

# MG15 ROME 1-7 JULY 2018



CELEBRATING THE 50<sup>TH</sup> ANNIVERSARY OF THE  
FIRST NEUTRON STAR DISCOVERY MARKING  
THE BIRTH OF RELATIVISTIC ASTROPHYSICS



# FIFTEENTH MARCEL GROSSMANN MEETING

ON RECENT DEVELOPMENTS IN THEORETICAL AND EXPERIMENTAL GENERAL RELATIVITY, ASTROPHYSICS, AND RELATIVISTIC FIELD THEORIES

## SATELLITE MEETINGS

- **THIRD ZELDOVICH MEETING**, National Academy of Sciences of Belarus, Minsk, Belarus, 23-27 April 2018
- **FIRST MARKARIAN MEETING**, National Academy of Sciences, Yerevan, Armenia, 21-25 May 2018
- **SECOND JULIO GARAVITO ARMERO MEETING ON RELATIVISTIC ASTROPHYSICS**, Bucaramanga, Colombia 30 July - 3 August, 2018
- **THIRD CESAR LATTES MEETING**, Rio de Janeiro, Brazil, 6-10 August 2018

## LOCAL ORGANIZING COMMITTEE

Amati, L., Angelantonj, C., Barbiellini, G., Bassan, M., Battistelli, E., Belinski, V.A., Belli, L., Benedetti, R., Bernabei, R., Bianchi, M., Bianco, C.L., Bini, D., Buchert, T., Burgio, F., Capozziello, S., Chakrabarti, S.K., Chardonnet, P., Dall'Agata, G., De Angelis, A., De Bernardis, P., Della Valle, M., Di Virgilio, A., Ferrari, V., Frasca, S., Fraschetti, F., Fré, P., Frontera, F., Giavalisco, M., Giommi, P., Gionti, G., Ingrassio, G., Jantzen, T.R., Jetzer, P., Lee, H.-W., Lerda, A., Liberati, S., Longo, R., Mandolesi, N., Marmo, G., Menotti, P., Merafina, M., Morselli, A., Pani, P., Pelster, A., Piacentini, F., Pian, E., Procesi, C., Quevedo, H., Ricci, F., Riccioni, F., Rosati, P., Ruffo, S., Scarpetta, E.V., Tavani, M., Tino, G., Titarchuk, L.G., Vereshchagin, G.V., Xue, S.-S., Zen Vasconcellos, C.

## INTERNATIONAL ORGANIZING COMMITTEE

David Blair, Yvonne Choquet Bruhat, Thibault Damour, Paolo De Bernardis, C. W. Francis Everitt, Riccardo Giacconi, Theodor Haensch, Stephen Hawking, Christine Jones Forman, Roy Kerr, Hagen Kleinert, Jutta Kunz, Claus Laemmerzahl, Tsvi Piran, Jorge Rueda, Remo Ruffini (**Chairperson**), Misao Sasaki, Humitaka Sato, Rashid Sunyaev, Gerard 't Hooft, Steven Weinberg, Shing-Tung Yau

