



March 23, 2023 UCF Board of Trustees Workshop

Board of Trustees

UCF Downtown Campus, DPAC 106A/107

Mar 23, 2023 9:15 AM - 12:15 PM EDT

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Board of Trustees Workshop
March 23, 2023
UCF Downtown Campus, DPAC 106A/107
9:15 a.m. – 12:15 p.m.
(or upon adjournment of the previous Board meeting)

Livestream: <https://www.youtube.com/watch?v=A9WyoofuxhE>

Conference Call Number: +1 929 205 6099; Meeting ID: 916 9962 4851

AGENDA

1. Call to Order and Welcome Alex Martins, *Chair, UCF Board of Trustees*
2. Roll Call Lauren Ferguson, *Assistant Vice President, Board Relations*
3. Remarks Chair Martins
Alexander N. Cartwright, *President*
4. Discussion

DISC - 1 Building the Research Enterprise at the University *for the Future*
Alexander N. Cartwright, *President*
Michael D. Johnson, *Provost and Executive Vice President for Academic Affairs*
Winston Schoenfeld, *Interim Vice President for Research*
5. Adjournment Chair Martins



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DISC-1: Building the Research Enterprise at the University *for* the Future

Information

Discussion

Action

Meeting Date for Upcoming Action: N/A

Purpose and Issues to be Considered:

This workshop will delve into building the University’s Research Enterprise and how our existing efforts support the Strategic Plan’s focus of Discovery and Exploration. Specifically, as it relates to recruiting, retaining and supporting top faculty and strengthening UCF's research enterprise.

The Workshop will highlight a panel of the following esteemed UCF faculty members:

- **Dr. Roger Azevedo**, Professor - School of Modeling Simulation and Training
- **Dr. Jayanta (Jay) Kapat**, Pegasus Professor and Director of the Center for Advanced Turbomachinery and Energy Research
- **Dr. Jennifer Kent-Walsh**, Associate Dean of Research, FAAST Center Director, Professor

Background Information:

As outlined in the university’s 2022-2027 strategic plan, UCF seeks to be a destination for ambitious thinkers, doers, creators, innovators, healers, and leaders who collaboratively discover and explore ideas that enable groundbreaking research and produce inspiring works of art.

UCF’s knowledge enterprise is an essential driver of the region’s economic vitality. We plan to invest in our research infrastructure in ways that address prevailing workforce needs in the state, accelerate the development of industry clusters, attract new companies and high-wage jobs to Florida, support the formation of entrepreneurial ventures, guide evidence-based policies, encourage creative activity, and advance the state’s objective to be the 10th-largest economy in the world.

The university seeks to achieve the following by 2027:

- Invest \$350M in support of basic, applied, clinical, and translational research activities.
- Secure an average of 55 patents awarded annually.
- Secure an average of 36 licenses and options executed annually.
- Secure an average of 6 start-up companies created annually.
- Recruit and retain highly qualified faculty, post-doctoral appointees, and doctoral students to increase academic outcomes and support our research activity, including 2,100 faculty FTE and 225 post-doctoral appointees.

Recommended Action:

N/A



Alternatives to Decision:

N/A

Fiscal Impact and Source of Funding:

N/A

Authority for Board of Trustees Action:

N/A

Contract Reviewed/Approved by General Counsel N/A

Committee Chair or Chair of the Board has approved adding this item to the agenda

Submitted by:

Lauren Ferguson, Assistant Vice President, Board Relations

Supporting Documentation:

Attachment A - Faculty Panelist Bios

Facilitators/Presenters:

Alex Martins, Chair, Board of Trustees

Alexander N. Cartwright, President

Michael D. Johnson, Provost and Executive Vice President for Academic Affairs

Winston Schoenfeld, Interim Vice President for Research



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FACULTY PANEL

BUILDING THE RESEARCH ENTERPRISE AT THE UNIVERSITY FOR THE FUTURE



Roger Azevedo, Ph.D.

Professor, Director of the Laboratory for the Study of Metacognition and Advanced Learning Technologies
School of Modeling, Simulation and Training

Dr. Roger Azevedo is a Professor in the School of Modeling, Simulation and Training at the University of Central Florida (UCF). He is also an affiliated faculty member in UCF's Departments of Computer Science and Internal Medicine and is the lead scientist for the university's Learning Sciences Faculty Cluster Initiative. He received his Ph.D. in Educational Psychology from McGill University and completed his postdoctoral training in Cognitive Psychology at Carnegie Mellon University.

