

## **Petter Krus**

**Professor in Fluid and Mechatronic Systems**

**Department of Management and Engineering**

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**Swedish Endowed Professor Chair at ITA**

### About me

Petter Krus got his PhD in 1988 in Fluid and Mechatronic Systems, at LiU. In 2001 he became full professor in Machine design at LiU. In 2010 he moved back to become full professor in Fluid and Mechatronic Systems at LiU. Research interests are in fluid, mechanical, and mechatronic systems technology, specifically focusing on system dynamics, control, system simulation, optimization, system design and design automation (system and geometric (CAD) design). Applications are in aircraft conceptual design, road vehicles and construction machines.



## Paulo Sérgio Lacerda Beirão

Director of Science, Technology and Innovation

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### About me

Paulo Sérgio Lacerda Beirão holds a medical degree from UFMG (1972), a master's degree in Biophysics (1976) and a PhD in Sciences from the Institute of Biophysics Carlos Chagas Filho from UFRJ (1980). He did postdoctoral studies at the University of Leicester, U.K. (1993). He is currently Professor of the Department of Biochemistry and Immunology at UFMG (since 1998). He was Research Associate of the University of Pennsylvania and Jefferson Medical College (1976-1977) and Honorary Research Fellow of the University of Leicester (1992-1993). Demonstrated the mechanism of action of several toxins of spiders of the genus *Phoneutria*. Proposed and demonstrated the molecular mechanism of scorpion toxins action, and the mechanism of control of rapid inactivation in sodium channels. Participated as a guest lecturer in several national and international congresses. He formed a strong group of electrophysiology, recognized nationally and internationally, where several masters and doctors graduated and currently occupy positions in Brazilian and foreign universities. He was president of the Brazilian Society of Biophysics (1994-1996) and the Brazilian Society of Biochemistry and Molecular Biology (2006-2008), and vice president of the Brazilian Society of Toxinology. Participated in the Deliberative Council of the Federation of Societies of Experimental Biology and was adviser of the Brazilian Society for the Progress of Science in two terms. He is interested in Education, having introduced innovative methods in the practical teaching of Biochemistry, besides coordinating and participating in activities of improvement of Basic Education of Sciences. He was the coordinator of the Postgraduate Program in Biochemistry and Immunology, and led the creation of the PhD Course in Bioinformatics, of which he was the first coordinator. He was Pro-Rector of Research at UFMG (1998-2002). Under his management, the project for the creation of the technological park of the UFMG (BH-TEC) was elaborated. He coordinated the creation of the UFMG Institute of Advanced Transdisciplinary Studies, of which he was the first president. He was president of the FAPEMIG Curator Council (2010-2011), and participates or participated as a representative of the scientific community of several committees related to Education, Science and Technology, such as the CNPq Deliberative Council, the FINEP Advisory Board, the CTInfra Steering Committee, the Commission of Coordination of PRONEX and Coordinating Committee for the preparation of the National Postgraduate Plan (2011-2020). Received honors and distinctions of students, Minas Gerais government and Federal government. Received Fundep 2012 Award. He received the National Order of Scientific Merit and he is titular member of the Brazilian Academy of Sciences. He was Director of Agrarian, Biological and Health Sciences at CNPq from February 2011 to August 2013 and Director of Institutional Cooperation at CNPq (July 2014 to April 2015). Currently he is Director of Science, Technology and Innovation of FAPEMIG.



## **Ricardo Machado Ruiz**

Vice President and Director of Business Prospecting

[vicepresidencia@indi.mg.gov.br](mailto:vicepresidencia@indi.mg.gov.br)



### About me

Ricardo Machado Ruiz graduated in Economics from the State University of Campinas (1988), Master in Economics Science from the State University of Campinas (1994) and a PhD in Economics from the New School for Social Research, New York (2003). He is associate professor of Economics at the Center for Development and Regional Planning (CEDEPLAR) of the Federal University of Minas Gerais (UFMG). He was Board Advisor to the Administrative Council for Economic Defense (CADE) in the period from 01/2010 to 02/2014. Currently, he is Vice President and Director of Business Prospecting of the Integrated Development Institute of Minas Gerais (INDI – Minas Gerais Investment and Trade Promotion Agency).