## INTERNATIONAL COORDINATING COMMITTEE

- **ALBANIA**: Hafizi, M. • **ARGENTINA**: Argüelles, C., Ghezzi, C.R., Mirabel, F., Romero, G.E. • **ARMENIA**: Aharonian, F., Sahakyan, N.
- **AUSTRALIA**: Blair, D., Ju, L., Lun, A., Manchester, D., Melatos, A., Quinn, P., Scott, S.M., Steele, J.D.,
- **AUSTRIA**: Aichelburg, P.C., Schindler, S.
- **BELARUS**: Kilin, S., Minkevich, A.V., Siutsou, I.A.
- **BELGIUM**: Henneaux, M. • **BOLIVIA**: Aguirre, C.B.
- **BOSNIA AND HERZEGOVINA**: Pasic, V.
- **BRAZIL**: Aguiar, O., Berkovits, J.N., Carneiro da Cunha, B., de Almeida, U.B., de Gouveia Dal Pino, E.M., de Souza Oliveira Filho, K., Guzzo, M., Hadjimichef, D., Klippert, R., Malheiro, M., Negreiros, R., Nóbrega Santos, F.A., Peres Menezes, D., Romero, C.A.F., Shellard, R., Teixeira Coelho, H., Villela, T., Zen Vasconcellos, C.
- **BULGARIA**: Yazadjiev, S.
- **CANADA**: Singh, D., Smolin, L., Turok, N.
- **CHILE**: Bunster Weitzman, C., Giacomini, A., Reisenegger, A.
- **CHINA** (Mainland): Cai, R.G., Cao, Z., Chang, J., Chen, J., Chen, X., Dai, Z., Feng, L.-L., Han, W.-B., Jing, Y., Li, T.-P., Lou, Y.-Q., Luo, J., Wang, Y., Wu, X.-P., Wu, Y.-L., Zhang, B., Zhang, S.-N., Zhao, G. • **CHINA (TAIWAN)**: Chen, C.-M., Chen, P., Lee, D.-S., Lee, W.-L., Ni, W.-T., Xiangdong, J., Yuan, Y.-F.
- **COLOMBIA**: Bagueño de Retes, P., Barret, W., Gonzalez, G., Granda Velasquez, L.N., Núñez, L., Pachón Contreras, L.A., Portilla, B., Valenzuela Toledo, C.A.
- **CROATIA**: Cvitan, M., Milekovic, M., Požek, Smolčić, V., Smolčić, I., M., Sokolić, F., Surić, T.
- **CUBA**: Perez Martinez, A., Quiros, I., Pérez Rojas, H.
- **CZECH REPUBLIC**: Bičák, J. • **DENMARK**: Naselsky, P.
- **EGYPT**: Tawfik, A.N., Wanas, M.I. • **ESTONIA**: Einasto, J., Saar, E. • **FINLAND**: Poutanen, J., Volovik, G.
- **FRANCE**: Brillat, A., Buchert, T., Chardonnet, P., Couillet, P., de Freitas Pacheco, J.A., Deruelle, N., Iliopoulos, J., Mignard, F., Veneziano, G. • **GEORGIA**: Lavrelashvili, G., Machabeli, G. • **GERMANY**: Biermann, P., Blumlein, J., Di Piazza, A., Fritzsche, H., Genzel, R., Gilmozzi, R., Hehl, F., Keitel, C., Kiefer, C., Mirzoyan, R., Neugebauer, G., Nicolai, H., Renn, J., Ringwald, A., Ruediger, A.
- **GREECE**: Batakis, N.A., Cotsakis, S., Vagenas, E.C.
- **HUNGARY**: Fodor, G., Levai, P. • **ICELAND**: Björnsson, G.
- **INDIA**: Chakrabarti, S.K., Iyer, B., Padmanabhan, T., Souradeep, T.
- **IRAN**: Mansouri, Mashhoon, B., Ru, S., Sobouti, Y.
- **IRELAND**: O'Murchada, N., Pe'er, A.
- **ISRAEL**: Milgrom, M., Piran, T.
- **ITALY**: Belinski, V.A., Bianchi, M., Bianco, C.L., Cherubini, C., Della Valle, M., Falciano, S., Filippi, S., Menotti, P., Merafina, M., Pani, P., Ricci, F., Treves, A., Vereshchagin, G.V., Vitale, S., Xue, S.-S. • **JAPAN**: Fujimoto, M.-K., Makishima, K., Nakamura, T., Sato, K., Shibata, M.
- **KAZAKHSTAN**: Aimuratov, Y., Boshkayev, K., Medeu, A., Mychelkin, E.G.
- **KYRGYZSTAN**: Gurovich, V.Ts. • **LIBYA**: Gadri, M.
- **MEXICO**: Breton, N., García-Díaz, A.A., Macías Alvarez, A., Mielke, E.W., Rodríguez, L.F., Quevedo, H.
- **NEW ZEALAND**: Visser, M., Wiltshire, D.
- **NORWAY**: Knutsen, H. • **POLAND**: Demianski, M., Lewandowski, J., Nurowski, P., Sokolowski, L.
- **PORTUGAL**: Costa, M., Lemos, J.P.S., Lobo, F., Moniz, P., Silva, L.O., da Silva, A. • **ROMANIA**: Visinescu, M.
- **RUSSIA**: Aksenov, A.G., Arkhangelskaja, I., Bisnovatyi-Kogan, G.S., Blinnikov, S.I., Chechetkin, V.M., Cherepaschuk, A.M., Khriplovich, I.B., Lipunov, V.M., Lukash, V.N., Novikov, I.D., Rudenko, V.N., Starobinsky, A.A.
- **SERBIA**: Pankov-Hzvojevic, Prodanovic, T., M., Sijacki, D., Živoslav L.T. • **SLOVAKIA**: Balek, V.
- **SLOVENIA**: Cadez, A. • **SOUTH AFRICA**: Colafrancesco, S., Larena, J., Maharaj, S.,
- **SPAIN**: Elizalde, E., Ibanez, J., Perez Mercader, J., Verdager, E. • **SWEDEN**: Abramowicz, M.A., Marklund, M., Ryde, F. • **SWITZERLAND**: Durrer, R., Jetzer, P.
- **TURKEY**: Aliev, A., Gurses, M.
- **UKRAINE**: Novosyadlyj, B., Zhuk, A., Zaslavski, O.B.
- **UK**: Cruise, A.M., Frenk, C.S., Green, M., Kibble, T., Perry, M., Mavromatos, N.
- **USA**: Abel, T., Ashtekar, A., Bardeen, J., Carlstrom, J., Cornish, N., Dermer, C., Fan, X., Flanagan, E., Fraschetti, F., Fryer, C., Incera, V., Jantzen, T.R. (**Chairperson**), Kolb, R., Lousto, C., Madau, P., Mathews, G., Matzner, R., Melia, F., Mester, J., Michelson, P., Nordtvedt, K., Parker, L., Pretorius, F., Pullin, J., Shapiro, I., Shapiro, S., Shoemaker, D., Smoot, G., Stiavelli, M., Teukolsky, S., van Nieuwenhuizen, P., Zhang, B.
- **UZBEKISTAN**: Zalaletdinov, R.M.
- **VATICAN CITY**: Gionti, G.
- **VENEZUELA**: Barreto, W., Herrera, L.
- **VIETNAM**: Long, H.N.

