



COLLEGE OF NATURAL  
RESOURCES AND ENVIRONMENT  
**SUSTAINABLE BIOMATERIALS**  
VIRGINIA TECH

CENTER FOR PACKAGING AND UNIT LOAD DESIGN

# UNIT LOAD DESIGN AND PERFORMANCE

## NOVEMBER 5TH - 7TH, 2024

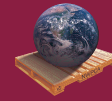
### Short Course Summary:

The Unit Load Design and Performance course is offered in collaboration with the National Wooden Pallet and Container Association. This unique 2.5-day course will focus on holistic unit load design. Attendees will learn how to use the interactions between wood pallets and packages to lower the cost of the unit load and improve the performance.

By the end of the course, attendees will be able to optimize their pallet designs for different types of packages, redesign the pallet to decrease the compression stress experienced by corrugated boxes, and design large pallets for flexible unit loads.



Course Partner:



**National Wooden Pallet  
& Container Association**  
*Pallets Move the World®*

[palletcentral.com](http://palletcentral.com)

### WHO SHOULD ATTEND?

The target audiences of this course are pallet designers and packaging engineers that seek:

- to gain a competitive advantage by holistically optimizing unit loads
- to reduce the cost of the entire unit load while ensuring safety and performance
- to reduce the environmental impact of their unit load

### TOPICS COVERED:

- Principles of unit load design
- Design and performance of corrugated boxes
- Principles of industrial packages
- Pallet interaction with material handling equipment
- Fundamentals of load bridging between packages and pallets
- The effect of pallet design on packaging performance
- Pallet design for large flexible unit loads
- Material handling audits
- Laboratory testing



### WANT TO KNOW MORE?

Contact Dr. Laszlo Horvath, Director and Associate Professor  
[unitload@vt.edu](mailto:unitload@vt.edu) | 540-231-7107

[unitload.vt.edu](http://unitload.vt.edu)



## UNIT LOAD DESIGN AND PERFORMANCE

NOVEMBER 5TH - 7TH, 2024

### INSTRUCTORS:

#### DR. LASZLO HORVATH

Associate Professor, Virginia Tech  
Director, Center for Packaging  
and Unit Load Design

In 2010, Dr. Horvath received his Ph.D. in Forest Biomaterials from NC State. He is one of the few packaging professionals who have received the "ISTA CPLP - Professional Level" certification. He is the chair of the ASTM D1185 working group, a U.S. delegate of TC 51, and a voting member of ANSI MH1 and MH 10 committees.



#### DR. BRAD GETHING

Vice President, National Wood Pallet  
and Container Association

Brad Gething became a member of the NWPCA staff in July 2013, taking on the role of Technical and PDS Manager. Brad's role includes participation in various standards bodies, promotion of research and development, and support on other technical issues related to the wood packaging industry. He also serves as a point of contact for PDS design support.



#### MS. KRISTEN DELACK

Professional Engineer, National Wood Pallet  
and Container Association

Kristen DeLack, a Virginia Tech alumna, is a 25-year veteran Structural Engineer who joined NWPCA in 2016. She is a licensed Professional Engineer in Texas and Virginia. Prior to joining NWPCA, Kristen, worked in the offshore oil and gas industry. During this time, she developed design and analysis software tools that helped engineers around the world efficiently design and build safe subsea structures. She is widely recognized as an expert in finite element analysis, which serves as the backbone for calculations performed by PDS.



### COST:

Registration costs are the same for both in-person and virtual attendance of this short course. All attendees will participate in 2.5-days of lectures, laboratory tours, and coursework. Breakfast will be served (all three mornings) and there will be lunch breaks and multiple daily snack breaks. Participants will receive a certificate of completion after successfully finishing the course.

#### Public Attendee:

\$1,456.00

#### CPULD & NWPCA Member

(50% discount):

\$728.00

### TIME:

Tuesday, November 5th, 8am - 5pm

Wednesday, November 6th, 8am - 5pm

Thursday, November 7th, 8am - 12pm

### LOCATION:

Brooks Forest Products Center  
Virginia Tech, MC 0503  
1650 Research Center Drive  
Blacksburg, VA 24061

### TO REGISTER:

Visit: [unitload.vt.edu/uld](http://unitload.vt.edu/uld)

Or call: Erich Sawyer at 540-231-4084



### WANT TO KNOW MORE?

Contact Dr. Laszlo Horvath, Director and Associate Professor  
[unitload@vt.edu](mailto:unitload@vt.edu) | 540-231-7107

[unitload.vt.edu](http://unitload.vt.edu)