



SECURE

REGIONAL-SCALE EARTHQUAKE GROUND MOTION PREDICTIONS
THROUGH PHYSICS-BASED AND EMPIRICAL APPROACHES:
A CASE STUDY CENTRAL ITALY

**Final Meeting of the INGV–SECURE Project, Pianeta Dinamico 2023–2025,
11–12 March 2026**

INGV, Via di Vigna Murata 605, Rome – Sala del Consiglio

Online link: <https://meet.google.com/kox-kyfs-nuc>

-----11 March 2026 -----

14:30 – Opening, Project Coord. Akinci A.

WP1 – Enhancements of Existing Crustal Velocity Models and Seismic Datasets WP Leader: De Gori P.

14:40 WP1 De Gori P. *3D velocity models across the three SECURE project target regions*

14:55 WP1 Burrato P. F. *Shallow geological models of Quaternary intermountain basins in Central Apennines*

WP2 – Characterization of Earthquake Source and Seismic Wave Propagation in the Central Apennines WP Leader: Calderoni G.

15:10 WP2 Calderoni G. *Multi-Method Stress Drop Estimation and Uncertainty Analysis for the 2016–2017 Amatrice–Visso–Norcia Seismic Sequence.*

15:25 WP2 Cirella, A., *Linking Stress Drop and Slip Heterogeneity to Assess Source Rupture Directivity for Earthquakes in Central Italy.*

15:40 WP2 Gabrielli, S., *Spectral Corrections for Propagation and Site Effects: Implications for Stress Drop Estimation in the 2016 Mw 6.0 Amatrice Earthquake.*

15:55 WP2 Colavitti, L. *Data-Driven Empirical Modeling of Source Directivity Effects in a Ground Motion Model for Central Italy*

16:10 - Coffee break

WP3 – Ground Motion Predictions using Innovative Approaches WP Leader: Sgobba S.

16:30 WP3 Sgobba, S., *Beyond Ergodicity and Stationarity: Advanced Approaches for capturing Spatio-Temporal Variability in Ground Motion Models*

16:50 WP3 Antonucci, A., *Intensity Prediction Equations: Performance and Developments*

17:05 WP3 - Artale Harris, P./Cuius, A., *Advancing Physics-Based Ground Motion Simulations through 1D and 3D approaches in central Italy.*

WP4 – Testing the Performance of Ground Motion Models and Empirical Relationships WP Leader: Taroni, M.

17:25 WP4 - Taroni, M., *New methods for the evaluation of the Ground Motion Models.*

17:45 – Discussion Q/A - End of Day 1

-----**12 March 2026**-----

10:00 – Keynote Lecture Bindi, D. (GFZ, Germany), *Bridging Spectral Decomposition and Ground-Motion Models: Results from SECURE and Perspectives.*

10:30 – Keynote Lecture, Gallovič, F., (Charles University in Prague, Czech Republic), *Constraining kinematic and dynamic rupture models for broadband strong-motion simulations.*

11:00 Coffee break

11:30 – Keynote Lecture, Askan, A., (METU, Türkiye), *From Simulations to Safety: Interdisciplinary Approaches for Urban Seismic Resilience in Türkiye.*

12:00 – Keynote Lecture Pitarka, A., (LLNL, USA), *Engineering use of recent physics-based ground motion simulations.*

12:30 – 13:00 Round Table and Closing

