



Contribution ID: 555

Type: **Invited talk in the parallel session**

## **GRB correlations and physical implications**

*Wednesday, 7 July 2021 06:30 (30 minutes)*

I will review several GRB correlations reported in the literature and discuss possible physical mechanisms behind them. Topics to be covered include Amati/Yonetoku relations, Frail relation, Ghirlanda/Liang-Zhang relations, energy/luminosity-Lorentz factor (Liang-Lü relation), Dainotti relation, and several three-parameter fundamental-plane relations. These correlations provide hints on the jet composition, energy dissipation mechanism, jet structure, and central engine of GRBs.

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**Session Classification:** Gamma-Ray Burst Correlations: Observational Challenges and Theoretical Interpretation

**Track Classification:** Fast Transients: Gamma-Ray Burst Correlations: Observational Challenges and Theoretical Interpretation