# RELATORIO DAS INDICAÇÕES ENVIADAS a IUPAP (16 Maio de 2011)

(por Ronald Cintra Shellard)

Indicações do Conselho para as comissões da IUPAP

Executive Council Vice President

#### Marcia Cristina Bernardes Barbosa

Instituto de Física Universidade Federal do Rio Grande do Sul Av Bento Gonçalves 9500 Porto Alegre, RS 91501-970 Phone: +55 51 3308 6420

FAX: 51 3308-7286

e-mail: marcia.barbosa@ufrgs.br

### **Background Information:**

Key reasons why this person should be elected:

Brazil has, by far, the largest physics community of Latin America acting on Physics and as such naturally qualifies for having representatives in key positions in IUPAP commissions. Her election would also strengthen gender equality in IUPAP related activities.

Dr. Barbosa is an active physicist working in Condensed Matter Physics. She has published more than 80 papers on prestigiuos journals. She was awarded the Nicholson Medal by the American Physical Society. She is the Director of her Institute.

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C2 – Symbols, Units and Constants: OK

# Vanderlei Salvador Bagnato Current Position: Full Professor

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Current address:

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Phone: +55 16 3373 9829 FAX: 55 16 3373 9811 e-mail: vander@ifsc.usp.br

#### Previous IUPAP Experience:

Have served on the C15 – Atomic, Molecular and Optical Physics Commission in the past.

### Background Info (why should be elected):

Prof. Bagnato has more than 360 published articles. He is a member of the Brazilian Academy of Sciences and the Academy of Sciences for the Developing World. His speciality is the study of Cold Atoms and Bose Einstein condensation. His group was the first one to produce atomic condensates in Latin America. Prof. Bagnato is the Director of the Optics and Photonics Research Center, a major project funded by the State of Sao Paulo funding agency FAPESP. The Center is a Multidisciplinary effort in research, technology transfer and education,

focussed in the field of optics and photonics, with applications in telecommunications, materials, laser engineering and life sciences.

Key reasons why this person should be elected:

Brazil has a largest physics community of Metrology issues and as such naturally qualifies for having representatives in key positions in IUPAP commissions.

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C3 – Statistical Physics: OK Francisco Castilho Alcaraz Current Position: Full Professor

Current address:

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Previous IUPAP Experience: None

# **Background Information:**

Prof. Alcaraz is leading expert on Statistical Physics. He has published more than 110 articles in prestigious physics journals, in colaboration with coleagues all over the world. Has participated many times on the STATPHYS series of conferences. He has been recently Head of the Departmento of Physics and Materials Science of his university, one of the leading in the area in Brazil.

Key reasons why this person should be elected:

Brazil has, by far, the largest physics community of South-America acting on Statistical Physics and as such naturally qualifies for having representatives in key positions in IUPAP commissions.

C4 – Cosmic Rays: OK **Ronald Cintra Shellard** 

**Current Position:** Current address:

Centro Brasileiro de Pesquisas Físicas (CBPF)

Rua Xavier Sigaud 150

Rio de Janeiro, RJ 22290-180 Phone: +55 21 2141 7331 FAX: +55 21 2141 7400 e-mail: shellard@cbpf.br

Previous IUPAP Experience: Is currently an Associate Member of the C4. Was an Associate Member of the C11 Commission (1984-1991)

**Background Information:** 

Prof. Shellard has more than 300 papers on his name, published in prestigious journals. He has participated in the DELPHI collaboration at CERN and is curently part of the collaboration which is running the Pierre Auger Observatory. He is vice president od the Brazilian Physical Society and Deputy Director of the Centro Brasileiro de Pesquisas Físicas (CBPF).

Key reasons why this person should be elected:

Brazil has a large tradition on the area of Cosmic Ray Physics, going back to the time of Gleb Wataghin and Cesare Lattes. Brazil is proposing to host the 2013 Internacional Cosmic Ray Conference in Rio de Janeiro.

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C6 – Biological Physics: OK Rita Maria Cunha de Almeida

Current Position: Associate Professor

Current address: Instituto de Física

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FAX: +51 3308-7286 e-mail: rita@if.ufrgs.br

Previous IUPAP Experience: None

## **Background Information:**

Dr. de Almeida is a theoretical physicist who has published more than 50 papers on prestigious journals. Her main theme of work in the alst few years has been that of biological cell systems, doing simulation of complex systems.

Key reasons why this person should be elected:

Brazil has, by far, the largest Biological Physics community of Latin America and as such naturally qualifies for having representatives in key positions in IUPAP commissions. Her election would also strengthen gender equality in IUPAP related activities.

