

## 30<sup>th</sup> July, Day 1: Nonlinear Raman basic theory

- 10:00** Welcome and school introduction from the organizers  
**10:30** T. Scopigno: Linear versus nonlinear Raman scattering  
**12:00** T. Scopigno: Nonlinear Raman for Time-Resolved and Imaging  
**13:00** G. Cerullo: Three and Four Wave Mixing Processes  
**14:00** Break  
**15:15** G. Cerullo: Nonlinear Optical Techniques  
**16:30** G. Cerullo: Question Time  
**17:00** S. Mukamel: Calculating the Nonlinear Raman response through a Diagrammatic formalism.  
**18:45** S. Mukamel: Question Time



## Sponsors



## 31<sup>th</sup> July, Day 2: Time Resolved Nonlinear Raman

- 01:00** C. Ferrante: Picosecond and sub-picosecond Dynamics through Frequency Domain Time Resolved Nonlinear Raman spectroscopy  
**02:00** T. Tahara: Concept and Steady-state Measurements of Time-Domain Raman  
**03:15** T. Tahara: Picosecond and sub-picosecond Dynamics through Femtosecond Time-Resolved Time-Domain Raman  
**04:30** T. Tahara: Question Time  
**05:00** Break  
**06:00** S. Mukamel: Theory and Experiments  
**07:00** G. Batignani: Experiments and Theory: Simulating the Signal  
**08:30** S. Ruhman: Time Domain Raman Experiments: the All Classical Perspective (Part 1)  
**09:30** S. Ruhman: Time Domain Raman Experiments: the All Classical Perspective (Part 2)  
**10:30** Break  
**11:00** G. Batignani and C. Ferrante: Virtual Lab Tour # 1, Time-Domain Nonlinear Raman

## 1<sup>st</sup> August, Day 3: Nonlinear Raman for Imaging

- 17:00** E. Potma: Coherent Raman Scattering microscopy introduction  
**18:30** M. T. Cicerone: Nonresonant Background in CARS Microscopy  
**20:00** G. Cerullo: Techniques for Broadband Stimulated Raman Microscopy  
**21:00** M. T. Cicerone: Broadband-CARS Applications  
**22:00** Break  
**23:00** E. Potma: Coherent Raman Scattering in the Single Molecule Limit

## 2<sup>nd</sup> August, Day 3: Nonlinear Raman for Imaging

- 00:30** G. Batignani and C. Ferrante: Virtual Lab Tour # 2, Frequency Domain Stimulated Raman  
**01:30** Final Remarks and Closing of the school