GENEVA GRADUATE INSTITUTE

CENTRE FOR FINANCE AND DEVELOPMENT

The Geneva Graduate Institute is recruiting an

Economics Ph.D. Student

with a focus on

Applied Time Series Econometrics & Empirical Macroeconomics

ACTIVITY RATE: 100% (full-time)

ANNUAL GROSS FUNDING: CHF 52'000 (= SNF rate for first-year PhD researcher)

DURATION: 4 years, starting on 18 August 2025 (contract), 15 September 2025 (program)

APPLICATION DEADLINE: 15 January 2025

OVERVIEW OF THE POSITION

The PhD student will write a doctoral dissertation broadly within the themes of the project *Econometric Analysis of Dynamic Network Effects* – funded by the Swiss National Science Foundation (SNSF) – under the direction of Prof. Marko Mlikota (https://markomlikota.github.io) (see brief project description below). In addition, the student will support Prof. Mlikota as a research assistant (RA) within the framework of this project.

The student will join the PhD program of the Department of International Economics at the Geneva Graduate Institute. The first year consists of coursework – mostly completed within the Swiss Program for Beginning Doctoral Students in Economics at the Studienzentrum Gerzensee (see here) –, while the subsequent years are devoted to research.

PROFILE AND REQUIREMENTS

- Master's degree in economics or related quantitative field
- Interest for quantitative methods ((time series) econometrics, numerical methods, coding)
- Interest for macroeconomics (business cycles, growth, supply chains, monetary and fiscal policy)
- Strong written and oral communication in English
- Strong analytical skills and solid quantitative background
- Strong coding skills (proficient in the use of Julia, R, Matlab or Python, willingness to learn Julia)
- High level of organization and ability to work independently towards a goal
- Ability to work in teams with other researchers

RESPONSIBILITIES

- Complete satisfactorily all coursework in the doctoral program
- Conduct own research, leading to three publishable academic articles to form a PhD thesis (coauthorships possible, and at least one coauthorship with Prof. Mlikota very probable)
- Support Prof. Mlikota as an RA (literature analysis, data collection and analysis, numerical implementation of estimation methods, (econometric and macro-theoretical analytical derivations))
- Participate in seminar series and other academic events of the department

WHAT WE OFFER

- Individual mentoring and an extraordinarily high level of support by the supervisor; during first-year courses, during subsequent further specializations in quantitative methods (and macroeconomic theory), and during the challenging first steps in conducting own research
- Transmission of most required knowledge during first-year courses at Gerzensee (econometric and macroeconomic foundations) and the course "Topics in Econometrics" taught by Prof. Mlikota (econometric specialization; see here)
- Teamwork with an international group of ambitious researchers (see project description below)
- Funding for travel for conference presentations
- Excellent working environment at an institution where academically rigorous yet policy-relevant research is produced
- Opportunities to interact with policymakers at international organizations (the Institute hosts the BCC program and the ICMB and has close ties to Geneva-based organizations like UN, WTO, World Bank, ILO, etc.)
- Possibility to obtain mobility grants to spend time at an institution abroad (see here)

PROJECT DESCRIPTION

Many economic environments feature a cross-section of units connected by a network of bilateral ties, such as countries linked through trade- and capital flows and geopolitical ties, industries and firms linked by supply chains, financial institutions linked through common risk exposures, or individuals linked by acquaintance or family ties. This project explores empirically how networks generate dynamics in cross-sectional variables like cross-country inflation, sectoral output or households' ability to smooth consumption. It does so in tight connection with (macro)economic theory and using the Network-Vector-Autoregression (NVAR) developed in Mlikota (2024) as a benchmark model (which itself is shown to approximate sectoral output and prices in an input-output Real Business Cycle (RBC) economy in which firms convert inputs into outputs in a lagged way).

The project is divided into several sub-projects (papers), carried out in teams with other researchers. Besides a revision of Mlikota (2024), this currently includes a project for-/nowcasting US macroeconomic aggregates using higher-frequency sectoral output-dynamics along supply chains (with F. Schorfheide), a project forecasting Swedish inflation using product-level price- and supply-chain data (with X. Zhang) and a project estimating the extent of households' income insurance through social ties in rural Thailand (with W. Gao). The prevalence of networks in economics and the habitual importance of dynamic relationships – at least in macroeconomics – open the door for numerous other applications, which students are also encouraged to propose!

The successful applicant will be welcome (but has no obligation) to also join future extensions of the above project or some of Prof. Mlikota's projects in other research agendas. The former will be focused on the relation between network dynamics and economic growth, which methodologically involves integrating models of dynamic network effects (e.g. the NVAR) with models of dynamic network formation. The latter includes work on the estimation of high-dimensional and non-linear DSGE models, on time-varying parameters in VARs, on invoicing currency dynamics in trade flows across countries and on monetary models based on monetary search rather than nominal rigidities.

APPLICATION PROCEDURE

Applications for this position should be submitted via the regular applications procedure for the PhD in Economics (see here), whereby applicants should reference this particular position and the project in the application form, motivational letter and thesis proposal. The application deadline is 15 January 2025. Interviews (online or in-person) with candidates shortlisted for the position will take place soon after the evaluation of the application packages.

For further information and informal inquiries, please contact Prof. Mlikota directly under marko.mlikota@graduateinstitute.ch.