<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Event</th>
<th>Speaker</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monday, March 4</td>
<td>12:00am</td>
<td><strong>Group, Lie and Number Theory</strong></td>
<td>No Talk</td>
<td>Winter break 4088 East Hall</td>
</tr>
<tr>
<td></td>
<td>12:00am</td>
<td><strong>Geometry &amp; Physics</strong></td>
<td>Winter Break</td>
<td>TBA 4096 East Hall</td>
</tr>
<tr>
<td>Tuesday, March 5</td>
<td>4:00pm</td>
<td><strong>Colloquium Series</strong></td>
<td>Winter Break</td>
<td>1360 East Hall</td>
</tr>
<tr>
<td>Wednesday, March 6</td>
<td>2:30pm-4:00pm</td>
<td><strong>Student Machine Learning</strong></td>
<td>Israel Diego-Guerra (University of Michigan) Sequence Modeling: Recursive and Recurrent Networks</td>
<td>3866 East Hall</td>
</tr>
<tr>
<td>Friday, March 8</td>
<td>12:00am</td>
<td><strong>Combinatorics</strong></td>
<td>Spring break, no seminar</td>
<td>2866 East Hall</td>
</tr>
</tbody>
</table>
### Abstracts for the week of March 3rd, 2019 - March 9th, 2019

**Group, Lie and Number Theory**  
*Monday, March 04, 2019, 12:00am-12:00am*  
4088 East Hall  
No Talk ()  
*Winter break*

**Geometry & Physics**  
*Monday, March 04, 2019, 12:00am-12:00am*  
4096 East Hall  
Winter Break ()  
*TBA*

**Colloquium Series**  
*Tuesday, March 05, 2019, 4:00pm-5:00pm*  
1360 East Hall  
*Winter Break ()*  
*Winter Break*

**Student Machine Learning**  
*Wednesday, March 06, 2019, 2:30pm-4:00pm*  
3866 East Hall  
Israel Diego-Guerra (University of Michigan)  
*Sequence Modeling: Recursive and Recurrent Networks*

Recurrent networks are networks that can be trained to learn time dependence of the variables. This can be thought of as a neural network where the computational graph is a directed path. This chapter extends the idea of a computational graph to include cycles. These cycles represent the influence of the present value of a variable on its own value at a future time step. Such computational graphs allow us to define recurrent neural networks. We then describe many different ways to construct, train, and use recurrent neural networks.

**Combinatorics**  
*Friday, March 08, 2019, 12:00am-12:00am*  
2866 East Hall  
()  
*Spring break, no seminar*