## **Mats Olofsson**

**Lic (Colonel Ret.)**

**Chairman, Swedish Brazilian Aeronautical  
Committee**

**Innovair - Strategic Innovation Program in**



### About me

Until a few years ago Mats Olofsson held the position as Chief Scientist and Head of Research in the Swedish Armed Forces, and he was also Deputy Head of Policy and Plans Department, Armed Forces HQ. He now works as a consultant, in matters related to R&D and innovation. Among other tasks is the chairmanship in the newly established bilateral CISB Aeronautics Committee, where participants from government, academia and industry from Brazil and Sweden strives to increase cooperation in the field of aeronautics.

Mats Olofsson is an Air Force Colonel and has a Licentiate of Science degree in atmospheric science from Stockholm University. He regularly works as an evaluator for the Swedish Research Council and he is a member of the Royal Swedish Academy of War Sciences.

Previous positions include Project Manager for the C3I development in the Air Force, Head of the Military Weather Service and Research Manager at the Swedish National Defence College.



## **Emilia Villani**

Professora do Instituto Tecnológico de Aeronáutica

Bolsista de Produtividade em Pesquisa do CNPq – Nível 2



### About me

Possui graduação em engenharia mecatrônica pela Universidade de São Paulo (1997), mestrado (2000) e doutorado (2004) em engenharia mecânica também pela Universidade de São Paulo. Desde 2005 é professora do Instituto Tecnológico de Aeronáutica, atuando em engenharia mecatrônica e sistemas aeroespaciais. Desenvolve pesquisas relacionadas (1) a especificação, verificação e validação de sistemas embarcados para aplicações críticas, e (2) ao projeto de sistemas de automação industrial, com ênfase em aplicações robóticas.



# Dan Henningson

Royal Institute of Technology (KTH)

Professor in Fluid and Mechatronic Systems



## About me

About twenty years ago Prof. Henningson entered into the field of flow control, in particular applying modern control theory to turbulence control. Prof. Henningson is one of the pioneers in this field, and has tested the controllers in free-flight on gliders in a collaboration project with the Center for Smart Interfaces at the University of Darmstadt aimed at delay of the onset of turbulence on the wings and drag reduction. The most recent avenue of research in optimal control involves topology optimization for optimal cooling of heat sinks and has received international attention. The present proposal builds on this work.

The more applied side of Prof. Henningson's research has led to the involvement of KTH in numerous EU-projects, and direct collaboration with Saab AB and Airbus in the large European research initiative Clean Sky.

Recently Prof. Henningson's research group has made important contributions to the basic understanding of laminar-turbulent transition through the use of dynamics systems theory, where structures in phase space of the Navier-Stokes equations are characterized.

Another strategic direction in Prof. Henningson's research is high performance computing where he has been involved in the development of state of the art direct numerical simulation codes as well as been associated with the largest turbulence and transition simulations in recent years.

Prof. Henningson is also the first and only Swedish associate editor of the Journal of Fluid Mechanics, the most prestigious journal in the area of fluid mechanics, a fellow of the EUROMECH Society, a recipient of the prestigious Alexander von Humboldt Award and the recipient of an ERC Advanced grant.



Victor J. De Negri  
Professor in Fluid Power and Mechatronic Systems  
Federal University of Santa Catarina  
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#### About me

Victor J. De Negri is professor at Federal University of Santa Catarina, Head of Laboratory of Hydraulic and Pneumatic Systems – LASHIP at the Department of Mechanical Engineering. He received his Mechanical Engineering degree in 1983, from UNISINOS, Brazil, M. Eng. degree in 1987 and D. Eng. degree in 1996, both from UFSC, Brazil. In 2010 he took a sabbatical at the PTMC, University of Bath, UK. From 2012 to 2014 he was the Head of the Department of Mechanical Engineering and currently he is vice-coordinator of the Graduate Program in Mechanical Engineering. He is member of ASME, GFPS and ABCM and Associate Editor of the International Journal of Fluid Power and the Journal of the Brazilian Society of Mechanical Sciences and Engineering. His research areas include analysis and design of hydraulic and pneumatic systems and components and design methodology for mechatronic systems. He has coordinated several projects with industry and governmental agencies in the areas of hydroelectric and wind power, vehicles and aeronautics, and industrial hydraulics and pneumatics. He already supervised 50 Master's and Doctoral students and around 90 undergraduate students. Nowadays he is supervising about 15 students per year. As a result of these activities, he has 4 patents and over than 130 journal and conference papers.



