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Douglas Coffin: Paper Physics Guru

Editor's Note: This month, we continue our series of columns profiling the background and expertise of TJ's editorial board members. These volunteer members spend long hours overseeing the peer review process and contributing to TJ. TAPPI would like to express its gratitude to the editorial board members for their hard work and willingness to share their expertise with the forest products community.

– Monica Shaw, Editorial Director

TAPPI and the *TAPPI JOURNAL* (TJ) editorial staff would like to welcome a new member to the TJ Editorial Board, Douglas W. (Doug) Coffin, a professor in the Department of Chemical, Paper, and Biomedical Engineering at Miami University in Oxford, OH. A member of TAPPI since 1994, Doug has been recognized numerous times for his contributions to the field of Paper Physics, including with the Van den Akker Prize in Paper Physics in 2001 and the TAPPI Corrugated Division Award and Bettendorf Prize in 2011.



Douglas W. (Doug) Coffin,
TJ Editorial Board

A native of Lancaster, PA, Doug received his Bachelor's (1987) and Master's degrees (1989) in Civil Engineering from the University of Delaware, where he also received his Ph.D. in Mechanical Engineering in 1993, with a focus on mechanics of composite materials. From 1989 to 1994, he was a structural engineer with the Electric Boat Division of General Dynamics, after which he became faculty member at the Institute of Paper Science and Technology (IPST) in Atlanta Georgia. He joined Miami University in 2002 and was promoted to professor in 2008. At the university, he teaches courses in Paper Physics, Statics and Mechanics, Thermodynamics, and Chemical Process Safety, in addition to his research in Paper Physics.

Doug has completed extensive work in the mechanics of paper materials and in the creep behavior of paper. He has developed robust nonlinear viscoelastic-plastic constitutive equations for paper and expanded on the role of bonding in sheet efficiency and tensile behavior. An active researcher, his projects have ranged from tissue and cor-

rugated board to nanofibers and converted boxes. He has also overseen a number of studies and papers by his students, from undergraduate to post-graduate.

Doug's publication experience includes a book and book chapters, as well as numerous journal and presentation papers. As a member of the TJ Editorial Board, which he has previously assisted as a reviewer, he looks to "help facilitate the connection between author and reader to bring relevant and high-quality technical information in the areas of paper physics and corrugated board that will be useful to readers."

TAPPI involvement and industry perspective

Doug first joined TAPPI when he became a faculty member at IPST in 1994. He is a member and past Chair (along with holding other positions) of the TAPPI Paper Physics Committee. He was also the TAPPI representative at the 2007 International Paper Physics Conference and is the TAPPI representative on the Fundamental Research Committee of the Pulp and Paper Fundamental Research Society. Doug says that "connections to people" have been TAPPI's greatest benefit to his career.

From the industry angle, Doug says that the biggest change he has seen as an academician is the "loss of sponsored research and very few researchers in the U.S. that still focus on pulp and paper." This, he feels, will result in "a lack of people that understand the fundamentals of the behavior of pulp and paper as a material and know the previous work that was completed. Information not found online will be lost to those in the future, and time will be spend rediscovering that knowledge."

As a professor of young engineering students, one of Doug's top teaching philosophies is "learn to learn," with the belief that "the most important mindset to instill in students is that they are lifetime learners." He says that "many students begin their college career with the expectation that all answers can be found in a book, and that they will not be asked to perform tasks that they have not had prerequisite study," but understands that "it's impossible to teach engineers everything that they will need in their careers." He goes on to say:

"My experiences as an engineer are that we rarely use the exact information that we learned in undergraduate education. We do apply the skills we developed. Teaching students that to be successful they must develop skills of learning is an important component of every course."

On a personal note, Doug enjoys spending time outdoors and with his wife of 31 years, Susan, and their three older sons (ages 24, 23, and 21), along with their seven-year-old son who keeps them "young at heart." He also enjoys woodworking but finds it a challenge to create time for it in recent years. **TJ**

TAPPI's Int'l Research Management Committee to Visit Andritz, SAPPI, BASF and Merck

TAPPI's International Research Management Committee has organized its fall meeting to include visits to several important research centers in Europe. Scheduled for the week of October 22-26, the trip is a stimulating experience of research, discovery, and networking among pulp, paper and tissue R&D leaders.

The committee will visit paper research facilities at Andritz in Graz, Austria, and at BASF and Merck near Frankfurt, Germany. They will also enjoy a tour of Sappi's Gratkorn Mill and the EU's FAIR Particle Accelerator, which is currently under construction.

The program includes plenty of time for sightseeing and networking. Members of the committee are encouraged to register by **September 14**. More information is available on the [website](#). If you are interested in being a part of the **TAPPI International Research Management Committee**, please contact Scott Springmier at sspringmier@tappi.org. Nominations will be considered by the Membership Working Group.

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