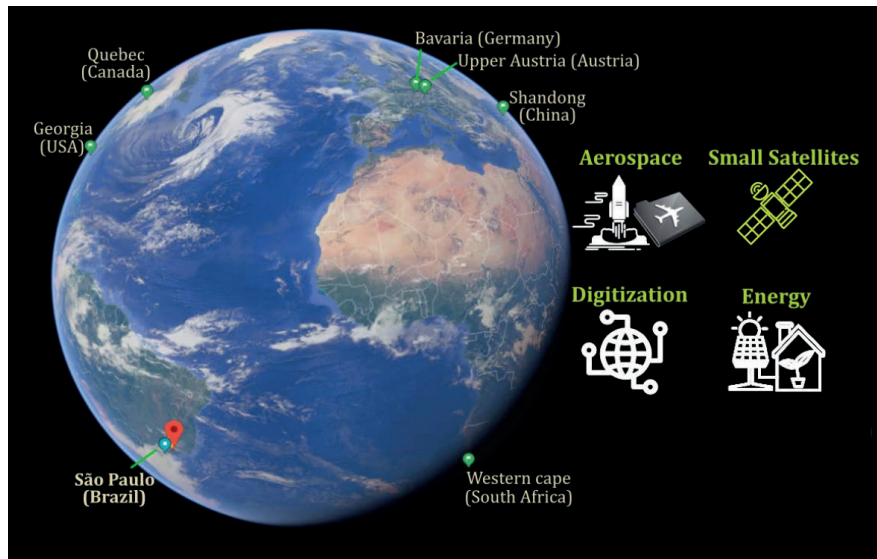


Regional Leadership Summit (RLS)

Annual Meeting 2019 at LIT, INPE, São José dos Campos

27 – 31 May



Introduction

From 27 - 31 May, 2019, the Regional Leadership Summit will meet at LIT (Laboratory of Integration and Tests) of the INPE (National Institute for Space Research) in the city of São José dos Campos, the state of São Paulo, Brazil.

The Regional Leadership Summit (RLS) is a multilateral political forum of seven partner regions: Bavaria (Germany), Georgia (USA), Quebec (Canada), São Paulo (Brazil), Shandong (China), Upper Austria (Austria), and Western Cape (South Africa). The RLS covers four themes: Small satellites, Aerospace, Energy, and Digitization. These themes run in parallel sessions.

This meeting will be offering researchers and leaders from RLS, an exceptional opportunity to exchange knowledge and results of current studies and to discuss research about the projects of Small Satellites, Aerospace, Energy, and Digitization.

The local organizing committee would like to welcome you all to the state of São Paulo and in particular to the LIT-INPE.

São Paulo, May 2019

Gilberto de Martino Jannuzzi (FEM-UNICAMP)

Geilson Loureiro (LIT-INPE)

Euclides de Mesquita Neto (FEM-UNICAMP)

General Program

TIME	MAY 27TH – MON	MAY 28TH – TUES	MAY 29TH – WED	MAY 30TH – THURS	MAY 31TH – FRI
8h – 8h30	Registration	Registration		Technical Visit Sugar-ethanol mill and CNPEM	Visit EMBRAER
8h30 – 9h20	Opening	Area Activity	RLS-Sciences Sectoral meetings		
9h20 – 10h10	Small Sats course	Area Activity			
10h10 – 10h30	Coffee-break	Coffee-break	Coffee-break		
10h30 – 11h20	Area Activity	Area Activity	RLS-Sciences Global meetings		
11h20 – 12h10	Area Activity	Area Activity			
12h10 – 14h	Lunch	Lunch	Lunch		Lunch
14h – 14h50	Area Activity	Area Activity	RLS-Sciences Joint Activities		VISIT LIT
14h50 – 15h40	Area Activity	Area Activity			
15h40 – 16h	Coffee-break	Coffee-break	Coffee-break		
16h – 16h50	Area Activity	Area Activity	Closing		
16h50 – 17h40	Area Activity	Smart Region			
17h40 – 18h30	Keynote VISIONA	Smart Region			
18h30 – 20h30	Reception Cocktail	Dinner			

Small Satellites

Small Sat course will be on 27 May and Small Sat seminars will be on 28 May.

