SUMMER 2010
JAMES MADISON UNIVERSITY

MATERIALS SCIENCE
RESEARCH EXPERIENCE FOR
UNDERGRADUATES (REU)
Welcome
Welcome to the Summer 2010 JMU Research Experience for Undergraduates. We hope your time here at JMU is fun, educational, and productive.

What is the REU?
The Research Experience for Undergraduates Program is a program in which funds are given to a small number of colleges and universities throughout the United States to enable undergraduate students to participate in high level scientific research. These programs provide an immersion in research for ten weeks during the summer, direct mentoring of undergraduate students by faculty, and social and other events to encourage the development of a scholarly community engaged in scientific pursuits.
The bulk of the funding for this program comes from the Department of Defense through a program called ASSURE (Awards to Stimulate and Support Undergraduate Research Experiences) and from some funds provided by James Madison University. Some of the student scholarships are being funded by other funds from grants that individual faculty members have received.

Summer 2010 Participants

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<thead>
<tr>
<th>Name</th>
<th>Institution</th>
<th>Advisor</th>
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<tr>
<td>Toni Bost</td>
<td>Salem</td>
<td>Reisner</td>
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<td>Matt Bradley</td>
<td>JMU</td>
<td>Augustine</td>
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<td>Jon Bridstrup</td>
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<td>Alex Burant</td>
<td>JMU</td>
<td>Hughes</td>
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<td>Jake Carey</td>
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<td>Chris Durcan</td>
<td>JMU</td>
<td>Paulson</td>
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<td>Chris Flint</td>
<td>JMU</td>
<td>Augustine/Paulson</td>
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<td>Ben Foltz</td>
<td>JMU</td>
<td>Utter</td>
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<td>Joe Hardcastle</td>
<td>JMU</td>
<td>Paulson</td>
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<td>Jacob Hill</td>
<td>Catawba</td>
<td>DeVore</td>
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<td>SoMyung Kim</td>
<td>KIST</td>
<td>Reisner</td>
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<td>Ashley Lambers</td>
<td>Randolph-Macon</td>
<td>Lawrence</td>
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<td>Brandon Lancaster</td>
<td>JMU</td>
<td>Lawrence</td>
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<td>Andrew Massonneau</td>
<td>JMU</td>
<td>Paulson</td>
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<td>Alan Mo</td>
<td>JMU</td>
<td>Augustine</td>
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<td>Margaret Ngami</td>
<td>Clarkson</td>
<td>Amenta/Utter</td>
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<td>Alex Pakpour-Tabrizi</td>
<td>London (Royal Holloway)</td>
<td>Constantin</td>
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<td>Darius Reynolds</td>
<td>West Virginia</td>
<td>Kander</td>
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<td>Lee Reynolds</td>
<td>JMU</td>
<td>Holland</td>
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<td>Daniel Rubino</td>
<td>St. Vincent</td>
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<td>Nora Swisher</td>
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<td>Natalie Trinh</td>
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<td>Kyle Vasquez</td>
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<td>Scarel</td>
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<td>Anita Vincent-Johnson</td>
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<td>Skye White</td>
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<td>Brittany Wilhelm</td>
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<td>Veve Zungu</td>
<td>Kwa-Zula Natal</td>
<td>Augustine</td>
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What is required of You
You are taking a one credit course on research in materials science this summer and the primary requirement of that course is that you take a serious approach to solving the
research problem to which you are assigned and that you use that experience to develop as a scientist. It is typical to work as much as 40 hours a week for the next 10 weeks, though the exact hours that you work are to be determined by you and your mentor in the way that best suits your research. Your attendance will also be expected at several seminars, several field trips, and group meetings. Finally, you are expected to keep a detailed notebook of your work and give a presentation of your completed work during the week ending July 30.

Your Scholarship
You will be enrolled this summer in a one credit research course here at JMU. For those of your who are not already JMU students, this means that you will be enrolled here as a special summer student and be able to receive an ID, email account, library privileges, and access to JMU facilities such as UREC. Your scholarship check is currently being processed by the JMU Financial Aid Office.
Since this is being paid as a scholarship, there will be no tax withheld from this check. We strongly recommend that you determine for yourself if this is taxable income for your particular situation and pay the tax required of you next spring. Likewise, benefits such as housing, travel expenses, and meal plans MAY also be considered taxable.

Housing
Many of you are receiving housing from the REU program in Wampler Hall. If you have any problems related to this housing, please contact the JMU Events and Conferences Office.

Mail Service
If you would like to receive mail while here at JMU, you may have it sent to:

c/o Center for Materials Science MSC 4310
James Madison University
Harrisonburg, VA 22807

Social Events
There will be social events that allow students from the different labs to get to know each other better. These are tentatively planned to include a pool party/cookout and a canoe trip.

Field Trips
We hope to take two field trips this summer. In years past, these included NIST in Gaithersburg, MD, Dominion Semiconductor in Manassas and Johnson & Johnson’s Spectacle Lens Group in Roanoke. You will be informed as soon as the trips are scheduled.

Seminars
There will be several seminars this summer involving visitors from other institutions. The dates and times for these will be listed on the web.

