

# PREFACE

This volume of abstracts comprises the collected geological knowledge of all aspects of Gondwana formation and evolution, presented during the Gondwana 14 International Conference, held in Búzios, Rio de Janeiro State, Brazil, between 25–30 September 2011. Following suggestions from the last Gondwana meeting in China, 2008, this Gondwana Conference has the goal of linking geoscientists from all Gondwana fragments—a meeting where the East meets the West. The story of Gondwana can be subdivided in three main periods: the amalgamation (heritage, terranes and thermotectonic events), the development (thermotectonic evolution, intracontinental basins, paleoclimate and active margins), and the break up (rifting processes, mantle plumes and paleogeography). Therefore the Gondwana 14 Conference is divided in three parallel sessions: Gondwana Amalgamation (Room 1-GAMA); Gondwana Development (Room 2- GDEV) and Gondwana Break Up (Room 3-GBRE). In the end of each day all rooms merge in one big conference room of main interest.

This volume of abstracts starts with the six main conferences and sixteen keynote talks. The continuation is organized in the three rooms and their respective sessions proposed by forty eight conveners. Room 1 contains the following sessions: GAMA-01-01-Pre-Gondwana cratons and paleoenvironment (D.Evans, E.Dantas, M.Geraldes), GAMA-01-02-Pre-Gondwana paleogeographic evolution (A. Rapalini, R.Trindade, S.A. Pisarevsky), GAMA-01-03-Oroclines during Supercontinent amalgamation (B.Murphy, A.B.Weil, S. T. Johnston, G.Gutierrez-Alonso, R.Trouw, F.Alkmim), GAMA-01-04- Neoproterozoic-Cambrian accretionary and collisional orogenesis and the Cambrian amalgamation of Gondwana (A.Collins, J.Foden, M.Santosh, C.Clark, P.Johnson, P.Cawood, M.Heilbron, R.Schmitt), GAMA-01-05-Gondwana shear zones and sutures – histories of the amalgamation of a supercontinent and inheritance on continental deformation (R.D. Martino, G. Vujovich, M.Egydio Silva).

Sessions in room 2 are: GDEV-02-01-Gondwana to Pangea and back (B. Murphy & G. Gutierrez-Alonso), GDEV-02-02-Gondwanides (I. Dalziel, R. N. Tomezzoli, M. de Wit), GDEV-02-03-Patagonia and its connections with the southern continents (V. A. Ramos & J. Bradshaw), Symposium – the Gondwana ecosystem through time, GDEV-02-04-Neoproterozoic to Cambrian (C. Gaucher & A. Sial), GDEV-02-05-Paleozoic basins and sequences (E.J. Milani, E. Pereira, M. Guerra-Sommer) and GDEV-02-06-Mesozoic (I. S. Carvalho, S. Chatterjee, F. Guillocheau).

Sessions in room 3 are: GBRE-03-01- Tectonic, magmatic, sedimentary and thermal evolution of rift systems in continents and backarc systems leading to formation of oceans (G. Manatschal, L. Magnavita, N. Stanton, M. Moulin), GBRE-03-02-Mantle plumes and Gondwana break up (S.Valente, A. Corval, G. Foulger), GBRE-03-03-Gondwana orogen-passive margin systems (J. Jacobs, R. Schmitt, R. Thomas), GBRE-03-04-Geological heritage of Gondwana (K.L. Mansur & E. Guedes) and GBRE-03-05-GondwanaMetallogenesis (R.S.C deBrito, C.G. Porto, E. Bongiolo).

Technical sessions, including oral and poster presentations, are running over a period of four days. There will be also a workshop on the discussion about the project of the new edition of the Gondwana Map.

The Gondwana 14 Conference offers pre, during and post-meeting field trips. The pre-conference field trips are: (1) Parana I – the Paleozoic of Paraná Basin, by A.França and F. Vesely; and (2) the Brazilian counterpart of the Araçuaí-West Congo Orogen, by A.C. Pedrosa Soares and F. Alkimim. Wednesday, the middle day of the conference, is a free day where participants are encouraged to engage in one of the following six field trips: (1) Buzios Cambrian collisional orogeny, by R. S.Schmitt and R.Trouw; (2) Cretaceous structures and magmatic bodies – the rifting of Gondwana, by N. Stanton and M. Geraldès; (3) Stromatolites of Lagoa Salgada, by L. Borghi; (4) Arraial do Cabo Tertiary magmatism, by S. Valente, A. Corval and A.P.R. Alves; (5) Geological heritage of the Costa do Sol region, by K.L. Mansur and E. Guedes; (6) Structures and magmatic episodes related to the break-up of Gondwana on the onshore basement of Campos basin, by J.Almeida, M. Heilbron, C.Valeriano and W. Mohriak. Four post-conference field trips are proposed: (1) the Ribeira-Brasília orogen transects, by R. Trouw, M. Heilbron, M. Tupinamba and A. Ribeiro; (2) Meso and Neoproterozoic of the Chapada Diamantina, Bahia, NE Brazil, by C.E. Souza Cruz and A.J. Pedreira ; (3) Parana II – Juro-Cretaceous Sequence, by B.L. Waichel, C. Scherer and E. Fernandes; (4) Reconcavo-Tucano-Jatoba aulacogens – Bahia, by L. Magnavita and R. Rosa.

The village of Buzios is located 180 km east of the international airport of the city of Rio de Janeiro, Galeão-GIG (Antônio Carlos Jobim Airport). It is a cozy and charming resort in the eastern coast of Rio de Janeiro state, with sixteen beautiful beaches that are flanked by amazing outcrops of Cambrian gneisses that register one of the youngest orogenies related to the amalgamation of Gondwana, the Buzios Orogeny. In addition, tholeiitic diabase dykes, associated with Meso-Cenozoic faults, complete the Gondwana story by illustrating its break-up and the development of the South Atlantic margins. Mild temperatures and dry weather in the end of September mark the beginning of spring, with flowers and fruits all over.

Bem Vindo!

We trust that you will enjoy the meeting, the ambience and assist in developing our understanding of the great southern continent Gondwana.

*The Editors*