TIME	MAY 27TH – MON	MAY 28TH – TUES
8h – 8h30	Registration	An Overview of LIT Small Satellites Activities Geilson Loureiro – São Paulo (Brazil)
8h30 – 9h20	Opening	Internet of Space by small satellites Klaus Schilling – Bavaria (Germany)
9h20 – 10h10	Small Sats course	ADCS Commissioning of CubeSats and an Overview on the Western Cape's Small Satellite Activities Herman Steyn – Western Cape (South Africa)
10h10 – 10h35	Coffee-break	Coffee-break
10h35 – 12h15	Small Sats course	Small Satellite ADCS Simulations, Using EOS and ADCS Simulation Tool Lourens Visagie – Western Cape (South Africa)
10h35 – 11h25		
11h25 – 11h50		Orbital Engineering SA. Expertise in Space Technologies Célio Costa Vaz – São Paulo (Brazil)
11h50 – 12h15		Validation Tests of Attitude Determination Software for Nanosatellite Embedded Systems Luiz S. Martins-Filho – São Paulo (Brazil)
12h15 – 14h	Lunch	Lunch
14h – 15h40	Small Sats course	The VCUB spacecraft Himilcon de Castro Carvalho – São Paulo (Brazil)
14h – 14h25		
14h25 – 14h50		An overview of Initiatives Related to NanoSats at INPE, for Scientific and Technological Missions and for Educational Purposes Walter Abrahão dos Santos – São Paulo (Brazil)
14h50 – 15h15		An Overview of CRON Small Satellites Activities Otavio Santos Cupertino Durão – São Paulo (Brazil)
15h15 – 15h40		An Overview of the ITA Small Satellites Activities and Space Propulsion Development Applied to Small Satellites Luis Eduardo Vergueiro Loures da Costa – São Paulo (Brazil)
15h40 – 16h	Coffee-break	Coffee-break
16h – 17h40	Small Sats course	The Quebec Small Satellite Activities Giovanni Beltrame – Quebec (Canada)
16h – 16h50		
17h40 – 18h30		EMBRAER Seminar

Aerospace-Digitalization

TIME	MAY 27TH – MON	MAY 28TH – TUES
08h00 – 08h30	Registration	Registration
08h30 – 09h20	General Opening – RSL Challenges of Science, Technology and Innovation in Brazil João Azevedo – CNPq President	Experimental and Numerical Investigations of CH4/O2 Rocket Combustion Oskar J. Haidn – Technical University Munich
09h20 – 10h10	Status and Perspectives of Worldwide Satellite Navigation Guenter W. Hein – Munich Aerospace e.V	Smart Materials Applications: Wind Energy Harvesting, Vibration Attenuation and Smart Metamaterials Carlos de Marqui – University of São Paulo EESC
10h10 – 10h30	Coffee Break	Coffee Break
10h30 – 11h20	Path Planning For Autonomous Aerial Vehicles Corné Edwin van Daalen – Stellenbosch University	Flight Management Systems for Mobility Luis Rodrigues – Concordia University
11h20 – 12h10	Aerospace Electric + Kash Khorasani – Concordia University	Overview of AI activities in São Paulo Roberto Marcondes Cesar – University of São Paulo
12h10 – 14h00	Lunch	Lunch
14h00 – 14h50	Mini Course Smart Materials and Structures – Part 1 Domingos Alves Rade – ITA	Machine Learning tools for Internet-connected Systems Jia Yuan Yu – Concordia University
14h50 – 15h40	Mini Course Smart Materials and Structures – Part 2 Domingos Alves Rade – ITA	Existing initiatives in artificial intelligence in Québec Patrick Hyndman – Director of Canadian and International Partnerships at the Ministry of Economy and Innovation of Québec
15h40 – 16h00	Coffee Break	Coffee Break
16h00 – 16h50	High-Fidelity Simulations and Reduced Order Modeling of Dynamic Stall William Roberto Wolf – University of Campinas	Machine Learning in Digital Transformation Dr. Markus Steindl – RISC Software GmbH
16h50 – 17h40	Contributions from Digitalization to Aerospace: a survey of ITA activities and challenges Emilia Vilani – ITA	Smart Regions Meeting
17h40 – 18h30	Keynote Presentations SPACE: A realm of opportunities Himilcon Carvalho – Visiona – Director for Space Technology	Smart Regions Meeting
18h30 – 20h00	Reception	
20:00 – 22:00		Dinner

