latex beamer template for presentation supermcm

Zhou Lvwen

Institute of Mechanics, CAS

September 23, 2018

- Introduction
 - Overview of the Beamer Class

- 2 Animation examples
 - NS
 - Booth Tolls
- MatLab Scripts

Features of the Beamer Class

- Normal LaTeX class.
- Easy overlays.
- No external programs needed.

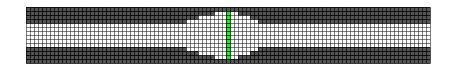
Features of the Beamer Class

- Normal LaTeX class.
- Easy overlays.
- No external
- Normal LaTeX class.
- Easy overlays.
- No external
- Easy overlays.
- No external
- No external



NS

Booth Tolls



```
ns.m
01 function flux = ns(rho,p,L,tmax) % aaa
02 ncar = round(L*rho);
                                      % bbb
03 x = sort(randperm(L, ncar));
                                    % ccc
                                       % ddd
04 \text{ vmax} = 5;
05 v = vmax * ones(1, ncar);
                                      % eee
06 \text{ for } t = 1:tmax
v = \min(v+1, vmax);
                                    % fff
08 gaps = gaplength(x,L,ncar);
                                  % hhh
09 v = min(v, gaps-1);
                                       % iii
10 v = max(v - (rand(1, ncar) < p), 0); % 555
11 \qquad x = x + v;
                                       % 666
12 \qquad x(x>L) = x(x>L) - L;
                                     % 888
13
      flux = flux + sum(v)/L;
                                    % 999
14 end
15 flux = flux / tmax;
```

```
ns.m
01 function flux = ns(rho,p,L,tmax) % aaa
02 ncar = round(L*rho);
                                      % bbb
03 x = sort(randperm(L, ncar));
                                    % ccc
                                       % ddd
04 \text{ vmax} = 5;
05 v = vmax * ones(1, ncar);
                                      % eee
06 \text{ for } t = 1:tmax
v = \min(v+1, vmax);
                                    % fff
08 gaps = gaplength(x,L,ncar);
                                  % hhh
09 v = min(v, gaps-1);
                                       % iii
10 v = max(v - (rand(1, ncar) < p), 0); % 555
11 \qquad x = x + v;
                                       % 666
12 \qquad x(x>L) = x(x>L) - L;
                                     % 888
13
      flux = flux + sum(v)/L;
                                    % 999
14 end
15 flux = flux / tmax;
```

```
ns.m
01 function flux = ns(rho,p,L,tmax) % aaa
02 ncar = round(L*rho);
                                      % bbb
03 x = sort(randperm(L, ncar));
                                    % ccc
                                       % ddd
04 \text{ vmax} = 5;
05 v = vmax * ones(1, ncar);
                                      % eee
06 \text{ for } t = 1:tmax
v = \min(v+1, vmax);
                                    % fff
08 gaps = gaplength(x,L,ncar);
                                  % hhh
09 v = min(v, gaps-1);
                                       % iii
10 v = max(v - (rand(1, ncar) < p), 0); % 555
11 \qquad x = x + v;
                                       % 666
12 \qquad x(x>L) = x(x>L) - L;
                                     % 888
13
      flux = flux + sum(v)/L;
                                    % 999
14 end
15 flux = flux / tmax;
```

```
ns.m
01 function flux = ns(rho,p,L,tmax) % aaa
02 ncar = round(L*rho);
                                      % bbb
03 x = sort(randperm(L, ncar));
                                    % ccc
                                       % ddd
04 \text{ vmax} = 5;
05 v = vmax * ones(1, ncar);
                                      % eee
06 \text{ for } t = 1:tmax
v = \min(v+1, vmax);
                                    % fff
08 gaps = gaplength(x,L,ncar);
                                  % hhh
09 v = min(v, gaps-1);
                                       % iii
10 v = max(v - (rand(1, ncar) < p), 0); % 555
11 \qquad x = x + v;
                                       % 666
12 \qquad x(x>L) = x(x>L) - L;
                                     % 888
13
      flux = flux + sum(v)/L;
                                    % 999
14 end
15 flux = flux / tmax;
```

```
ns.m
01 function flux = ns(rho,p,L,tmax) % aaa
02 ncar = round(L*rho);
                                      % bbb
03 x = sort(randperm(L, ncar));
                                    % ccc
                                       % ddd
04 \text{ vmax} = 5;
05 v = vmax * ones(1, ncar);
                                      % eee
06 \text{ for } t = 1:tmax
v = \min(v+1, vmax);
                                    % fff
08 gaps = gaplength(x,L,ncar);
                                  % hhh
09 v = min(v, gaps-1);
                                       % iii
10 v = max(v - (rand(1, ncar) < p), 0); % 555
11 \qquad x = x + v;
                                       % 666
12 \qquad x(x>L) = x(x>L) - L;
                                     % 888
13
      flux = flux + sum(v)/L;
                                    % 999
14 end
15 flux = flux / tmax;
```

```
ns.m
01 function flux = ns(rho,p,L,tmax) % aaa
02 ncar = round(L*rho);
                                      % bbb
03 x = sort(randperm(L, ncar));
                                    % ccc
                                       % ddd
04 \text{ vmax} = 5;
05 v = vmax * ones(1, ncar);
                                      % eee
06 \text{ for } t = 1:tmax
v = \min(v+1, vmax);
                                    % fff
08 gaps = gaplength(x,L,ncar);
                                  % hhh
09 v = min(v, gaps-1);
                                       % iii
