



Research  
Education  
Outreach

**CCA**

# **Economics of Innovation**

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## **Instructor**

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## **Programme**

- Introduction
- Lexicon. Endogenous/Exogenous. Invention, Innovation, Adoption, Diffusion. Product-Process-Input-Organization-Markets Innovation. The Map of Isoquants: Elasticity of Substitution. The Direction: Neutral/Labor/Capital Intensive. Effects on Employment/Localization/Size.
- Total Factor Productivity and Tobin's Q: Definition and Debates
- Adam Smith, Nicholas Kaldor, Jacob Schmookler and the Demand Pull Approach. The Contribution of Daron Acemoglu.
- Karl Marx, John Hicks, Daron Acemoglu and The Induced Technological Change Approach: The Problem of Technological Congruence.
- Schumpeter 1911: Entrepreneurship and Marshallian Economics
- Schumpeter 1942: The Corporation, Oligopolistic Rivalry and Product Life Cycle.
  - The Role of Oligopolistic Rivalry
  - Barriers to Entry and Monopolistic Competition

- Structure - Conduct -Performance (T) / Structure - Conduct -Performance (T +1)
- The Dynamics of Learning and Its Implications:
  - Edith Penrose and the Resource Based Theory of the Firm
  - Learning by Doing
  - Localized Learning
  - Learning by Interacting: User-Producer
  - Localized Technological Change
- Evolutionary Contributions
  - The Life Product Life Cycle: Vernon
  - Epidemic Models of Diffusion
  - Supply Driven Diffusion
  - The Replicator Dynamics
  - Natural Selection: Nelson & Winter
  - Lamarckian and Darwinian Evolution: Genotypes Vs. Phenotypes.
- The Arrowian Economics of Knowledge: The Implications of the Limited Appropriability: Intellectual Property Rights, University, New Antitrust, Subsidies.
- From Knowledge as a Good to The Knowledge Generation Process: The Dynamics of Recombination. The Size and Composition of External Knowledge: Jacobs Increasing Returns
- Spillover Economics and The New Growth Theory.
- Beyond the Limited Appropriability: Knowledge Properties Revisited (I): Limited Exhaustibility, And Technological Congruence
- Beyond the Limited Appropriability: Knowledge Properties Revisited (II): Limited Transferability, Technical Versus Pecuniary Externalities.
- The Technology Production Function and the Knowledge “Generation” Function: The Cdm Approach.
- Schumpeter 1947: The Creative Response and The Economics of Complexity
- Innovation as a Context Dependent Creative Reaction. The Notion of Emergence
- Schumpeterian Growth Regimes
  - The Capitalization of Knowledge
  - The Knowledge Industry
  - The Open Technology Approach
- Technological Change and International Trade
- Technological Change and Income Inequality

Basic References are found in:

- Antonelli, C. (2009), The Economics of Innovation: From the Classical Legacies to the Economics of Complexity, *Economics Of Innovation And New Technology* 18, 611–646.
- Antonelli, C. (2011), The Economic Complexity of Technological Change: Knowledge Interactions and Path Dependence, In Antonelli, C. (Ed.) *Handbook on the Economic Complexity of Technological Change*, Edward Elgar, Cheltenham, Pp.1-62.
- Antonelli, C. (2017), *Endogenous Innovation: The Economics of an Emergent System Property*, Edward Elgar, Cheltenham.
- Antonelli, C. (2019), *The Knowledge Growth Regime: A Schumpeterian Approach*, Palgrave Macmillan, London.