TIME	MAY 27TH – MON	MAY 28TH – TUES
8h – 8h30	Registration	Coffee
8h30 – 9h20	Opening	Energy Tariffs Ulrich Terblanche – Western Cape
9h20 – 10h10	RLS Energy Network and São Paulo’s energy system Overview on the network’s roadmap “Regional Renewables Alliance” and São Paulo’s energy system Sebastian Goers – Upper Austria, Gilberto Jannuzzi – São Paulo	Smart Grids Campus Sustentável Madson Cortes de Almeida – Unicamp – São Paulo
10h10 – 10h30	Coffee-break	Coffee-break
10h30 – 11h20	Climate Highlights of the FAPESP Global Climate Change Program and International Cooperation Jean Ometto – FAPESP – São Paulo)	Smart Grids Challenges for Future Renewable Electrical Energy Supply and Solutions Pettter Zeller – Upper Austria
11h20 – 12h10	Climate Energy Systems and the environment – a sensitive interface Ralf Ludwig (LMU München), Maximilian Kadzioch – Bavaria	Smart Grids Decentralized Energy Production and Storage Cases Reinhart Schwaiberger, Maximilian Mock – Bavaria
12h10 – 14h	Lunch	Lunch
14h – 14h50	A Brief Review of Our Recent R-D Activities on Energy Efficiency - Lessons Learned, Current Challenges and Future Perspective Louis Gosselin	Québec’s Smart Energy Network : Partnership for the Energy Transition Simon Barnabé and Stéphanie Simard
14h50 – 15h40	Biofuels Biofuel development in Shandong Keng Chung – Shandong	Smart Energy / Smart Grids Smart use of ICTs in a context of energy transition and GHG emissions reduction Roy Stevenson Soler Chisabas – Québec
15h40 – 16h	Coffee-break	Coffee-break
16h – 16h50	Biofuels Life Cycle Assessment and socio-economic analysis of advanced biofuels production Fazeni-Fraisl – Upper Austria	Student researcher activities Simon Barnabe – Québec
16h50 – 17h40	Biofuels / Power-to-X Current research and developments on integrated “Power-to-fuel” and “Biomass-to-fuel” systems Sebastian Fendt – Bavaria	Smart Region Sebastin Goers – Upper Austria Together with RLS-Energy Network and RLS-Sciences researchers
17h40–18h30	Common Activities	
18h30–20h30	Reception Cocktail	Dinner Student presentation

TIME	29TH WED	30TH THURS	31TH FRI	
8h – 8h30	Coffee	Technical Visit Sugar-ethanol mill	Visit EMBRAER	
8h30 – 9h20	Internal RLS-Energy Network meeting • Roadmap (WP4, WP6) • Further steps (2020's topic 'Smart Region', collaboration, dissemination, exchange...)			
9h20 – 10h10	Sebastian Goers – Upper Austria WKS – Bavaria Muringathuparambil – Western Cape			
10h10 – 10h30	Coffee-break			
10h30 – 11h20	RLS-Sciences			
11h20 – 12h10				
12h10 – 14h	Lunch			Lunch
14h – 14h50	RLS-Sciences			VISIT LIT
14h50 – 15h40				
15h40 – 16h	Coffee-break			
16h – 16h50	Closing			
16h50 – 17h40				

Speakers

Alexander Kleinschrodt	University of Würzburg
Carlos De Marqui Junior	São Carlos School of Engineering, University of Sao Paulo
Célio Costa Vaz	Orbital Engenharia
Corné Edwin van Daalen	Stellenbosch University
Domingos Alves Rade	Aeronautics Institute of Technology
Emilia Vilani	Aeronautics Institute of Technology
Euclides de Mesquita Neto	University of Campinas - Unicamp - Brazil
Geilson Loureiro	National Institute for Space Research (INPE)
Gilberto M Jannuzzi	University of Campinas
Giovanni Beltrame	Polytechnique Montreal
Guenter W. Hein	Munich Aerospace e.V.
Herman Steyn	University of Stellenbosch
Himilcon de Castro Carvalho	Visiona Tecnologia Espacial S.A.
Jayson Campos de Souza	Emsisti
Jean Ometto	São Paulo Research Foundation
Jia Yuan Yu	Concordia University
João Azevedo	National Council for Scientific and Technological Development
Karin Fazeni-Fraisl	Energy-Institute at the Johannes Kepler University
Karin Fazeni-Fraisl	Energy Institut at the Johannes Kepler University
Kash Khorasani	Concordia University
Keng Chung	Qingdao Institute of Bioenergy and Bioprocess Technology
Klaus Schilling	University Würzburg
Louis Gosselin	Department of Mechanical Engineering, Université Laval
Louis Gosselin	Université Laval
Lourens Visagie	University of Stellenbosch
Luis Eduardo Vergueiro	Aeronautics Institute of Technology
Loures da Costa	
Luis Rodrigues	Concordia University

