**Stweeler: A Framework for Twitter Bot Analysis**  
Zafar Gilani, Mario Almeida, Reza Farahbakhsh, Liang Wang, Jon Crowcroft  
University of Cambridge

The WWW has seen massive growth in variety and opportunistic usage of OSNs.  

Most of these opportunistic pursuits are exploited through automated programs, known as bots. We propose a framework (Stweeler) to study bot impact and influence on Twitter from systems and social media perspectives.

### Research Questions

1. **About bots:** Why do bots exist in such quantity in a large OSN such as Twitter?

2. **Bot usage and impact:** How do different entities, e.g. news corps or commercial enterprises, use bots to disseminate content? Do bots influence content popularity, such as making topics ‘trend’? Can bots impact content placement and CDNs?

3. **Bot weight:** What do bots post? Is it original content? What percentage of content is produced by bots and what percentage by humans? Can we predict and cache content? Do bots make Twitter more active by forming large connected components?

How Stweeler bot works.

- Trending topic
- Shorten URL
- Assemble tweet
- Log clicks

### Stweeler analysis framework.

<table>
<thead>
<tr>
<th>Total clicks on our URLs</th>
<th>Clicks by bots</th>
</tr>
</thead>
<tbody>
<tr>
<td>63,400 +</td>
<td>26,200 + (41%)</td>
</tr>
</tbody>
</table>