

## **First Webinar Presented by Leading Women in Business and Industrial Statistics**

ISBIS is pleased to announce the inaugural webinar in the series by leading women working in business and industrial statistics announced earlier. The relevant information is as follows:

Title: *“The social structure of financial networks”*  
Date: 2020-12-01  
Start Time: 4:00 pm  
End Time: 5:00 pm  
Time Zone: (GMT+01:00) Amsterdam, Berlin, Bern, Rome, Stockholm, Vienna

### **Panelists:**

**Antonietta Mira** - [antonietta.mira@usi.ch](mailto:antonietta.mira@usi.ch)  
(University of the Italian Switzerland, Switzerland, and University of Insubria, Italy)  
**Federica Bianchi** - [federica.bianchi@usi.ch](mailto:federica.bianchi@usi.ch)  
(University of Glasgow, UK)

### **Abstract**

Financial markets can be considered as networks where nodes are financial institutions and edges are cash flows connecting those institutions. We study the temporal evolution of dyadic relationships in the European interbank market, as induced by monetary transactions registered in the electronic market for interbank deposits (e-MID) during a period of 10 years (2006–2015). In particular, we keep track of how reciprocal exchange patterns have varied with macro events and exogenous shocks and with the emergence of the Global Financial Crisis in 2008. The approach adopted extends the model of Holland and Leinhardt (JASA, 1981) to a longitudinal setting where individuals’ temporal trajectories for the tendency to connect and reciprocate transactions are explicitly modelled through splines or polynomials, and individual-specific parameters. We estimate the model by an iterative algorithm that maximizes the log-likelihood for every ordered pair of units. The empirical application shows that the methodology proposed may be applied to large networks and represents the process of exchange at a fine-grained level.

Although the webinar is free for all, registration is required at the following link:

<https://attendee.gotowebinar.com/register/1421032328477468939>