Speakers

Luiz Carlos Pereira da Silva	University of Campinas
Luiz de Siqueira Martins Filho	Universidade Federal do ABC - UFABC
Madson Cortes de Almeida	University of Campinas
Markus Steindl	RISC Software GmbH
Maximilian Kadzioch	Ludwig-Maximilians-University of Munich
Maximilian Mock	Technologiezentrum Energie (University of Applied Sciences Landshut)
Oskar J. Haidn	Technical University Munich
Oskar J. haidn	Technical University Munich
Otavio Santos Cupertino Durão	National Institute for Space Research (INPE)
Patrick Hyndman	Ministry of Economy and Innovation of Québec
Peter Zeller	University of Applied Sciences Upper Austria Electrical Engineering
Ralf Ludwig	Ludwig-Maximilians-Universitaet Muenchen
Reinhart Schwaiberger	TZE, UAS Landshut
Roberto Marcondes Cesar	University of São Paulo
Roy Stevenson Soler Chisabas	National Institute for Space Research (INPE)
Sebastian Fendt	Bavaria - Technische Universität München
Sebastian Goers	Energieinstitut at the Johannes Kepler University Linz
Simon Barnabé	Université du Québec à Trois-Rivières
Stephanie Simard	Université du Québec à Trois-Rivières
Ulisses Pereira Sampaio	Visiona Tecnologia Espacial S.A.
Ulrich Terblanche	Centre for Renewable and Sustainable Energy Studies (CRSES)
Walter Abrahão dos Santos	National Institute for Space Research (INPE)
Willem Hermanus Steyn	University of Stellenbosch
William Wolf	University of Campinas

Short Bios

Alexander Kleinschrodt

Researcher Computer Science VII: Robotics and Telematics Department of Computer Science, Julius-Maximilians Universität Würzburg. Teaching activities (Robotics I & II, Robotics Lab, Spacecraft system Design, Space Dynamics. Support of ground station activities for the UWE-3 & UWE-4 small satellite missions. Development of a ground station network to support small satellite earth observation missions: Project TOM. Investigation of a small satellite constellation for railway monitoring: Project GP-AIMS. Communication subsystem design (Concept-level): Project NetSat



Célio Costa Vaz

CEO of Orbital Engenharia. He graduated in Mechanical Engineering from University of Brasília – UnB (1981), achieved M.Sc. degree at Systems Analysis and Applications from National Institute for Space Research-INPE (1989) and Doctorate degree at Aeronautical and Mechanical Engineering from Aeronautics Technology Institute-ITA (2000). He worked for more than 15 years in the Engineering and Space Technology Division (ETE) of INPE, where he acquired vast experience in Systems Engineering and Satellite Subsystems. He participated in the developments of the Data Collecting Satellite (SCD) and China-Brazil Earth Resources Satellite (CBERS) Programs. In 2001, he founded the company Orbital Engenharia, which works in the areas of design, development, manufacturing, assembly, integration and testing of space technologies for the Brazilian Space Program related to: - Satellite Systems Engineering; Launching Vehicles Systems Engineering; Liquid Propulsion; Suborbital Microgravity Platforms for conducting scientific experiments under microgravity environment, including software development and control systems. In particular, he coordinated the following projects of Solar Generators for INPE's Satellites: CBERS 2B, CBERS 3, CBERS 4, CBERS 4A, Multi Mission Platform PMM-Amazônia-1, Multi Mission Platform - LATTES, and for projects of Brazilian Universities: Cubesats SERPENS and 14 BISat.



Corné van Daalen

Corné van Daalen obtained his masters degree in electronic engineering in 2006 and his PhD in electronic engineering in 2010, both at Stellenbosch University, South Africa. For his PhD, he developed a method for probabilistic collision prediction for autonomous vehicles. He is currently a senior lecturer in the Computer and Control Systems group in the Department of Electrical and Electronic Engineering at Stellenbosch University, where he teaches courses in electrical and electronic engineering at both undergraduate and postgraduate level. His research field is autonomous vehicles, focussing on all aspects of autonomous navigation, including path planning, collision prediction, mapping, localisation, and multi-target tracking.

He forms part of the Electronic Systems Laboratory (ESL) at Stellenbosch University, which consists of postgraduate engineering students, engineers and academics that do research on autonomous vehicles (including unmanned aerial vehicles (UAVs), autonomous terrestrial vehicles and autonomous underwater vehicles (AUVs)) as well as satellite systems.