Future Publications
We hope that after the summer ends you all keep in touch with us and let us know how your career progresses. One thing that we do request is that you acknowledge the support of the Department of Defense ASSURE program (grant #0851367) and inform us of any publications or presentation that arise from your work this summer. In addition, please check with your advisor about other grants that you may need to acknowledge.
What To Do In And Around Harrisonburg

There are things to do in Harrisonburg in the summer. While this is not a comprehensive list and should not be considered an endorsement of any sort, here are some of the more popular regularly scheduled activities:

*Fridays on the Square*

An event each Friday of the summer on Court Square in downtown H’burg alternating between bands and movies. Bands perform on the lawn of the courthouse every other Friday evening from 7 to 9 pm. On the other weeks, movies will be shown starting around 8:30 pm on the square (pre-show events start at 8 pm). All events free and open to the public. ([http://www.fridaysonthesquare.com](http://www.fridaysonthesquare.com))

- June 4 ............... Concert: The Nighthawks
- June 11 ............. Film: *Julie & Julia*
- June 18 ............ Concert: Mills Family Band
- June 25 ............ Film: *24 Solo & Off Road to Athens*
- July 2 ................. Concert: Trent Wagler & Steel Wheels
- July 9 ................. Film: *The Princess Bride*
- July 16 ............... Concert: Just Jazzin’
- July 23 ............... Film: *Dial M for Murder*
- July 30 ............... Concert: Marlon Foster and Friends
- Aug. 6 ............... Film: *Sandlot*
- Aug. 13 ............. Concert: Eric Brace & Last Train Home
- Aug. 20 ............... Film: *Up!*
- Aug. 27 ............... Concert: Everyday People
- Sep. 3 ............... Film: *Ashes of American Flags*

*Fundfest*

Bands perform on the lot across from the *Daily News Record* offices on South Liberty Street every other Wednesday evening from 6 to 9 pm. Admission is charged to assist the Harrisonburg-Rockingham SPCA & a local charity.

- May 19 ............... Southern Company
- June 2 ............... Standing Room Only
- June 16 .............. Everyday People
- June 30 ............... Mirage
- July 14 ............... The Worxx
- July 28 ............... Maybe Tomorrow
- Aug. 11 ............... Hackens Boys
- Aug. 25 ............... Standing Room Only

*Green Valley Book Fair*

Cheap, cheap books. Open only a few times a year – this summer from May 15 to May 31 and again July 3 to July 18 ([http://www.gvbookfair.com](http://www.gvbookfair.com)).

*Independence Day Celebrations*

- **Staunton 4th of July** – Gypsy Hill Park, Staunton, Sat. July 3 ([http://stauntonjulyfourth.com](http://stauntonjulyfourth.com))
- **4th of July in New Market** – New Market, Sat. July 4. Includes Firecracker Five-Miler, events. ([http://www.newmarketvirginia.com](http://www.newmarketvirginia.com))
**Kline’s Dairy Bar**

A must part of any summer in the valley. One of a kind ice cream. Only three flavors at a time: vanilla, chocolate, and the flavor of the week. ([http://www.klinesdairybar.com/](http://www.klinesdairybar.com/))

Wolfe Street
May 20 - Strawberry
May 27 – Black Raspberry
June 3 – Cake Batter
June 10 – Cookies and Cream
June 17 – Black Raspberry
June 24 – Peach
July 1 – Choc. Peanut Butter
July 8 – Banana

South Main St.
May 20 – Cherry Nut
May 27 – Peanut Butter Cookies and Cream
June 3 – Red Raspberry
June 10 – Blueberry Cheesecake
June 17 – Choc. Peanut Butter
June 24 – Cherry Choc. Chip
July 1 – Black Raspberry
July 8 – Choc. Chip Cookie Dough

**Summer Concerts on the Lawn**


May 30 ............... Mr. Jefferson’s Bones
June 6 ............... The Main Street Singers (in Memorial Hall Auditorium)
June 13 ............... Just Jazzin’
June 20 ............... Harrisonburg-Rockingham Concert Band
June 29 ............... The 29th Infantry Division Army Band

**Harrisonburg Turks ([http://www.harrisonburgturks.com/](http://www.harrisonburgturks.com/))**

The Harrisonburg Turks are one of the teams in the Shenandoah Valley League, a summer college developmental wooden bat baseball league sanctioned by the NCAA. The Turks play at Harrisonburg Veterans Memorial Park on S. High Street. Games start at 7:30 pm.

Thursday, June 3 New Market
Tuesday, June 8 Waynesboro
Friday, Jun e 11 Covington
Wednesday, June 16 Haymarket
Friday, June 18 Rockbridge
Saturday, June 19 Staunton
Wednesday, June 23 Front Royal
Friday, June 25 Woodstock
Tuesday, June 29 Luray
Wednesday, June 30 New Market
Saturday, July 3 Waynesboro

Wednesday, July 7 Front Royal
Thursday, July 8 Covington
Saturday, July 10 Winchester
Tuesday, July 13 Staunton
Friday, July 16 Haymarket
Sunday, July 18 Rockbridge
Sunday, July 25 Woodstock
Tuesday, July 27 Winchester
Wednesday, July 28 Luray
Saturday, July 31 Rockbridge
Monday, August 2 Waynesboro