<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Event</th>
<th>Location</th>
<th>Details</th>
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</thead>
<tbody>
<tr>
<td>Monday, March 04, 2019</td>
<td>12:00am-12:00am</td>
<td><strong>Group, Lie and Number Theory</strong> -- No Talk () Winter break -- 4088 East Hall</td>
<td>4088 East Hall</td>
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<td>12:00am-12:00am</td>
<td><strong>Geometry &amp; Physics</strong> -- Winter Break () TBA -- 4096 East Hall</td>
<td>4096 East Hall</td>
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<tr>
<td>Tuesday, March 05, 2019</td>
<td>4:00pm-5:00pm</td>
<td><strong>Colloquium Series</strong> -- Winter Break () Winter Break -- 1360 East Hall</td>
<td>1360 East Hall</td>
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<tr>
<td>Wednesday, March 06, 2019</td>
<td>2:30pm-4:00pm</td>
<td><strong>Student Machine Learning</strong> -- Israel Diego-Guerra (University of Michigan) Sequence Modeling: Recursive and Recurrent Networks -- 3866 East Hall</td>
<td>3866 East Hall</td>
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</tr>
<tr>
<td>Friday, March 08, 2019</td>
<td>12:00am-12:00am</td>
<td><strong>Combinatorics</strong> -- () Spring break, no seminar -- 2866 East Hall</td>
<td>2866 East Hall</td>
<td></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*