Short Bios



Domingos A. Rade

Domingos A. Rade holds a Mechanical Engineering degree (Federal University of Uberlândia – UFU, Brazil, 1984), a Master of Science in Aeronautical Engineering (Aeronautics Institute of Technology – ITA, Brazil, 1987), and Doctorate in Sciences for the Engineer (University of Bourgogne Franche – Comté, France, 1994). He has been Associate Professor and Full Professor at the Federal University of Uberlândia (1985-2015) and is currently Professor at the Division of Mechanical Engineering of the Aeronautics Institute of Technology. He has served as invited professor at the University of Bourgogne Franche – Comté, National Institute of Applied Sciences of Rouen and National Engineering School of Mans, both in France. He has held the following administrative positions at UFU: head of the Physics Department, Coordinator of the undergraduate course of Aeronautical Engineering, and Director of the School of Mechanical Engineering. At ITA he is currently the head of the Department of Mechanical Design. He has been the vice-coordinator of the National Institute of Science and Technology of Smart Structures in Engineering (2009-2014) and member and coordinator of the Advising Board of Engineering and Architecture of the Minas Gerais Research Foundation – FAPEMIG (2008-2012). He is currently member of the Advising Board of Mechanical, Aerospace, Naval and Oceanic Engineering of the Brazilian Research Council – CNPq. He is the Scientific Director of the Brazilian Society of Mechanical Sciences and Engineering. He holds research award for distinguished research performance from CNPq level 1B. His teaching and research activities are devoted to structural dynamics and vibrations, with emphasis on inverse problems, vibration control, probabilistic structural mechanics, smart materials and structures, and fluid-structure interaction. He has advised 27 master dissertations and 17 doctorate theses. He has co-authored 51 refereed journal papers, 7 book chapters and the textbook Kinematics and Dynamics for Engineering (in Portuguese), published by Elsevier.



Geilson Loureiro

He is the head of the Laboratory of Integration and Testing of INPE (The Brazilian Institute for Space Research, www.inpe.br) since February 2013. Geilson is a member of the Science and Technology Committee of INPE since May 2009. He is project leader at ISO (International Standardization Organization) Space Systems Engineering committee having worked on TRL (Technology Readiness Level) standard and now leading the development of a Systems Engineering Management standardization initiative.

He is professor of Systems Engineering at INPE and Technological Institute of Aeronautics (ITA, www.ita.br), in São José dos Campos, SP, BRAZIL. He is one of the founders and the president of the INCOSE (International Council on Systems Engineering) Brasil chapter since March 2012. He is a technologist at LIT (the Laboratory of Integration and Testing, www.lit.inpe.br) of INPE, since January 1988. Since then he has worked on many complex products (most of them satellites) life cycle processes such as: electronic manufacturing, assembly, integration, thermal-vacuum and EMI/EMC testing. He has 5 PhD and 20 Master completions since 2006. Themes include lean development, postponement, project teams, strategic planning, stakeholder engineering, requirements engineering, systems architecture, technology transfer, scalability, acquisition, design for integration, design for the environment, sustainability, organization architecture.

Short Bios



Gilberto De Martino Jannuzzi

Full Professor of Energy Systems at the Department of Energy, Mechanical Engineering Faculty, UNICAMP (University of Campinas), Senior Researcher at the Centre for Interdisciplinary Energy Studies at UNICAMP. Board Member of the Climate Change Research Program at FAPESP.

PhD from Cambridge University (UK), post-doctoral work at Lawrence Berkeley Laboratory, University of California-Berkeley. Visiting scientist at UNEP Energy Center, Denmark and University of Zaragoza, Spain, and others.

Executive Director of the International Energy Initiative, a Southern-conceived, Southern-led and Southern-located South-South-North partnership.



Giovanni Beltrame

Obtained his Ph.D. in Computer Engineering from Politecnico di Milano, in 2006 after which he worked as microelectronics engineer at the European Space Agency on a number of projects spanning from radiation-tolerant systems to computer-aided design. In 2010 he moved to Montreal, Canada where he is currently Professor at Polytechnique Montreal with the Computer and Software Engineering Department.

He was also Visiting Professor at the University of Tübingen in 2017/2018. Dr. Beltrame directs the MIST Lab, with more than 30 students and postdocs under his supervision. He has completed several projects in collaboration with industry and government agencies in the area of disaster response and space exploration. He is the principal investigator for the first university-made CubeSat in Quebec, and scientific director of the Quebec Nanosatellite Constellation project. His research interests include modeling and design of embedded systems, artificial intelligence, and robotics, on which he has published research in top journals and conferences.



Herman Steyn

Professor Herman Steyn is head of Satellite Engineering and Control Systems at Stellenbosch University (SU). He holds a Masters Degree in Electrical and Electronic Engineering from SU, a Masters Degree in Satellite Engineering from the University of Surrey in the UK, as well as a PhD from SU. Prof. Steyn's space experience started with the development of Africa's first fully indigenous satellite called SUNSAT during the late 90's at the SU as a postgraduate student project. He then had a four-year stint as Principal Engineer and Team Leader for satellite control systems at Surrey Satellite Technology Limited, where he participated in many European Space Missions, e.g. Rosetta where he lead the development of a momentum wheel for the Philae comet lander.