His main research area includes examining the role of cognitive, metacognitive, affective, and motivational self-regulatory processes during learning with advanced learning technologies (e.g., intelligent tutoring systems, hypermedia, multimedia, simulations, serious games, immersive virtual learning environments). More specifically, his overarching research goal is to understand the complex interactions between humans and intelligent learning systems by using interdisciplinary methods to measure cognitive, metacognitive, emotional, motivational, and social processes and their impact on learning, performance, and transfer. To accomplish this goal, he conducts laboratory, classroom, and in-situ (e.g., medical simulator) studies and collects multi-channel data to develop models of human-computer interaction; examines the nature of temporally unfolding self- and other-regulatory processes (e.g., human-human and human-artificial agents); and designs intelligent learning and training systems to detect, track, model, and foster learners, teachers, and trainers' self-regulatory processes.

Dr. Azevedo has published over 300 peer-reviewed papers, chapters, and refereed conference proceedings, was the former editor of the Metacognition and Learning journal, and serves on the editorial board of several top-tiered learning and cognitive sciences journals. His research is funded by the National Science Foundation (NSF), Institute of Education Sciences (IES), National Institutes of Health (NIH), and many others.



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Jayanta (Jay) Kapat, Sc.D.
Professor, CATER Director
Mechanical and Aerospace Engineering
College of Engineering and Computer Science

Dr. Jay Kapat is currently a Pegasus Professor and Trustee Chair in the Department of Mechanical and Aerospace Engineering at the University of Central Florida. He is also the founding Director for Center for Advanced Turbomachinery and Energy Research (CATER). He obtained his Sc.D. in Mechanical Engineering from the Massachusetts Institute of Technology. He joined UCF in 1997 as an Assistant Professor, and was promoted to the ranks of Associate Professor and Professor in 2001 and 2005, respectively.

Since mid-2000's, Dr. Kapat has fully focused his research activities on turbo-machineries and associated technologies for power generation, aviation, and space propulsion, and created partnerships with a number of Original Equipment Manufacturers (OEMs) in these industries. As part of these efforts, he has put together a team of 11 faculty members under CATER to address some of the important technical challenges with great societal/national impact, such as decarbonization for affordable and reliable energy, alternative power cycles, hypersonics, and digital twins for power and propulsion.

He has graduated 33 Ph.D.s, 63 M.S., and 17 B.S. Honors in the Major thesis students, an overwhelming majority of whom are employed in the turbine OEMs (such as Siemens Energy, Mitsubishi Power, General Electric, etc.). He has authored over 375 peer-reviewed journal or conference publications. He has 15 patents issued to his credit as an inventor. His individual credited share of externally funded research is more than \$20.5 million, most of which is with him as the principal investigator (PI). The two biggest sources of these funds have been NASA and Siemens Energy.



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Jennifer Kent-Walsh, BEd, MS, Ph.D., CCC-SLP, S-LP(C)
Associate Dean of Research, FFAST Center Director, Professor
Communication Sciences and Disorders
College of Health Professions and Sciences

Dr. Jennifer Kent-Walsh is a Professor of Communication Sciences and Disorders, Director of the FFAST Atlantic Region Assistive Technology Demonstration Center & AAC Lab, and Associate Dean for Research in the College of Health Professions and Sciences at the University of Central Florida (UCF).

Dr. Kent-Walsh's primary area of research centers on improving early language and communication results for children who are unable to use natural speech to meet all of their communication needs. This research involves children who have developmental disabilities (e.g., cerebral palsy, childhood apraxia of speech, Down syndrome). Through the development and validation of indirect interventions for communication partners (e.g., parents, teachers, peers) and direct child-focused language interventions employing augmentative and alternative communication (AAC) assistive technologies, Dr. Kent-Walsh's work has yielded improved standard of care and clinical outcomes for children with severe speech disorders who use AAC (e.g., computerized speech output devices).

Dr. Kent-Walsh has developed coursework and taught in the areas of AAC, language development, and assistive technology at UCF. The FFAST Center & AAC Lab she founded and directs functions as a living laboratory where students acquire clinical skills and local families of individuals with disabilities receive clinical services and participate in federally funded research investigations. This center has been profiled nationally as a model demonstration center in assistive technology.

Dr. Kent-Walsh is an Honoree of the Florida Association of Speech-Language Pathologists (FLASHA) and a Fellow of the American Speech-Language-Hearing Association (ASHA), who also honored Dr. Kent-Walsh with the national Award for Significant Contributions in Higher Education.