Faculty Sponsor: Andrea Bertozzi
Research Mentors: David Arnold, Claudia Falcon, Mike Lindstrom
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Lab Location: Math Sciences 3355

Weekly Group Meeting: Mondays, 5 - 6 pm
Occasional Lecture: Wednesdays, 5 - 6 pm

Course Description: Mathematical, numerical, and experimental study of particle laden flows on an incline.

Expectations: Experimental Work / Data Analysis: 3 h/week
Report Writing: 1–2 h/week
Weekly Meeting: 1–2 h/week

Grading System:
Attendance: 45%
Oral Exam: 25%
Midterm Report: 5%
Final Report: 10%
Final Presentation: 15%

<table>
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<tr>
<th>Week</th>
<th>Research Activity</th>
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| 1    | M : April 3rd (5 – 8 pm) – Lab Orientation, Registration, and Research Meeting  
     | T,R: Experiments – Bidensity Constant Volume , Data Analysis  
     | W: Modeling Lecture – Conservation Laws, Thin Film Theory  
     | Report & Data Interpretation |
| 2    | M: Research Meeting  
     | T,R: Experiments / Data Analysis - Bidensity Constant Volume  
     | W: Modeling Lecture - Thin Film, Diffusive Flux Model  
     | Report & Data Interpretation |
| 3    | M: Research Meeting  
     | T,R: Experiments / Data Analysis - Bidensity Constant Volume  
     | W: Matlab  
     | Report & Data Interpretation |
| 4    | M: Research Meeting  
     | T,R: Experiments / Data Analysis – Bidensity Constant Volume  
     | W: LaTeX & Academic Writing  
     | Report & Data Interpretation |
| 5    | M: Research Meeting (Data Analysts Presentation)  
     | T,R: Experiments / Data Analysis - Bidensity Experiment  
     | F: Midterm Report Due |
| 6    | M: Research Meeting  
     | T,R: Experiments/ Data Analysis - Bidensity Constant Flux  
     | Report & Data Interpretation |
| 7    | M: Research Meeting  
     | T,R: Experiments/ Data Analysis - Bidensity Constant Flux  
     | Report & Data Interpretation |
| 8    | M: Research Meeting & Presentation Skills  
     | T,R: Experiments/ Data Analysis – Bidensity Constant Flux  
     | Report & Data Interpretation |
| 9    | M: Memorial Day (No Meeting)  
     | T,R: Experiments/ Data Analysis - Bidensity Constant Flux  
     | W: Research Meeting  
     | Report & Data Interpretation |
| 10   | M - Research Meeting & Practice Presentation  
     | W: June 7 (5pm) - Final Presentation @ MS 5233  
     | W: Final Report Due  
     | R - Oral Exams |