When he returned to South Africa in 2002, as Head of Product Development at SunSpace Information Systems (SA's first satellite engineering company), he helped to develop, build and commission earth observation satellites for international customers and SumbandilaSAT, the first EO satellite for the SA government. In 2005 he joined Stellenbosch University full time and established a satellite engineering research group inside the Electronic Research Laboratory to develop low cost nanosatellites and their components.

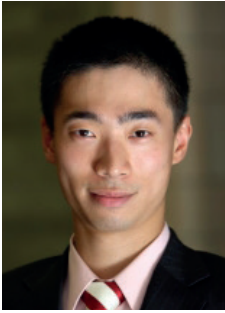
In 2012 he was chairing the Space Engineering Expert Group (SEEG) of the National Space Program (NSP) for the South African National Space Agency (SANSA) to plan the future government space activities in South Africa.

He was elected as Corresponding Member of the International Academy of Astronautics (IAA) in 2011. Herman as the project leader and his research team partnered with the Surrey Space Centre in the UK and participated with SME satellite and other space prime companies in Europe on several EU FP7 projects since 2010, e.g. Deorbit Sail (to deploy a drag sail in LEO), QB50 (to model the lower thermosphere with 36 CubeSats equipped with scientific sensors), where they contributed two 2U CubeSats to the mission and RemoveDebris to demonstrate active debris removal techniques. He was also the founder of the university spin-off company CubeSpace in 2017, to commercially exploit the small satellite market with turnkey attitude control systems and ADCS components.

Himilcon de Castro Carvalho

Engenheiro eletrônico formado pelo Instituto Tecnológico de Aeronáutica (ITA) em 1986, tem especialização (Mastère) em Telecomunicações Espaciais pela Ecole Nationale Supérieure d'Aéronautique et de l'Espace (Ensaé). É mestre e doutor (1995) pela mesma instituição francesa. Reúne experiência de 28 anos em engenharia de sistemas espaciais, tendo trabalhado em projetos dos satélites como SCD 1, 2, PMM e Microssatélite Franco-Brasileiro (FBM) no Instituto Nacional de Pesquisas Espaciais (Inpe). Atuou nas áreas de confiabilidade, arquitetura elétrica e gerenciamento de projetos e programas no INPE. Foi, entre 2004 e 20012, diretor de Política Espacial e Investimentos Estratégicos na Agência Espacial Brasileira. Desde 2012 é diretor de Tecnologia Espacial da empresa Visiona Tecnologia Espacial S.A.

Short Bios



Jia Yuan Yu

Jia Yuan Yu is an associate professor in the Concordia Institute of Information Systems Engineering. His interests include data science and decision theory, as well as applications to smart cities and Internet-connected devices. His recent research results are used by companies in computer vision, automated manufacturing, recommendation systems, finance, and supply chains. Previously, he developed solutions for a wide range of problems such as congestion and pollution management, demand-response in smart grids, ride-sharing, and crowdsourced event-detection. He has previously worked at IBM Research, the Dublin City University, the Ecole Normale Supérieure Paris, Stanford University, and Intel Research. Jia Yuan obtained his PhD in electrical engineering from McGill University in 2010.



Karin Fazeni-Fraisl

Dr. Karin Fazeni-Fraisl holds a PhD in social and economic sciences and did her thesis on Life Cycle Process Design for technologies under development. She is working in the field of environmental and socio-technic assessments of advanced biofuel and biobased value chains for more than ten years now at the Energy Institute at the JKU Linz. Her core expertise is about software supported Life Cycle Assessments and socio-technical assessments for emerging technologies. Currently she works on several EU-funded (Horizon 2020, BBI JU) projects dealing with the development and demonstration of new renewable production pathways for advanced biofuels and biobased chemicals.



Klaus Schilling

Prof. Dr. Schilling had in space industry responsibility in Earth observation and interplanetary satellites (such as HUYGENS to the Saturnian moon Titan and ROSETTA for exploration of comets) before he was appointed professor and chair for Robotics and Telematics at University Würzburg. In parallel he is president of the research company „Center for Telematics“. He initiated the international MSc programs “SpaceMaster” (supported in the EU elite program Erasmus Mundus) and “Satellite Technology” (supported by Elite-Netzwerk Bayern) at University Würzburg.

His team built the first German pico-satellite UWE-1, launched 2005 to optimize protocol parameters for “Internet in Space”. He published more than 350 papers and received several awards, including the Walter-Reis-Award for Robotic Innovations 2008 (for research in mobile robotics) and 2012 (for medical robotics), as well as from the European Research Council (ERC) the Advanced Grant “NetSat” 2012 for control of networked distributed small satellite systems and the Synergy Grant “CloudCT” 2018 for climate predictions by a small satellite formation using computer tomography methods. He is full member of the International Academy of Astronautics and was appointed as Consulting Professor at Stanford University 2002-2006.

