### Enhanced Science, Mathematics And Research Training

“K12 High School Science Education Outreach”

http://ultracold.uchicago.edu/e.SMART2019

**Kersten Physics Teaching Center (KPTC)**

5720 South Ellis Avenue
Chicago, IL 60637

**Number of Students:** 10–15

**Date:** July 11–July 16, 2019

**Organizers:**
- Krutik Patel: (773) 702-1218, (760) 707-9152, krutikp@uchicago.edu
- Eileen Sheu: (773) 834-9916, esheu@uchicago.edu
- Athena Frost: (312) 785-4104, frost.athena@gmail.com
- Maria Jimenez: (773) 702-9971, mdjimene@uchicago.edu
- Cheng Chin: (773) 702-7192, cchin@uchicago.edu

**Agenda:**

**Thursday, July 11**

<table>
<thead>
<tr>
<th>Time</th>
<th>Lecture + Experiment</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>9:45 am</td>
<td>Arrival and Breakfast</td>
<td>KPTC 206</td>
</tr>
<tr>
<td>10:00 - 10:50 am</td>
<td><strong>Topic 1: Light and Matter</strong> (Krutik Patel and Michelle Chong)</td>
<td>KPTC 213</td>
</tr>
<tr>
<td>11:00 - 11:50 am</td>
<td><strong>Topic 2: Interpreting the Sky</strong> (Krutik Patel and Michelle Chong)</td>
<td>KPTC 213</td>
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<tr>
<td>11:50 - 12:20 pm</td>
<td>Lunch with REU students</td>
<td>KPTC 206</td>
</tr>
<tr>
<td>12:20 - 1:30 pm</td>
<td>Chin Lab Tour (Jonathan Trisnadi, Geyue Cai)</td>
<td>GCIS ESB11</td>
</tr>
<tr>
<td>1:30 - 4:00 pm</td>
<td>A Bright Idea (Mark Chantell) (Assistants: Geyue Cai, Alex Preau)</td>
<td>KPTC 216</td>
</tr>
<tr>
<td>4:00 pm</td>
<td>Departure</td>
<td>5720 S. Ellis Avenue</td>
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**Friday, July 12**

<table>
<thead>
<tr>
<th>Time</th>
<th>High Speed Imaging and 3D Printing (Organizers: Jeffrey Gustafson and Justin Jureller) (Morning Assistant: Lucas Baralt and Michelle Chong)</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>9:45 am</td>
<td>Arrival and Breakfast</td>
<td>KPTC 206</td>
</tr>
<tr>
<td>10:00 am</td>
<td>Introduction to 3D Printing</td>
<td>KPTC 213</td>
</tr>
<tr>
<td>11:30 am</td>
<td>Introduction to High Speed Imaging</td>
<td>KPTC 206</td>
</tr>
<tr>
<td>12:15 pm</td>
<td>Lunch (Afternoon Assistant: Minjiamei Zhang, Alex Preau)</td>
<td>KPTC 206</td>
</tr>
<tr>
<td>1:00 pm</td>
<td>High Speed Imaging and 3D Printing</td>
<td>KPTC 213</td>
</tr>
<tr>
<td>4:00 pm</td>
<td>Departure</td>
<td>5720 S. Ellis Avenue</td>
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</tbody>
</table>
**Saturday, July 13**  
**Astro day - Observatory Tour (Athena Frost)**  
**Location**  
(Assistants: Huiting Liu, Michelle Chong, Xinyu Song)  
1:45 pm  Meet at U of C (Gordon Center)  
2:15 pm  Depart to Adler Planetarium  
6:00 pm  Dinner in front of Adler  
7:00 pm  Depart Adler to U of C Campus  
7:30 pm  Blackhole Talk  
8:30 pm  Star Gazing  
10:00 pm  Dismissed (Gordon Center)  

**Monday, July 15**  
**Holography and Argonne Lab**  
**Location**  
8:30 am  Arrival and Breakfast  
9:00 am  Bus to Argonne National Lab  
10:00 am - 1:30 pm  Argonne National Lab (Lunch @ Argonne)  
1:30 pm  Depart Argonne  
2:30 pm  Arriving U of C Campus  
2:30 pm  Experiment demonstration  
4:00 pm  Departure  

**Tuesday, July 16**  
**Lectures + Lab Tours + BBQ**  
**Location**  
9:45 pm  Arrival and Breakfast  
10:00 - 10:50 am  Experiment and Demonstration (I)  
11:00 - 11:50 am  Experiment and Demonstration (II)  
12:00 pm  Lunch with REU students  
1:00 pm  Engel Lab 2-6066 (Sami Abdulhadi, Siddhartha Sohoni)  
1:45 pm  Schuster Lab 2-7191  
2:30 pm  IME Nanofab Tour  
3:15 - 5:00 pm  BBQ Party  
(Brian DeSalvo, everyone and parents are welcome.)