

## Tectonostratigraphic, Paleogeography and Amalgamation of Sumatra Terranes, Indonesia

**Authors :** Syahrir Andi Mangga, Ipranta

**Abstract :** The geological, paleomagnetic, geochemical and geophysical Investigation in The Sumatra Region has yielded some new data, has stimulated a reassessment of stratigraphy, structure, tectonic evolution and which can show a Sumatra geodynamic model. Sumatra island has in the margin of southwest part of the Eurasia plate in the Sundaland cratonic block and occurred as the amalgamation of allochthonous microplates, continental fragments, Island arc and accretionary by foreland complex which assembled prior to Tertiary. The allochthonous rocks (terrane), can be divided into 4 (four) Terranes with Paleozoic to Mesozoic in age, had different origin, lithology and are separated by a Suture as main fault with trending NW-SE. The terranes are: the Tigapuluh-Bohorok (East Sumatra block / Sibumasu block), Permo-Carboniferous in age and is characterized by the rock types formed in glacio-marine and was intruded by Late Triassic to Early Jurassic granitics, occupied in the Eastern part of Sumatra, the paleomagnetic data shown 41° South. Tanjung Karang - Gunung Kasih Terrane, is composed of higher metamorphic rocks and supposed to be pre-Carboniferous in age, covered by Mesozoic sedimentary rocks and were intruded by granitic-dioritic rocks, occupied in the Southern part of Sumatra, the paleomagnetic data shown 19° North. The Kuantan-Duabelas Mountain (West Sumatra block) is occupied by metamorphic, sedimentary and volcanic rocks of Paleozoic - Mesozoic (Carboniferous - Triassic) in age, contains a Cathaysian fauna and flora and are intruded by the Mesozoic granitoid rocks. The terrane occurred in the western part of Sumatra. Meanwhile, the Gumai-Garba (Waloya Terrane) which is occupied by the tectonite/melange, metasediment, carbonate and volcanic rocks of Mesozoic (Jurassic - Cretaceous) in age, are intruded by the Late Cretaceous granitoid rocks, the paleomagnetic data shown 30° - 31° South.

**Keywords :** tectonostratigraphy, amalgamation, allochthonous, terranes, sumatra

**Conference Title :** ICEGSE 2016 : International Conference on Earthquake, Geological and Structural Engineering

**Conference Location :** Los Angeles, United States

**Conference Dates :** April 05-06, 2016