Luiz de Siqueira Martins-Filho

Education: B.Sc. in Physics from State University of Campinas, Brazil; M.Sc. in Space Engineering and Technology from the Brazilian Institute for Space Research, Brazil; Master (DEA) in Automation and Production from the Institut National Polytechnique de Grenoble, France; Ph.D. in Robotics from Université Paul Sabatier/Toulouse III, France.

Professional Background: UFABC – The Federal University of ABC – 2008 – date. Head of The Aerospace Engineering group – 2008-2009, 2013-2014. Associate professor and member of the faculty of BSc in Aerospace Engineering – 2008 – date. Member of the faculty of Master in Mechanical Engineering Program - 2013 – date. UFOP – The Federal University of Ouro Preto – 2000 – 2007. Adjunct professor and member of the faculty of BSc in Control and Automation. Engineering – 2002 – 2007. Member of the faculty of MSc/PhD in Materials Engineering Program - 2003 – 2009

Associate Editor of the Journal of Aerospace Technology and Management (JATM), since 2017. Author of more than 80 paper on Robotics, Aerospace Engineering, Materials Science, Engineering Education, and Computational and Applied Mathematics. Ad hoc reviewer of more than 20 journals in different areas.

Luis Rodrigues

Rodrigues is a Professor at the Department of Electrical Engineering of Concordia University and Director of Education at the Concordia Institute of Aerospace Design & Innovation. He received his PhD from the Department of Aeronautics and Astronautics of Stanford University in June 2002. During the last two years of his PhD research, Dr. Rodrigues worked as a visiting student at the Department of Aeronautics and Astronautics of MIT. He received his Masters and his “licenciatura” degrees from the Technical University of Lisboa, Portugal. Prior to joining Concordia, Dr. Rodrigues worked as a consultant for speech recognition at Eliza Corporation, USA, and as a project manager for flight simulation applications at Ydreams, Portugal. At Concordia University, Dr. Rodrigues has been awarded grants from the Natural Sciences and Engineering Research Council of Canada (NSERC), the Fond Québécois de la Recherche sur la Nature et les Technologies (FQRNT), the Mathematics of Information Technology and Complex Systems (MITACS) and the Consortium de Recherche et d’Innovation en Aérospatiale au Québec (CRIAQ). Dr. Rodrigues has worked on collaborative research and development projects with several companies including Echoer Canada, TRU Simulation and Training (former Mechtronix), Bombardier, Pratt & Whitney Canada, GlobVision, Pleiades, Northern Applied Dynamics, Maplesoft, and Marinvent. He is a senior member of the Institute of Electrical and Electronics Engineers (IEEE), a lifetime member of the American Institute of Aeronautics and Astronautics (AIAA) and a professional engineer registered in the Professional Engineers of Ontario (PEO). Dr. Rodrigues is the founder and director of the HYbrid CONtrol Systems (HYCONS) Laboratory and the leader of the FLlight CONtrol and Simulation (FLICONS) Laboratory at Concordia University. He is Associate Editor of the IEEE Transactions on Aerospace and Electronic Systems and the Chair of the Society on Aerospace and Electronic Systems of IEEE Montreal’s Chapter.

Short Bios



Oskar J. Haidn

Oskar J. Haidn is a chemical engineer (1984) and earned a doctorate degree (1991) in fluid mechanics both from the University of Erlangen - Nürnberg. He joined the Institute of Space Propulsion of the German Aerospace Center (DLR) in 1990 and served there in several positions. In 1998 he was appointed head of the Technology Department and Deputy Director Research and Technology in 1999. In April 2011 he was appointed Professor of Space Propulsion at the Technical University Munich which he joined in October 2011.

For many years Dr. Haidn has served as instructor of liquid rocket propulsion for the professional development courses of American Institute of Aeronautics and Astronautics (AIAA) as well as lecturer at La Sapienza in Rome.

Dr. Haidn's research interests cover all fields of liquid propellant rocket engines such as injection, atomization, ignition, combustion, heat transfer and cyclic life analyses and in particular all types of dynamic processes. He holds several patents in the field and is author and coauthor of more than 300 conference papers, journal articles and book chapters.

He is a fellow of the European Conference of Aerospace Sciences (EUCASS) and an associate fellow of AIAA, and a fellow of EUCASS



Otavio Santos Cupertino Durão

Education: BS in Civil Engineering from the Catholic University in Rio de Janeiro, Brazil; M.Eng., dual title in Industrial Engineering and Operations Research from The Pennsylvania State University, USA; Ph.D. in Industrial Engineering with minor in Industrial Automation (thesis in robotic vision) from the same University.