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C8 - Semiconductors: OK

#### **Belita Koiller**

Current Position: Full Professor

Current address: Instituto de Física

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Previous IUPAP Experience:

It is currently a member of the C8 (Semiconductors) Commission

# Background Info (why should be elected)

Prof. Belita Koiller, in particular, is an active member of the Brazilian community working in that area. She is well known abroad and is a member of the Brazilian Academy of Sciences and a member of the American Physical Society Council. She has received Unesco/L'Oréal Prize for Women in Science (Latin America) and she is a Guggenheim Fellow.

## Key reasons why this person should be elected:

Brazil has, by far the largest physics community of Latin America working on Semiconductors and as such naturally qualifies for having representatives in key positions in IUPAP commissions. Her election would also strengthen gender equality in IUPAP related activities.

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C9 – Magnetism: OK

Elisa Maria Baggio Saitovitch Current Position: Full Professor

Current address:

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Rua Xavier Sigaud 150

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Previous IUPAP Experience: NONE

#### **Background Information:**

Prof. Saitovitch has more than 280 papers published on prestigious journals under har name. She has a long experience on organizing conferences in Brazil and collaborating, as well, with others organized abroad. She is very active in advancing women in science having organized conferences on the topic. She is well known abroad and has advised 23 PhD thesis, most of students coming from outside Brazil.

#### Key reasons why this person should be elected:

Brazil has, by far, the largest physics community of Latin America working in the area of Magnetism and as such naturally qualifies for having representatives in key positions in IUPAP commissions. Her election would also strengthen gender equality in IUPAP related activities.

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C10 - Structure and Dynamics in Condensed Matter: OK

## Marco Aurelio Pinheiro Lima

Current Position: Full Professor

Current address:

Universidade Estadual de Campinas, Instituto de Física Gleb Wataghin,

Departamento de Eletrônica Quântica.

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# Previous IUPAP Experience:

Has organized two satélites meetings to the ICPEAC in 2005.

#### **Background Information**

Dr. Pinheiro Lima is a renown specialist in Condensed Matter Physics, in particular on the área of low energy electron and pósitron scattering by molecules. He has published more than 120 journal articles, having received more than 1700 citations. He is one of the editors of the European Physical Journal D.

#### Key reasons why this person should be elected:

Brazil has, by far, the largest Condensed Mater Physics community in Latin America and as such naturally qualifies for having representatives in key positions in IUPAP. Dr. Lima is currently the Director of the Science and Technology of Bioethanol Laboratory, part of the institutes of the Brazilian Ministry of Science and Technology focused on Energy questions

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### C11 – Particles and Fields: OK

### Sergio Ferraz Novaes

Current Position: Full Professor

Current address:

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e-mail: Sergio.Novaes@cern.ch

#### Previous IUPAP Experience:

Was member of the International Committee for Future Accelerator (ICFA) representing the "Other Countries" during the 2005-2007 term. Currently is the South America representative at the Standing Committee on Interregional Connectivity (SCIC) of ICFA since 1999.

#### **Background Information**

Prof. Novaes has more than 300 papers under his name. He is part of the CMS collaboration having worked on the past at the Dzero experiment. Has published extensively on theoretical papers on phenomenology of particle physics.

## Key reasons why this person should be elected:

Brazil has, by far, the largest High Energy Physics community in Latin America and as such naturally qualifies for having representatives in key positions in IUPAP. Brazilian physicists participate actively in experiments at CERN and Fermilab.

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C12 – Nuclear Physics: OK

Alinka Lépine-Szilv

Current Position: Full Professor

**Current address:** 

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#### Previous IUPAP Experience:

Prof. Lépine-Szily is currently a member of the C12 – Nuclear Physics Commission. It is currently the President of the Latin American Association for Nuclear Physics and its applications. Was member of working group WG9 on Nuclear Cooperation in Nuclear Physics IUPAP (2005).

# **Background Information**

Dr. Lepine-Szily in particular is an active member of the Brazilian Nuclear Physics community, she is key person of the project Radioactive Ion Beams in Brazil (RIBRAS), planned for the Pelletron-Linac complex in Sao Paulo, and she is wellknown abroad. She has published more than 110 papers in prestigious journals. She was awarded the Medal Arany János, by the Hungarian Academy of Sciences (2010).

### Key reasons why this person should be elected:

Brazil has, by far, the largest nuclear physics community of Latin America and as such naturally qualifies for having representatives in IUPAP commissions. Her appointment would also strengthen gender equality in IUPAP related activities.

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C13 – Physics for Development: OK **Paulo Murilo de Castro Oliveira** 

Current Position: Full Professor

Current rosition. Fun i rolessor Current address: Instituto de Física Universidade Federal Fluminense Campus da Praia Vermelha Niterói, RJ 24210-346

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Previous IUPAP Experience:

Served two terms at the C13 Commission.

## **Background Information:**

Prof. Paulo Murilo de Castro Oliveira is an active member of the Brazilian community working on statistical and computational physics, is known abroad. He is a Member of the Brazilian Academy of Science. Has participated in many committees in Brazil on the promotion os Sciences in other countries in Latin America.