## THE MARCEL GROSSMAN MEETINGS

Since 1975, the Marcel Grossman Meetings have been organized in order to provide opportunities for discussing recent advances in gravitation, general relativity and relativistic field theories, emphasizing mathematical foundations, physical predictions and experimental tests. The objective of these meetings is to elicit exchange among scientists that may deepen our understanding of space-time structures as well as to review the status of ongoing experiments aimed at testing Einstein's theory of gravitation and relativistic field theories either from the ground or from space. Previous meetings have been held in Trieste (1975) and (1979), Shanghai (1982), Rome (1985), Perth (1988), Kyoto (1991), Stanford (1994), Jerusalem (1997), Rome (2000), Rio (2003), Berlin (2006), Paris (2009), and Stockholm (2012). Interested scientists should address a member from any one of the organizing committees or the conference secretariat.  
**website:** <http://www.icra.it/MG/mg14/>  
**email:** mg14@icra.it

## "SAPIENZA" THE UNIVERSITY OF ROME

With approximately 120,000 students and 60 Institutions, the University "la Sapienza", "Studium Urbis" in Latin, has become the largest center of learning in the Mediterranean. It was founded in 1303 by Pope Bonifacio VIII. In 1431 by the will of Pope Eugenio IV the University was given a fixed endowment. In 1527 the students gave origin to various Academies and the topics of teaching were further extended. In 1660 three major institutions were founded: the main library "Alessandrina", the splendid Botanical Garden on the Gianicolo Hills, both still operating today, the church "S. Ivo" and the palace of "la Sapienza", designed by Borromini, today part of the Senate of the Italian Republic. In 1935 part of the University was transferred to the new campus, designed by Piacentini, where Tullio Levi-Civita and Enrico Fermi were members of the Faculty of Sciences.

With the participation of (preliminary list)