INPE – The Brazilian Institute for Space Reserach – 1986 – date. Head of The Mechanics and Control Div. – 1992– 1997; Deputy Coordinator for the Planning Coordination – 2010 – 2014. Engineering Coordinator for the NanosatC–Br1 and 2 cubesat missions at INPE Headquarter – 2010 – date. POC for the SPORT nanosat mission in cooperation with NASA – 2016 – date. Fellow of the Royal Academy of Engineering in the Leaders of Innovation Fellowship – London, 2017. Member of the LOC and the Program Committee for the UN/Brazil Symposium on Small Sat Missions. Natal, RN; Braszil; Set. 11–14, 2018.

Short Bios

Simon Barnabé

Simon Barnabé is an industrial microbiologist with master's and Ph.D. degree in water sciences from INRS-ETE in Quebec, Canada. He is a senior professor at Université du Québec à Trois-Rivières (UQTR) in Quebec, Canada where he holds an Industrial Research Chair in Environment and Biotechnology and jointly holds the Industrial Research Chair in Regional Bioeconomy and Bioenergy with one of his colleagues. He is the scientific director of the Institute of Innovations on ecomaterials, ecoproducts and ecoenergy at UQTR and he is an active member of many research centers and networks in Canada and around the world. His research activities are dedicated to relaunch regional economies and to revitalize local infrastructure and expertise through diversification of biomass products. Through his industrial researches and partnerships, his team has developed many expertise's in areas such as biomass fractionation, 2nd and 3rd generation biofuels, biomaterials and bioingredients. With his team of 20 students and professionals, he searches to maximize benefits from resource recovery by applying a unique community-based biorefining approach. He is also known to favor university-college-industry-city synergy in all of his projects, which accelerate his researches and allow him to cover the entire chain of value of biobased products and materials. Indeed, he is now involved in land development and circular economy by being a scientific counsellor for many cities or regions. A video of him and his team can be viewed here: <http://www.youtube.com/watch?v=g2FnyQJw8Xw>

Stéphanie Simard

Holder of a doctorate degree (Ph.D.) in educational psychology (University of Montreal) and a master's degree in information science (McGill University), Stéphanie Simard is a research associate at the Hydrogen Research Institute of the University of Québec in Trois-Rivières (UQTR). Since 2018, she has been coordinating and participating in various projects for Québec's Smart Energy Network (QSEN). Her interests focus on the implementation of collaborative projects in both research and training in the energy sector. Her areas of expertise also include the research and synthesis of scientific and technical information.



Walter Abrahão dos Santos

He is currently a senior technologist at the INPE at the Aerospace Electronics Division in the On-board Computing group working for the CBER-4A Chinese-Brazilian Earth Resources Satellite. He has experience in Computer Science, Electronic and Computer Engineering, with emphasis on Model-Driven Systems Engineering, Nano-satellites, Software Engineering. He is interested in the following topics: cognitive radio and SDR (Software Defined Radio), real-time systems, design and development of digital micro-systems, parallel processing, robotics, Kalman filtering and digital control, artificial satellites, telematics, information systems, mobile and pervasive computing, computer networks, satellite-based information services, multi-agent systems, e-Infrastructures for e-Science and e-Engineering.

Short Bios



William Roberto Wolf

William Wolf received his BSc. in Mechanical Engineering at University of Sao Paulo, Brazil, in 2003 followed by his MSc. in Electronic and Computer Engineering from the Technological Institute of Aeronautics, Brazil, in 2006. In 2011, he received his PhD in Aeronautics and Astronautics Engineering at Stanford University. From 2011 to 2013, he worked as a Research Associate in the Institute of Aeronautics and Space in Brazil. He is currently an Assistant Professor at University of Campinas, Unicamp, Brazil, where he leads the Aeronautical Sciences Laboratory in the School of Mechanical Engineering. His research interests include the application of high-performance computing to problems involving turbulent flows, unsteady aerodynamics and aeroacoustics. His research group also works on the development of reduced order models for unsteady flow problems and flow control.

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Additional information

ACCOMMODATION

Early booking for the event is strongly recommended.

* INPE is not responsible for the information below that must be confirmed with each establishment.

Hotel Nacional Inn São José dos Campos

Ibis Sao Jose dos Campos Colinas

Mercure Sao Jose dos Campos

TRANSPORT

There is a bus line that leaves the Guarulhos airport direct to Sao Jose dos Campos city. It is located at terminal 2 from Guarulhos International Airport:

Litorânea/Passaro Marrom