



Houston Wood

From our Director



**ROMAC ANNUAL
MEETING
JUNE 10–14, 2019
OMNI
CHARLOTTESVILLE
HOTEL**

**Make Your
Reservations by
May 10th for the
ROMAC [RATE](#)**

**SPECIAL POINTS OF
INTEREST**

2019 Summer Events

ROMAC Annual Meeting
June 10–14, 2019

**Rotordynamics and
Magnetic Bearings**
June 24–28, 2019

**CFD Modeling for Industrial
Machine Components**
August 19–23, 2019

**2019 International Conference on
Rotating Machinery, Transmission,
and Controls**
July 19–21, 2019

- **2019 ROMAC Graduate**
- **ROMAC Advisory Board**
- **Visiting Scholars**
- **Software Update**

March Madness was exciting and at times stressful, as we watched, cringed and cheered on our UVA Cavalier Basketball team. In the end it was all worth it. Now we can relax and be proud of our 2019 NCAA National Champions.

We are looking forward to a very busy summer! Our summers are typically busy with the annual meeting, and our Rotordynamics and Magnetic Bearings short course. However, this year we are introducing a second short course, CFD Modeling for Industrial Machine Components, and many of our ROMAC faculty and students are traveling to Beijing, China to join our colleagues at the Beijing Institute of Technology to participate in our jointly organized 2019 International Conference on Rotating Machinery, Transmission, and Controls. You will find more details for these events on the following pages and on our website. In addition to our own meetings and conferences students and faculty will be attending many industry conferences this summer including the ASME Verification & Validation, and Turbo conferences, as well as the STLE and the ASME Joint Fluids Engineering Conference.

On May 19, 2019, Ben Thomas will be one of thousands walking the Lawn to graduate with a Mechanical & Aerospace Engineering, Ph.D. degree. We have several students who are concluding their research and developing their dissertations. These projects and many others will be presented at the 2019 Annual Meeting.

We hope to see you at one of our events this summer. If your travels bring you to the foothills of the Blue Ridge Mountains in Virginia, please stop by for a visit. We enjoy welcoming visitors to the Lab.

Houston Wood

Save these dates and plan to attend any or all of the following ROMAC Events
Visit our website for additional information

2019 ROMAC Annual Meeting
June 10–14, 2019
OMNI Charlottesville Hotel

The 2019 ROMAC Annual Meeting will take place June 10-14 at the OMNI Charlottesville Hotel located on the [Charlottesville Downtown Mall](#)

[Register for the Annual Meeting](#)

To make your reservations at the OMNI Charlottesville Hotel please [make an on-line reservation](#) specifically using the ROMAC room block. **Reservations must be made by May 10, 2019 to receive the negotiated rate.**

If you have questions please contact [Lori Mohr Pedersen](#)

2019 International Conference
on Rotating Machinery, Transmission,
and Controls
July 19-21, 2019

Beijing Friendship Hotel, Beijing, China

Faculty and students from the University of Virginia ROMAC Lab in collaboration with our colleagues in the National Key Laboratory of Vehicle Transmission (NKLVT) at the Beijing Institute of Technology (BIT), invite ROMAC members to attend this conference.

[Register for the Conference](#)

If you have questions please contact [Lori Mohr Pedersen](#)

Rotordynamics and Magnetic Bearings [Register](#)
June 24 - 28, 2019

This rotordynamics and magnetic bearings short course will include presentations by UVA faculty and graduate students. Case histories and examples from industry professionals will also be presented.

CFD Modeling for Industrial Machine Components [Register](#)
August 19 - 23, 2019

This computational fluid dynamics (CFD) short course will include presentations by UVA faculty and graduate students. Tutorials using the commercial CFD software, ANSYS CFX, will also be performed for common rotating machinery component analyses.

Short courses take place at the ROMAC Lab on the Grounds of UVA in Charlottesville, VA

\$1,500 USD ROMAC Member | \$3,000 USD Non-Member

Course material, parking, breaks and lunch is included.

If you have questions please contact [Lori Mohr Pedersen](#)

2019 Graduates



Ben Thomas

In December 2018, Ben Thomas successfully defended his Ph.D. dissertation: *Modeling the Flow and Isotope Transport of a Low Speed Countercurrent Gas Centrifuge*. Ben completed

his Ph.D. degree as an

active duty member of the US Army, serving on two combat deployments and recently received the rank of Lieutenant Colonel. Congratulations Ben and Thank You for Your Service.

ROMAC Advisory Board

The ROMAC Advisory Board (RAB) will meet in late May. The minutes will be uploaded to the website within two weeks of the meeting and a report will be given at the Annual Meeting. If you have questions, concerns or a topic you'd like to be addressed please email it to the [ROMAC Advisory Board](#).

Visiting Scholars

Weiqi Bai is a PhD student in the State Key Laboratory of Rail Traffic Control and Safety at the Beijing Jiao-tong University. His appointment was extended for an additional year and is through October 2019. His research Interests include: Modeling and collaborative control of high-speed trains; Energy-saving optimal control; High-speed railway systems and Fault diagnosis.

Later this year ROMAC will be welcoming three additional visiting scholars, you will be introduced to them in the fall newsletter.

ROMAC Software Update

RotorLab+ v4.3 – The next release of RotorLab+ is presently in the testing phase with a plan to be released before this year's Annual Meeting. This latest version (v4.3) will contain the following updates...

RotorSol – a new solver that can perform lateral, axial, and torsional analysis – is being in the process of being integrated into RotorLab+. Initial integration work and testing has begun, and care is being taken to validate the solver and its implementation to ensure a smooth transition when released. The switch to RotorSol should be transparent to the end-user. With the successful implementation of RotorSol in RotorLab+, axial, torsional and combined axial-torsional-lateral analysis will finally be able to be performed in a single, unified graphical user interface.

In addition to the updates noted above, Cori Watson-Kassa has been leading a research effort related to seal modeling and analysis which will lead to a series of updated seal codes that will be integrated into RotorLab+ in the near future. These new codes are in the process of being comprehensively validated and will lead to increased modeling accuracy compared with the legacy codes they are scheduled to replace.

The planned release of all these developments is by the end of calendar year 2019.

For questions about RotorLab+ or any ROMAC software visit our [website](#) or contact us at romac@virginia.edu.



ENGINEERING

Department of Mechanical and
Aerospace Engineering

Rotating Machinery and Controls Laboratory

Areas of Expertise and Current Research

- **Software Development and Test Rig Validation**
- **Finite Element Analysis (FEA)**
- **Computational Fluid Dynamics (CFD)**
- **Fluid Film Bearings**
- **Rotordynamics**
- **Seals**
- **Squeeze Film Dampers**
- **Magnetic Bearings and Controls**
- **Optimization of Rotor-Bearing Systems**
- **Experimental, Computational, and Theoretical Studies**

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ROMAC Laboratory and Consortium

Mechanical & Aerospace Engineering

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