

Adhesion Science Short Course Program

May 14-18, 2018

The Inn at Virginia Tech and Skelton Conference Center

Blacksburg, Virginia

(please note: schedule is subject to change)

Monday, May 14

7:30 - 8:00 a.m.	Registration <i>The Inn at Virginia Tech and Skelton Conference Center - 2nd floor</i>
8:00 - 8:15 a.m.	Short Course Introduction
8:15 - 9:25 a.m.	Introduction to Adhesives and Polymer Design Parameters <i>S. Richard Turner</i>
9:25 - 9:40 a.m.	Break
9:40 - 10:50 a.m.	Classes of Adhesive Structure and Synthetic Methods - I <i>S. Richard Turner</i>
10:50 - 11:05 a.m.	Break
11:05 a.m. - 12:15 p.m.	Adsorption on Surfaces/Surface Energy <i>A.R. Esker</i>
12:15 - 1:15 p.m.	Lunch <i>The Inn at Virginia Tech and Skelton Conference Center (Preston's)</i>
1:15 - 2:25 p.m.	Stresses in Bonded Joints <i>D.A. Dillard</i>
2:25 - 2:40 p.m.	Break
2:40 - 3:50 p.m.	Classes of Adhesive Structure and Synthetic Methods - II <i>S. Richard Turner</i>
3:50 - 4:05 p.m.	Break
4:05 - 5:15 p.m.	Surfaces and Surface Preparation <i>A.R. Esker</i>
5:15 - 7:30 p.m.	Dinner (on your own)
7:30 - 9:00 p.m. <i>Break included</i>	Fracture of Adhesive Bonds <i>D.A. Dillard</i>



Macromolecules
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Tuesday, May 15

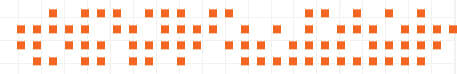
- 8:00 - 9:10 a.m. Viscoelasticity, its Importance and its Applications to Adhesives
M.J. Bortner
- 9:10 - 9:25 a.m. Break
- 9:25 - 10:35 a.m. Adhesive, Sealant and Waterborne Rheology I
R.M. Davis
- 10:35 - 10:55 a.m. Walk to Labs
- 10:55 a.m. - 12:25 p.m. Red Lab Team (a) -- Peel Testing of Adhesives
(MMDC ICTAS II)
- Red Lab Team (b) -- PhotoDSC
(MMDC ICTAS II)
- Blue Lab Team -- Surface Preparation / Bonding
A. R. Esker (315 Hahn N)
- 12:25 - 1:40 p.m. Lunch
The Inn at Virginia Tech and Skelton Conference Center (Preston's)
- 1:40 - 2:50 p.m. Adhesive Test Methods
D.A. Dillard
- 2:50 - 3:10 p.m. Break/Walk to Labs
- 3:10 - 4:40 p.m. Blue Lab Team (a) -- Peel Testing of Adhesives
(MMDC ICTAS II)
- Blue Lab Team (b) -- PhotoDSC
(MMDC ICTAS II)
- Red Lab Team -- Surface Preparation / Bonding
A. R. Esker (315 Hahn N)
- 4:40 p.m. Dinner (on your own)



Wednesday, May 16

- 8:00 - 9:10 a.m. Adhesive, Sealant and Waterborne Rheology II
R.M. Davis
- 9:10 - 9:25 a.m. Break
- 9:25 - 10:35 a.m. Free Volume, DSC and Intro to Time-Temp Superposition TTS
M.J. Bortner
- 10:35 - 10:55 a.m. Walk to Labs
- 10:55 a.m. - 12:25 p.m. Red Lab Team -- Rheological Testing
R. M. Davis (240 ICTAS I)
- Blue Lab Team -- Adhesive Bond Testing
D. A. Dillard (420 ICTAS I)
- 12:25 - 1:40 p.m. Lunch
The Inn at Virginia Tech and Skelton Conference Center (Preston's)
- 1:40 - 2:50 p.m. Analysis of Surfaces
A.R. Esker
- 2:50 - 3:10 p.m. Break/Walk to Labs
- 3:10 - 4:40 p.m. Blue Lab Team -- Rheological Testing
R. M. Davis (240 ICTAS I)
- Red Lab Team -- Adhesive Bond Testing
D. A. Dillard (420 ICTAS I)
- 5:00 - 6:30 p.m. Introduction to Dynamic Mechanical Methodology and Application
to Adhesives
M.J. Bortner
- 6:30 p.m. Dinner (on your own)





Thursday, May 17

8:00 - 9:10 a.m.	PSA Performance and Testing <i>D.A. Dillard</i>
9:10 - 9:25 a.m.	Break
9:25 - 10:35 a.m.	Demo Interpretation (All) <i>Bonding-Failure Analysis -- A. R. Esker</i>
10:35 - 10:40 a.m.	Group Picture
10:40 - 10:50 a.m.	Break
10:50 - 11:50 a.m.	Frontiers in Adhesion Science <i>Johan Foster, Jonathan Boreyko, Raffaella De Vita</i>
11:50 a.m. - 12:50 p.m.	Lunch <i>The Inn at Virginia Tech and Skelton Conference Center (Preston's)</i>
12:50 - 2:00 p.m.	Adhesive, Sealant and Waterborne Rheology III <i>R.M. Davis</i>
2:00 - 2:15 p.m.	Break
2:15 - 3:25 p.m.	Wood Adhesion <i>C. Frazier</i>
3:25 - 3:40 p.m.	Break
3:40 - 4:40 p.m.	Durability and Design <i>D.A. Dillard</i>
6:30 - 8:00 p.m.	Group Dinner

Friday, May 18

8:00 - 8:55 a.m.	Applications of Surface Science to Adhesion <i>A.R. Esker</i>
8:55 - 10:00 a.m.	Demo Interpretation (All) <i>Fracture Analysis -- D. Dillard</i> <i>Master Curves and Superposition -- D. Dillard / M.J. Bortner</i>
10:00 - 10:25 a.m.	Case Study Overview (All)
10:25 - 10:35 a.m.	Break
10:35 - 11:35 a.m.	Case Study Team Solutions (All)
11:35 - 12:00 noon	Wrap-up; collect Evaluations; receive certificates

