# PRELIMINARY AGENDA

Grand Challenges Scholars Program Workshop:

August 5-7, 2019

*(Official Languages: Portuguese/English, Simultaneous Translation available)*

<table>
<thead>
<tr>
<th>Day 0 - August 5, 2019</th>
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<tbody>
<tr>
<td>14:00h Registration Open</td>
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<tr>
<td>16:00h Afternoon - GCSP Brazil</td>
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<tr>
<td><strong>Welcome and Opening Remarks.</strong></td>
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<tr>
<td>Sandra Goulart, Rector, Universidade Federal de Minas Gerais - UFMG</td>
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<tr>
<td>Francis Bogossian, President, Academia Nacional de Engenharia - ANE</td>
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<tr>
<td>Luiz Davidovitch, President, Academia Brasileira de Ciências - ABC</td>
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<tr>
<td>João Luiz Filgueiras de Azevedo (President) Conselho Nacional de Desenvolvimento Científico e Tecnológico- CNP,</td>
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<td>Evaldo Vilela, President, Fundação de Amparo a Pesquisa do Estado de Minas Gerais – FAPEMIG</td>
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<td>Cícero Murta Diniz Starling, Dean, School of Engineering, Universidade Federal de Minas Gerais - UFMG</td>
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<td>Virginia Ciminelli, Chair, Grand Challenges Scholar Program Workshop – Brasil, and Professor, Universidade Federal de Minas Gerais - UFMG</td>
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<tr>
<td>17:00h Guest speaker: Paulo Artaxo (Universidade de São Paulo - USP):</td>
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<tr>
<td><em>The Role of Science and Engineering in Climate Change and on the Implementation of the Sustainable Development Goals</em></td>
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<tr>
<td>17:30h Guest speaker: B.L. Ramakrishna (NAE GCSP Network Office):</td>
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<td><em>Engineering: The enabling Discipline for the 21st Century</em></td>
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<td>18:00h Welcome Reception</td>
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<tr>
<th>Day 1 - August 6, 2019</th>
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<tr>
<td>8:00h Registration Open</td>
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<tr>
<td>9:00h Welcome and Opening Remarks</td>
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<tr>
<td>Organizing Committee and the three Academies</td>
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<tr>
<td>9:30h Keynote Address</td>
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Moderator
Francis Bogossian
President, Academia Nacional de Engenharia

The NAE’s Grand Challenges for Engineering and the GCSP
Richard Miller
President, Franklin W. Olin College of Engineering

10:10am Q&A

Coffee-Break – 10:30-11:00h

11:00h Successful Implementation of GCSP

Moderator
Edson Watanabe
Director COPPE/Universidade Federal do Rio de Janeiro

Rapporteur
Nelson Martins
Co-chair, GCSP Brazil
Electrical Energy Research Center - CEPEL

11:10h GCSP Competencies
Rama Ramakrishna
Director, NAE GCSP Network Office
U.S. National Academy of Engineering

11:30h Fulfilling GCSP Competencies: Exemplars
Lueny Morell
Vice Dean of the School of General Engineering
Beihang University

11:50h Q&A

12:30- 14:00h – Lunch

14:00h Panel: GCSP fostering modern global engineer competencies including entrepreneurship

Moderator
José Roberto Boisson de Marca  
Co-chair, GCSP Brazil  
*Pontificia Universidade Católica- PUC/Rio*

**Rapporteur**

Mario Neto Borges  
Former President, Fundação de Amparo a Pesquisa do Estado de Minas Gerais - FAPEMIG and Conselho Nacional de Desenvolvimento Científico e Tecnológico - CNPq  
*Universidade Federal de São João Del Rei – UFSJ*

**Panelists** *(14:10 – 15:00h)*

Alessandro Moreira  
Vice-president  
*Universidade Federal de Minas Gerais - UFMG*

Mauricio Guedes  
Director  
*Fundação de Amparo à Pesquisa do Estado do Rio de Janeiro – FAPERJ*

Alvaro Prata  
Former National Secretary of Innovation and Professor  
*Universidade Federal de Santa Catarina – UFSC*

