

How to construct credible cosmic structures with exact solutions of General Relativity

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We provide specific examples of how a class of exact solutions of Einstein's equations (the Szekeres models) can be worked out to describe the evolution of a collection of over-densities and voids in assorted directions. The resulting structures can be used to study the full relativistic non-linear effects in the dynamics of structure formation and growth suppression, in gravitational lensing and in fitting observations in the galactic cluster and super-cluster scale.

Primary author: SUSSMAN, Roberto (ICN-UNAM, Mexico)

Co-author: DELGADO, Ismael (Autonomous University of Morelos State, Mexico)

Presenter: SUSSMAN, Roberto (ICN-UNAM, Mexico)

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