

Center for Packaging and Unit Load Design

CPULD NEWS

Holiday Newsletter



As this year draws to a close, the Center for Packaging and Unit Load Design (CPULD) would like to thank all of our customers and our affiliate membership companies in particular. CPULD wouldn't have had such a successful year without all of you. Our researchers were able to work towards solving industry problems, and our students gained valuable life and career experience through their work in our state-of-the-art laboratories which exist in large part because of our members' support and financial donations.

In this year, CPULD was able to renovate additional sections of our laboratories and purchase new laboratory equipment. We would like to add a special thank you to our **Industrial Affiliate Members** for their support of our research program: National Wooden Pallet and Container Association (NWPCA) and CHEP; Litco International, Ongweoweh Corporation, Neopal LLC, Universal Forest Products, and Monoflo, Nelson Company, Peco Pallet, Orbis Corporation, Pallet Machinery Group, and Polymer Solutions International. Our Membership program continues to grow each year, and we appreciate all

of our members' continued support of our educational and research goals. We also like to thank the Roanoke facility of the **Packaging Corporation of America** and **Sealed Air Corporation** for all of the corrugated board and foam samples that we received throughout the year.

This year, we also received two equipment donations from **Ranpak Corporation**. The PadPak® SR Cushioning System and the Geami WrapPak® HV will benefit all of our 115 packaging students who will gain knowledge and experience working on these new machines.

Please enjoy this mini-edition of CPULD News & learn all about our year in numbers. Happy Holidays to all!



2019

OUR YEAR IN NUMBERS

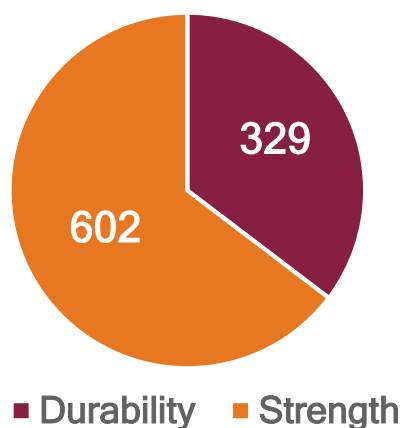
5,600

FasTrack cycles with 89,600 pallet handling steps

200

packages were certified or evaluated

of Pallets tested in our lab:



We've completed:

85 CONTRACT TESTING PROJECTS

Our projects range from evaluating the material properties of novel packaging materials, to identifying the causes of unit load instability. However, throughout all of our projects, our goal is to help our partners create **SAFE, FUNCTIONAL, and SUSTAINABLE** packaging solutions.

79 STUDENTS EDUCATED

Our lab provided hands-on educational opportunities for 79 undergraduate students, either through our Distribution Packaging Summer Internship or through laboratories taken along with many of our packaging classes.

4 RESEARCH PROJECTS

Four of our graduate students defended their Master's thesis this year. Their findings helped us learn more about the pallet industry and will ultimately help companies optimize their plastic and wooden pallets.

6 INDUSTRIAL EDUCATIONAL COURSES

We also had a chance to educate many industry professionals from both the pallet and the packaging industries through **2 short courses and 4 webinars**.



DRUM PALLET TESTING

Our graduate student, Mary Alvarez, loaded and unloaded **200 steel, 55-gallon drums**, and she recorded **650 pressure mat readings** from more than a **dozen pallets** in order to understand the effect that drums have on pallet performance and to develop new design methods for creating specialty pallets to carry drums.

6,800

CORRUGATED TESTS

were conducted to certify **130 board types** in our IKEA Certified laboratory. This was completed in order to make sure that all IKEA products sold in the U.S. come in efficient and safe packages.

1,105

PALLET FASTENERS

were evaluated to make sure that pallets are only manufactured with the best fasteners.

THANK YOU FOR THE SUPPORT OF ALL OUR PARTNERS

Your support was essential in providing hands-on educational opportunities to our packaging students. The money that we collect through our testing operations is used to maintain our package testing equipment and to provide financial assistance to our packaging students. This past year, using these funds, the Center provided paid, hands-on experience to 15 undergraduate students and gave 5 graduate students the opportunity to pursue their M.S. or Ph.D. degrees.

Continuing Education Opportunities

Wood Pallet Design & Performance Short Course, April 29-30, 2020

Omni Hotel, Richmond, VA

Pallet design is an integral part of the material handling system. Wood pallet suppliers, sales professionals, professionals responsible for pallet purchases, packaging engineers, and pallet specifiers will all benefit from an understanding of how to design pallets that will last longer and perform better.

This intensive three-day short course will teach techniques that pallet designers can use to save money when designing pallets by considering the interactions between all of the components of the material handling system. The course will use a state-of-the-art pallet design software called the Pallet Design System (PDS) to better demonstrate the steps that go into the pallet design process. Attendees will also be taken on a tour of a working, state-of-the-art, pallet testing laboratory!

This upcoming short course will be held in Richmond, VA in conjunction with the Richmond Expo.

Unit Load Design and Performance Short Course, Fall 2020

Unit load design is a revolutionary, systems-design approach that significantly reduces the cost of distributing products to consumers by understanding how pallets, packaged products, and handling equipment mechanically interact. Unit load design is a new and valuable service that pallet, packaging, and handling equipment suppliers can offer their customers.

This intensive three-day short course will teach techniques that pallet and packaging designers can use to save money on corrugated board and plastic packaging materials when designing pallets and packages by considering the interactions between all of the components of unit loads. The course will use a state-of-the-art unit load design software called Best Load to better demonstrate the steps of the unit load design process. Attendees will also be taken on a tour of a working, state-of-the-art, packaging and pallet testing laboratory!



To learn more or register for these courses, visit:
www.unitload.vt.edu/education/continuing-education/

2019 Calendar of Upcoming CPULD Events

- Dec. 20: Winter Commencement
- Dec. 21: Virginia Tech closes
- Dec. 25: Merry Christmas!
- Jan. 1: Happy New Years!
- Jan. 2: Virginia Tech reopens
- Jan. 21: Spring semester classes start



*Quotes for new testing projects,
distribution packaging projects,
unit load design projects,
membership with the center,
new research projects*

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*Scheduling meetings
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