensemble optimization (2025)

### **Theme 4: Spectral/Network Methods in Finance**

- Spectral Gap as FOMC Policy Uncertainty Indicator (2024)
- G-Designer — Knowledge Graphs for Federal Reserve Communications (2026)
- Fiedler value for economic fragmentation detection (2026)
- Hypergraph analysis for multi-party relationships (2026)
- Temporal Knowledge Graph for FRB Districts (2025)

### **Theme 5: Multi-Agent Systems & AI Orchestration**

- CrewAI: Specialized agent collaboration (2024)

### **Theme 6: HANK Models & Heterogeneous Agent Economics**

- Education-Based Heterogeneity in HANK Models: US case study (2025)
- Place-Based Fiscal Policy in Korea's High-Education Society via HANK (2025)
- Persistent Effects of Policy and Behavior on Wealth Inequality (2026)

### **Theme 7: Behavioral Economics & Market Psychology**

- AI preference elicitation using experimental economics (2025)
- Social media narratives as systemic risk operators (2026)

- Phantom systemic risk from algorithmic amplification (2026)
- Evolutionary finance and hyper-risk-aversion (2026)

## **Research in Progress (2026)**

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- Narrative-Induced Systemic Risk (BLZ  $\times$  Takata  $\times$  SNS Framework)
- HANK Models and LLM Economist — Transforming Economic Policy Design
- Hypergraph-based Fiedler Indicators for Risk Factor Exploration
- Federal Reserve Beige Book and FOMC Statements — AI-Driven Comparative Analysis
- Federal Reserve Monetary Policy Decision Modeling: A Multi-State Markov Chain Analysis with Machine Learning Enhancement
- Lead-lag analysis between US sectors and macro variables via reinforcement learning