



UNIVERSITY  
OF BRESCIA

DEPARTMENT OF ECONOMICS AND MANAGEMENT

## SEMINAR

### *Identification of one independent shock in structural VARs*

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**Chair: Prof. Mattia Guerini**  
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*Tuesday, May 20th, 2025  
10:30 AM - 12:30 PM*

**Room A6, C.da S. Chiara 50**



We establish the identification of a specific shock in a structural vector autoregressive model under the assumption that this shock is independent of the other shocks in the system, without requiring the latter shocks to be mutually independent, unlike the typical assumptions in the independent component analysis literature. The shock of interest can be either non-Gaussian or Gaussian, but, in the latter case, the other shocks must be jointly non-Gaussian. We formally prove the global identification of the shock and the associated column of the impact multiplier matrix, and discuss parameter estimation by maximum likelihood. We conduct a detailed Monte Carlo simulation to illustrate the finite sample behavior of our identification and estimation procedure. Finally, we estimate the dynamic effect of a contraction in economic activity on some measures of economic policy uncertainty.

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