Key reasons why this person should be elected:

Brazil has, by far, the largest physics community of Latin America and as such naturally qualifies for having representatives in key positions in IUPAP commissions.

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C14 - Physics Education: OK

#### Roberto Nardi

**Current Position: Associate Professor** 

**Current address:** 

Universidade Estadual Paulista Júlio de Mesquita Filho, Faculdade de Ciências de Bauru,

Departamento de Educação.

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Vargem Limpa

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Previous IUPAP Experience: Have participated in the series Inter-American Conference on Physics Education and in the International Organization for Science and Technology Education

### **Background Information**

Prof. Nardi is an active member of that community with large experience. He has organized many of the meetings of this community in Brazil and in Latin America and have participated in meetings on thi theme across the world. He has published more than 80 articles in prestigious journals and made more than 300 contributions, published in events proceedings.

Key reasons why this person should be elected:

Brazil has a large community involved in improving Physics Education and very active at that.

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C15 – Atomic, Molecular and Optical Physics: OK

# **Eduardo Chaves Montenegro**

Current Position: Full Professor

Current address: Instituto de Física

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Caixa Postal 68528

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#### Previous IUPAP Experience:

Participation as Official Delegate in the 23rd General Assembly of IUPAP (1999) Atlanta GA, USA.

#### Background Information

Prof. Montenegro is a leading member of that community. He has published more than 110 papers in prestigious journals. He is a felow of the American Physical Society. He was involved in the organization of many conferences in Brazil and abroad.

Key reasons why this person should be elected:

Brazil has a large community of physicists working in Atomic, Molecular and Optical Physics and as such naturally qualifies for having representatives in key positions in IUPAP commissions.

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C16 - Plasma Physics: OK

Ricardo Magnus Osorio Galvão

Current Position: Full Professor

Current address:

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Previous IUPAP Experience: Current member of the C16

#### **Background Information**

Prof. Osorio Galvão is one of the leaders of that community and is well known by the plama physics community worldwide. He is the leader of the Tokamak Laboratory in São Paulo and is setting up the Brazilian Free Electron Laser Laboratory in Rio. Prof. Galvão has published more than 180 articles in prestigious journals in collaboration with scientists all over the world. He has a large experience in the Physics of Tokamaks, on the issue of wave instabilities in plasma, on Alfven waves and on technological application of plasmas. He is, at present, the director of the Centro Brasileiro de Pesquisas Fisicas. He is a member of the Brazilian Academy of Sciences, is a fellow of the Institute of Physics, in the United Kingdom. He was awarded the Sandoval Vallarta Prize at the International Centre for Theoretical Physics, in Trieste.

Key reasons why this person should be elected:

Brazil has a large community working on Plasma Physics and as such naturally qualifies for having representatives in key positions in IUPAP commissions.

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C17 - Quantum Electronics: OK

Sérgio Carlos Zilio

Current Position: Full Professor

Current address:

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Previous IUPAP Experience: None

**Background Information** 

Prof. Zilio is an active member of the Quantum Electronics community in Brazil. He has published more than 160 papers in prestigious journals in Physics, in collaboration with colleagues from all over the world. He has published, as well hundreds of contributions to conferences worldwide. He been Director of the Physics Department of the University of São Paulo (São Carlos campus).

Key reasons why this person should be elected:

Brazil has a large physics community working on quantum electronics and as such naturally qualifies for having representatives in key positions in IUPAP commissions

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C18 – Mathematical Physics: OK **Alfredo Miguel Ozorio de Almeida** 

Current Position: Full Professor

Current address:

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Previous IUPAP Experience: None

### **Background Information**

Prof. Osório de Almeida is one of the leading figures of that community in Latin America. He has collaborated extensively with scientist all over the world. Prof. Osório de Almeida has published more than 70 papers in prestigious journals in collaboration with scientista all over the world. He was honored with the National Order of Scientific Merit granted by the president of Brazil.

Key reasons why this person should be elected:

Brazil has a large community of physicists working on Mathematical Physics and as such naturally qualifies for having representatives in key positions in the IUPAP C 18 Commission.

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C20 – Computational Physics: OK

#### **Ronald Dickman**

Current Position: Full Professor

Current address:

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Universidade Federal de Minas Gerais

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Experiência prévia na IUPAP:

International Advisory Committee, StatPhys 23 (2007) and StatPhys 24 (2010).

**Background Information** 

Prof Dickman is very active in this area, having published more than 150 papers on prestigious journals. He belongs, as well, to the Board of Editors of the Journal of Statistical Physics. He has organized many conferences in Brazil and abroad on Statistical Physics and Computacional Physics.

Key reasons why this person should be elected:

Brazil has a large community of physicists working on problems Computational Physics and as such naturally qualifies for having representatives in key positions in the IUPAP C 20 Commission.

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