10 v = max(v - (rand(1, ncar) < p), 0); % 555
11 \qquad x = x + v;
                                       % 666
12 \qquad x(x>L) = x(x>L) - L;
                                     % 888
13
      flux = flux + sum(v)/L;
                                    % 999
14 end
15 flux = flux / tmax;
```

```
ns.m
01 function flux = ns(rho,p,L,tmax) % aaa
02 ncar = round(L*rho);
                                      % bbb
03 x = sort(randperm(L, ncar));
                                    % ccc
                                       % ddd
04 \text{ vmax} = 5;
05 v = vmax * ones(1, ncar);
                                      % eee
06 \text{ for } t = 1:tmax
v = \min(v+1, vmax);
                                    % fff
08 gaps = gaplength(x,L,ncar);
                                  % hhh
09 v = min(v, gaps-1);
                                       % iii
10 v = max(v - (rand(1, ncar) < p), 0); % 555
11 \qquad x = x + v;
                                       % 666
12 \qquad x(x>L) = x(x>L) - L;
                                     % 888
13
      flux = flux + sum(v)/L;
                                    % 999
14 end
15 flux = flux / tmax;
```

```
ns.m
01 function flux = ns(rho,p,L,tmax) % aaa
02 ncar = round(L*rho);
                                      % bbb
03 x = sort(randperm(L, ncar));
                                    % ccc
                                       % ddd
04 \text{ vmax} = 5;
05 v = vmax * ones(1, ncar);
                                       % eee
06 \text{ for } t = 1:tmax
v = \min(v+1, vmax);
                                     % fff
08 gaps = gaplength(x,L,ncar);
                                   % hhh
v = \min(v, \text{gaps}-1);
                                       % iii
10 v = max(v - (rand(1, ncar) < p), 0); % 555
11 \qquad x = x + v;
                                       % 666
12 \qquad x(x>L) = x(x>L) - L;
                                     % 888
13
      flux = flux + sum(v)/L;
                                     % 999
14 end
15 flux = flux / tmax;
```

```
ns.m
01 function flux = ns(rho,p,L,tmax) % aaa
02 ncar = round(L*rho);
                                      % bbb
03 x = sort(randperm(L, ncar));
                                    % ccc
                                      % ddd
04 \text{ vmax} = 5;
05 v = vmax * ones(1, ncar);
                                      % eee
06 \text{ for } t = 1:tmax
v = \min(v+1, vmax);
                                    % fff
08 gaps = gaplength(x,L,ncar);
                                  % hhh
09 v = min(v, gaps-1);
                                       % iii
10 v = max(v - (rand(1,ncar) < p), 0); % 555
11 \qquad x = x + v;
                                       % 666
12 \qquad x(x>L) = x(x>L) - L;
                                     % 888
13
      flux = flux + sum(v)/L;
                                    % 999
14 end
15 flux = flux / tmax;
```

```
ns.m
01 function flux = ns(rho,p,L,tmax) % aaa
02 ncar = round(L*rho);
                                      % bbb
03 x = sort(randperm(L, ncar));
                                    % ccc
                                       % ddd
04 \text{ vmax} = 5;
05 v = vmax * ones(1, ncar);
                                      % eee
06 \text{ for } t = 1:tmax
v = \min(v+1, vmax);
                                    % fff
08 gaps = gaplength(x,L,ncar);
                                  % hhh
09 v = min(v, gaps-1);
                                       % iii
10 v = max(v - (rand(1, ncar) < p), 0); % 555
11 \qquad x = x + v;
                                       % 666
12 \qquad x(x>L) = x(x>L) - L;
                                     % 888
13
      flux = flux + sum(v)/L;
                                    % 999
14 end
15 flux = flux / tmax;
```

```
ns.m
01 function flux = ns(rho,p,L,tmax) % aaa
02 ncar = round(L*rho);
                                     % bbb
03 x = sort(randperm(L, ncar));
                                   % ccc
                                      % ddd
04 \text{ vmax} = 5;
05 v = vmax * ones(1, ncar);
                                      % eee
06 \text{ for } t = 1:tmax
v = \min(v+1, vmax);
                                    % fff
08 gaps = gaplength(x,L,ncar);
                                  % hhh
09 v = min(v, gaps-1);
                                      % iii
10 v = max(v - (rand(1, ncar) < p), 0); % 555
11 x = x + v;
                                      % 666
12 \qquad x(x>L) = x(x>L) - L;
                                    % 888
13
      flux = flux + sum(v)/L;
                                    % 999
14 end
15 flux = flux / tmax;
```

```
ns.m
01 function flux = ns(rho,p,L,tmax) % aaa
02 ncar = round(L*rho);
                                      % bbb
03 x = sort(randperm(L, ncar));
                                    % ccc
                                       % ddd
04 \text{ vmax} = 5;
05 v = vmax * ones(1, ncar);
                                      % eee
06 \text{ for } t = 1:tmax
v = \min(v+1, vmax);
                                    % fff
08 gaps = gaplength(x,L,ncar);
                                  % hhh
09 v = min(v, gaps-1);
                                       % iii
10 v = max(v - (rand(1, ncar) < p), 0); % 555
11 \qquad x = x + v;
                                       % 666
12 \qquad x(x>L) = x(x>L) - L;
                                     % 888
13
      flux = flux + sum(v)/L;
                                    % 999
14 end
15 flux = flux / tmax;
```