**15:00h** Q&A

**15:30- 16:00h – coffee-break**

**16:00h** Brainstorming session: Making the Challenges pertinent to Brazil.

**Moderator**

Evaldo Vilela  
President,  
*Fundação de Amparo a Pesquisa ao Estado de Minas Gerais – FAPEMIG*

**Rapporteur**

Ivan Marques de Toledo Camargo  
Former President,  
*Universidade de Brasília – UnB*
Panelists (16:10 – 17:00h)
Jorge Guimaraes
President,
Empresa Brasileira de Pesquisa e Inovação Industrial - EMBRAPPI

Helio Waldman
Former president, Universidade Federal do ABC
Universidade de Campinas - UNICAMP

Tatiana Dumêt
Dean, School of Engineering
Universidade Federal da Bahia – UFBA

17:00h - Q&A

17:30h Summary – Day 1

Day 2- August 7, 2019

8:30h Panel: The Value of GCSP to Employers

Moderator

Al Bunshaft
Vice President,
Dassault Systems

Panelists (9:00-10:00h)

André Gasparotti
Director, Technology Development
Embraer/Boeing Brasil Comercial

Camila Dias de Miranda Ribeiro
General Manager, Human Resources & Communication
Nexa Resources
João Irineu Medeiros Neto,
Director, Regulatory Affairs
Fiat-Chrysler Automobiles

Ricardo Valadares Gontijo,
Founding and Board Chairman
Direcional Engenharia

10:00h - Q&A

Coffee-Break – 10:30-11:00h

11:00h Panel: The GCSP and other International Collaboration Experiences: Perspectives of students and recent graduates

Moderator

Richard Magdalena Stephan
Universidade Federal do Rio de Janeiro - COPPE/UFRJ

Rapporteur

Luiz Machado
Co-chair, GCSP Brazil
Vice-Dean, School of Engineering,
Universidade Federal de Minas Gerais-UFMG

Panelists (11:00- 12:00h)

Siena Applebaum
Rising Senior, Mechanical Engineering
University of Southern California – USC

Barbara Rosado
Ph.D. Candidate in Electrical Engineering
Universidade Estadual de Campinas – UNICAMP

José Oniram Vilaverde
Ph.D. Candidate in Mechatronics Systems
Universidade de Brasilia – UNB, IEEE Brasil
Bruno Gomes Angelo,
Senior, Major in Mechanical Engineering
Universidade Federal de Minas Gerais – UFMG

12:00h - Q&A

12:30-13:30h Lunch

13:30h Brainstorming Session: Implementing GCSP in Brazil

**Moderator**

Ronaldo Tadeu Pena
*Former President and Emeritus Professor*
Universidade Federal de Minas Gerais – UFMG

**Rapporteur**

Vilma Alves de Oliveira
*University of São Paulo - São Carlos*
*President, Brazilian Society of Automation - SBA*

**Panelists (13:30- 14:30h)**

Valder Steffen Jr.
*President*
Universidade Federal de Uberlândia

José Roberto Cardoso
*Former Dean and Professor*
Escola Politécnica
Universidade de São Paulo

Valquiria Villas Boas Gomes Missell
*Universidade de Caxias do Sul - UCS*
*Academic Director*
Brazilian Association of Engineering Education – ABENGE

Flávio Paulino de Andrade e Silva
*Executive Project Manager*
MRV Engenharia e Participações S.A

14:30 - Q&A

15:00- 15:30h – coffee-break
15:30h The Elements of a Successful GCSP Program

Moderator

Rama Ramakrishna -
Director, NAE GCSP Network Office
U.S. National Academy of Engineering

Panelists

Cathy Leslie
Executive Director, Engineers Without Borders-EWB
President, EWB International

Lueny Morell
Vice Dean of the School of General Engineering
Beihang University

16:00 – 17:00h Working Session: Wrap-up and Next Steps

Rapporteurs and Organizing Committee

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<tr>
<th>Day 3- August 8, 2019</th>
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<tr>
<td><strong>Morning</strong></td>
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<td>Extra Activity for Institutions (with prior sign-up)</td>
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<td>Preparing a GCSP Proposal aligned with each Institution’s goals</td>
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<td>Rama Ramakrishna</td>
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<td>Working session for Brazilian Universities and Institutions for preparing the proposal to join the GCSP</td>
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