

# **Anisotropies in core-collapse supernova explosions**



**Monday, 21 October 2019 - Wednesday, 23 October 2019**

**Oratorio SS Elena e Costantino**

## **Scientific Programme**

**Monday October 21****Morning Session****8.30-9.30** *Registration***9.30-9.45** M. Miceli/F. Bocchino/S. Milioto, *Welcome***Session 1: SN progenitors and pre-SN environment** (Chair: P. Zhou)**9.45-10.30** A. Chieffi, *The role of rotation on the evolution of massive stars***10.30-11.15** C. Triglio, *Anisotropies in winds and nebulae around Luminous Blue Variables***11.15-12.00** *Coffee break***Session 2: Early supernova evolution and interaction with CSM** (Chair: A. Chieffi)**12.00-12.45** A. Pastorello, *Gap transients and interacting supernovae***12.45-13.05** H. Lee, *Tracing end of star from SNR observation***Afternoon Session****Session 3: Explosion physics of CC-SNe** (Chair: S. Orlando)**14.30-15.15** A. Wongwathanarat, *Long-term evolution of core-collapse supernova asymmetries from shock revival to shock breakout***15.15-16.00** M. Obergaulinger, *Magnetorotational explosions and the road to proto-magnetars***16.00-16.35** *Coffee break***16.35-16.50** R. Bonito, *Equity, Diversity, and Inclusion in Astronomy* (solicited)**16.50-17.35** S. Nagataki, *Anisotropies in SN1987A***17.35-17.55** A. Tutone, *3D MHD modeling from the onset of the SN to the full-fledged SNR***Tuesday October 22****Morning Session****Session 4: Engine driven SNe, GRBs and GWs** (Chair: S. Nagataki)**9.00-9.45** G. Terreran, *Pursuing the afterlife: unveiling the inner engine from late-time observations of supernovae***9.45-10.30** L. Izzo, *Jet-cocoon signatures in broad-line supernovae associated with gamma-ray bursts***10.30-11.15** E. Troja *Neutron star mergers across the electromagnetic spectrum***11.15-11.45** *Coffee break***Session 5: Magnetars, Pulsars and PWNe** (Chair: E. Troja)**11.45-12.30** A. Borghese, *Highly magnetic neutron stars: an observational review***12.30-13.15** B. Olmi, *Pulsar Wind Nebulae and their winds***Afternoon Session****Session 6: From SNe to SNRs: asymmetries and anisotropies** (Chair: M. Lemoine-Goumard)**14.30-15.15** S. Orlando: *Linking the morphology of SNRs to anisotropies in parent core-collapse SNe through MHD simulations***15.15-16.00** J. Vink: *The anisotropy of the ejecta in Cassiopeia A***16.00-16.20** A. Piquenot, *Revisiting the ejecta asymmetries in CasA with a novel method for component separation in X-rays***16.20-16.40** S. Ustamujic, *Investigating the effects of the inhomogeneous interstellar medium in shaping the morphology of SNR IC 443***16.40-17.10** *Coffee break***17.10-18.30** *Visit to the historical museum of the Palermo Observatory***20.30 Social dinner**

**Wednesday October 23**

**Morning Session**

**Session 6 From SNe to SNRs: asymmetries and anisotropies** (Chair: J. Vink)

**9.30-10.15** P. Zhou, *Supernova remnants hosting magnetars*

**10.15-10.35** E. Greco, *Discovery of an overionized jet-like structure in the SNR IC443*

**10.35-10.55** S. Derlopa, *First 3D Morpho-kinematical model of a SNR. Case of VRO 42.05.01 (G 166.0 +4.3)*

**10.55-11.30** Coffee break

**11.30-12.15** M. Lemoine Goumard, *Anisotropies in the gamma-ray emission of SNRs*

**12.15-12.35** P. Kostic, *3D hydrodynamical simulation of the clumpy supernova ejecta*

**12.35-13.00** M. Miceli, *Discussion and greetings*