**Embassy of Sweden**  
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## **Jacob Silva Paulsen**

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### About me

Jacob Silva Paulsen got his PhD in 2001 in Civil Engineering, at the Royal Institute of Technology, Stockholm. In 2002, he became Project Manager at the Swedish Standards Institute, SIS, Nordic Swan Ecolabel. He was Project Leader for the development of criteria for sustainable homes and head of project for several other product groups. In 2009 he became Senior Research Officer at FORMAS (The Swedish Research Council for Environment, Agricultural Sciences and Spatial Planning), where he had coordinated groups of international experts, evaluations and cooperation with the civil construction sector, among other activities. Also, he represented Sweden in some ERA-net (European Research Area), for European cooperation in the construction industry along with 21 other countries. From 2012 until 2016, he was Visiting Professor at the University of Brasília - Department of Civil Engineering. His research was focused on LCA (Life Cycle Assessment) and energy in the urban environment. From 2016 to 2018 he has worked as CEO for Paulsen Consultoria. Since May 2018, he is the Director of the Science and Innovation Section at the Embassy of Sweden in Brazil.

# Jonas Petzén

B.Sc.

Site Manager at GDDN, **G**ripen **D**esign and **D**evelopment **N**etwork, Embraer, located in Gavião Peixoto, Brasil.

Age: 53 years old



## About me

1989 – 1997 Flight test instrumentation engineer at Saab Aeronautics.

1997 – 2011 Area manager at Flight test instrumentation and Hardware / software FTI development at Saab Aeronautics.

2011 – 2016 Human Resources (HR-Business partner) at Saab Aeronautics.

2016 – 2018 Site Manager at GDDN in Brazil for Saab Aeronautics.



Brazilian Air Force

## Sérgio Roberto de Almeida

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### About me

Lt Gen Almeida is Chief of Strategic Plans of Air Force Staff and representative in Brazil-Sweden Cooperation in Aeronautics Executive Committee.

As a fighter pilot, he has flown more than 3,700 hours, 3,000 of them in fighter aircrafts. He has worked in the areas of Logistics, Weapon Systems and Airspace Control.

Former 3rd/3rd Aviation Group and Porto Velho Air Base Commander. He has worked as president of the Commission for Coordination and Implementation of Space Systems (CCISE), the Commission for Coordination of the SIVAM Project, and the Commission for the Implementation of the Airspace Control System (CISCEA).

He has also represented Brazil as UN Military Observer in Yugoslavia and as Military Attaché in Italy.



## **Joselito R. Henriques**

Director - R&D and Innovation

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### About me

Joselito R. Henriques studied Mechanical Industrial Engineering until 2004 at Methodist University of Piracicaba. He worked three years as an ISO editor for the STEP Standard ISO 10303-214 and also for different companies, like Romi S.A. in process plan area, for Focke & Co. at product development and for PROSTEP AG at the CAD data exchange department. In 2007, he joined the research team at the department for Computer Integrated Design (DiK) in Darmstadt, Germany, working in the field of Information Rights Management for 3D CAD product data. He works 4 years as coordinator of Application at Center for Advanced Security Research Darmstadt (CASED). In November 2014 he joins the SENAI Innovation Institute implementation management team at the Innovation and Technology unit from SENAI National Department. Since October 2016 he is Director for Research, Development and Innovation at AKAER Engenharia S.A, an integrated technological solutions provider company in São José dos Campos / Brazil specialized in the development of aero-structures and "Turn Key" projects management for the aerospace and defense markets.



Fernando Bianchini Saretta  
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#### About me

Fernando Bianchini Saretta has graduated in Engineering from the State University of São Paulo (2002), *Aeronautic Engineering System Specialist* from Embraer/ITA (2009) and MBA Strategical and Economic Business Management from FGV (2011).

Experienced Product Development Manager with a demonstrated history of working in the aviation and aerospace industry. Current Embraer Senior Manager responsible for Gripen E/F technology transfer, engineering development and flight test integration.