



**Colloquium on
Innovation and Technological Change
Winter Term 2024/25**

The “Colloquium on Innovation and Technological Change “ is aimed at all students currently attending the lecture E 350 / E 454 on “Innovation and Technological Change”. It deals with a theoretical analysis of innovation processes at the firm level, the industry level, the country level and the global level. Correspondingly, topics will be “Innovation Management”, “Innovation Competition”, “Innovation and Economic Development“ and “Innovation and International Trade”. Bachelor students can use their presentation as basis for a follow-up Bachelor Thesis.

Registration: You have to register online via ILIAS. The application is open from Monday, October 21, 10 am until Wednesday, October 30, 10 am. The places are limited to 16 participants. The places are allocated on a first-come-first-served system.

Organizational Meeting: There will be a mandatory kick-off meeting on Thursday, October 31, at 12.30 am. In this meeting, we will clarify the course of the colloquium and demonstrate how to give a rousing and stirring presentation.

Presentation: Presentations are limited to 15 minutes so that some time is left for discussion. The aim of the presentation should be that fellow students understand the core message of the model. Your task is fulfilled in the best possible way, if you succeed in inspiring other students for the topic. The presentation should be very focussed, possible extensions should be postponed to the critical discussion at the end.

Criteria for passing the colloquium are (i) self-dependence in preparing the presentation, (ii) clarity and persuasiveness of the presentation, and (iii) taking an active part in the colloquium.

Preparation: Two weeks before your presentation, you will receive precise instructions via email. The email will specify the topic and the model of your presentation. Depending on the degree of difficulty, the considered model might be modified or simplified.

One week before your presentation, you may contact your supervisor for a (voluntary) preparatory talk. However, it is important that you have skimmed the paper before the talk.

Latest on the Wednesday before your presentation at 10 am, you have asked to send your slides (in pdf format) to manfred.stadler@uni-tuebingen.de and marit.holler@uni-tuebingen.de .

Topics and References:

Topic 1: Innovation Management (November 21, 2024; Supervisor: M. Holler)

1. Management of a Development Project with Financial Constraints

Kukuk, M. and Stadler, M. (2001), Financing Constraints and the Timing of Innovations in the German Services Sectors. *Empirica* 28, 277-292.

2. Management of an Innovation Project with Technological Uncertainty

Grossman, G.M. and Shapiro, C. (1986), Optimal Dynamic R&D Programs. *Rand Journal of Economics* 17, 581-593.

3. Management of a Multi-Stage Innovation Project

Harris, C.J., Vickers, J.S. (1987), Racing with Uncertainty. *Review of Economic Studies* 54, 1-21.

4. Management of an Innovation Project with Hazard-Rate Uncertainty

Malueg, D.A. and Tsutsui, S.O. (1997), Dynamic R&D Competition with Learning. *Rand Journal of Economics* 28, 751-772,

Topic 2: Innovation Competition (December 12, 2024; Supervisor: M. Holler)

5. Innovation Races with Delegated Research

Loury, G.C. (1979), Market Structure and Innovation. *Quarterly Journal of Economics* 93, 395-410.

6. Two-Stage Innovation Races

Grossman, G.M. and Shapiro, C. (1987), Dynamic R&D Competition. *Economic Journal* 97, 372-387.

7. Innovation Races, Spillover Effects and Research Joint Ventures

Martin, S. (2002), Spillovers, Appropriability and R&D. *Journal of Economics* 75, 1-32.

8. Sequential Innovation Races and Creative Destruction

Reinganum, J.F. (1985), Innovation and Industry Evolution. *Quarterly Journal of Economics* 100, 81-99.

Topic 3: Innovation and Economic Development (January 23, 2025; Supervisor: M. Stadler)

9. Quality Ladders, Innovation and Economic Growth

Helpman, E. (1992), Endogenous Macroeconomic Growth Theory. *European Economic Review* 36, 237-267.

10. Quality Ladders, innovation and Imitation

Segerstrom, P.S. (1991), Innovation, Imitation and Economic Growth. *Journal of Political Economy* 99, 807-827.

11. Education and Innovation as Twin-Engines of Economic Growth

Stadler, M. (2012), Engines of Growth: Education and Innovation. *Review of Economics* 63, 113-124.

12. Scientific Breakthroughs and Innovation Clusters

Stadler, M. (2013), Scientific Breakthroughs, Innovation Clusters and Stochastic Growth Cycles. *Homo Oeconomicus* 30, 143-162.

Topic 4: Innovation and International Trade (January 30, 2025; Supervisor: M Stadler)

13. Innovation and North-North Trade between Similar Countries

Stadler, M. (2015), Education, Imitation and Growth in Quality-Ladder Models of North-North Trade. *Modern Economy* 6, 1115-1128.

14. Innovation and North-North Trade with Transportation Costs

Stadler, M. (2015), Education, Imitation and Growth in Quality-Ladder Models of North-North Trade. *Modern Economy* 6, 1115-1128.

15. Innovation, Imitation and International Product Cycles

Stadler, M. (2015), Innovation, Industrial Dynamics and Economic Growth. In: H.J. Ramser and M. Stadler (eds.), *Entwicklung und Perspektiven der Wirtschaftswissenschaft*, Tübingen: Mohr Siebeck, 283-309.

16. Innovation and Technology Transfer via Foreign Direct Investment

Stadler, M. (2015), Innovation, Industrial Dynamics and Economic Growth. In: H.J. Ramser and M. Stadler (eds.), *Entwicklung und Perspektiven der Wirtschaftswissenschaft*, Tübingen: Mohr Siebeck, 283-309.