Utilizing Machine Learning Techniques in Theoretical Physics

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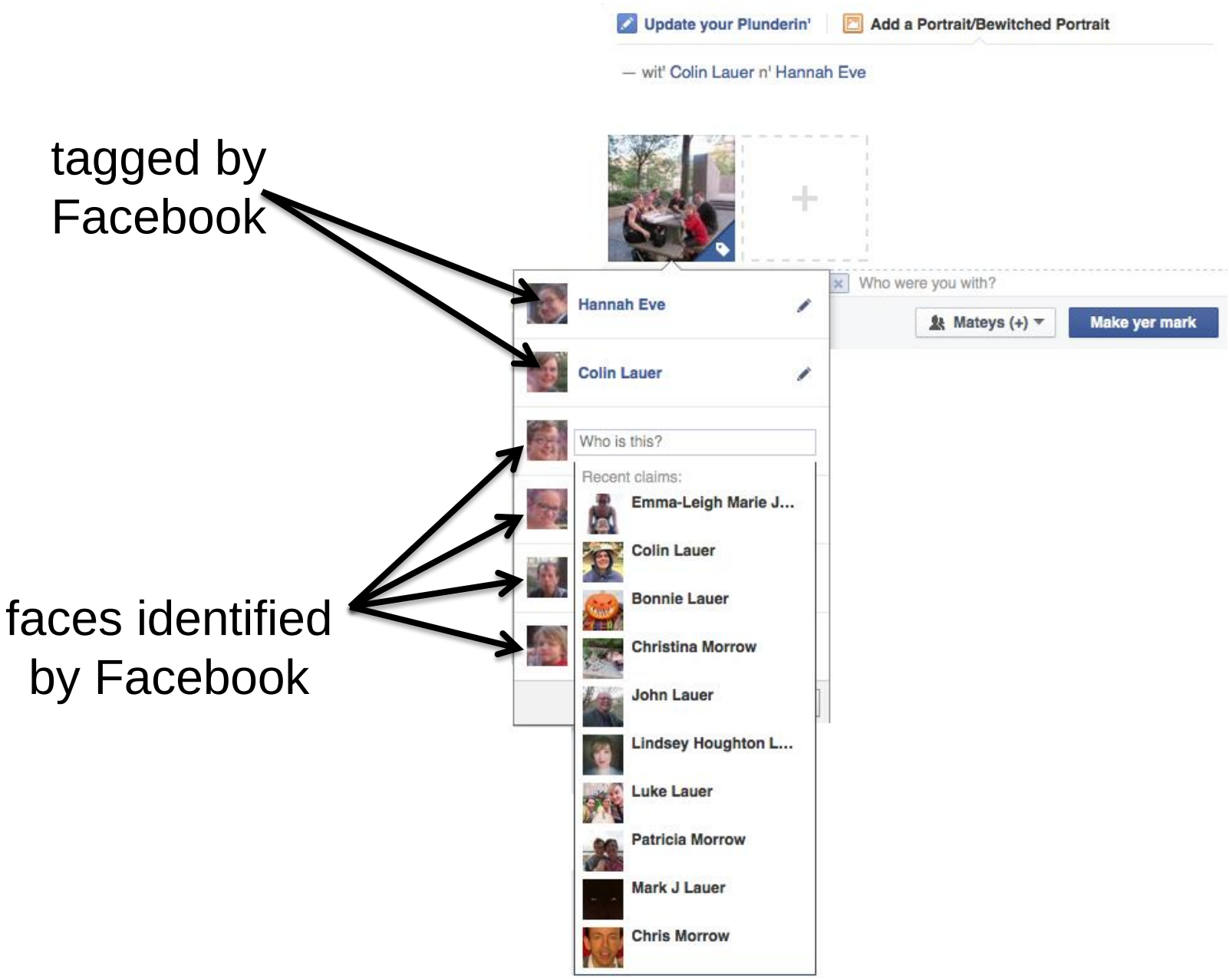
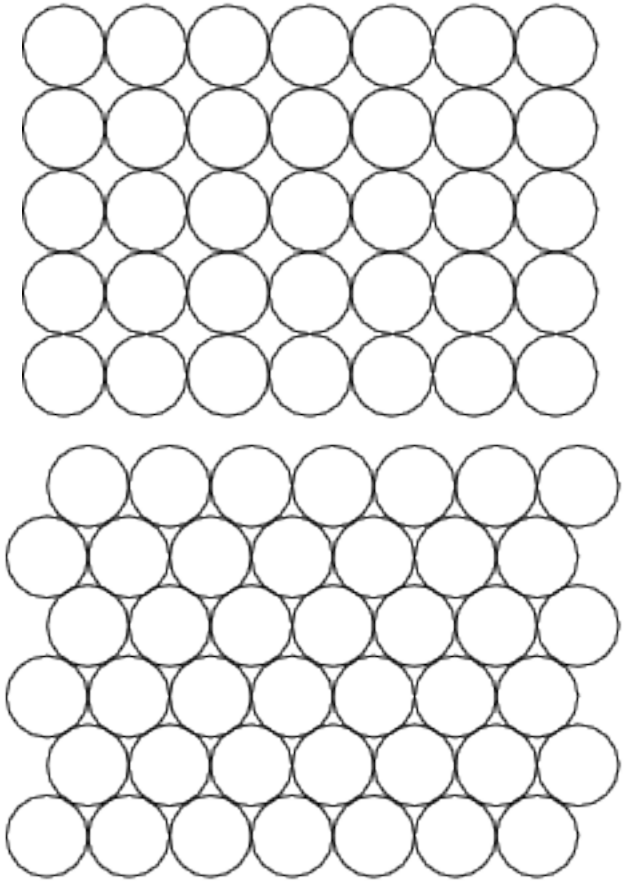
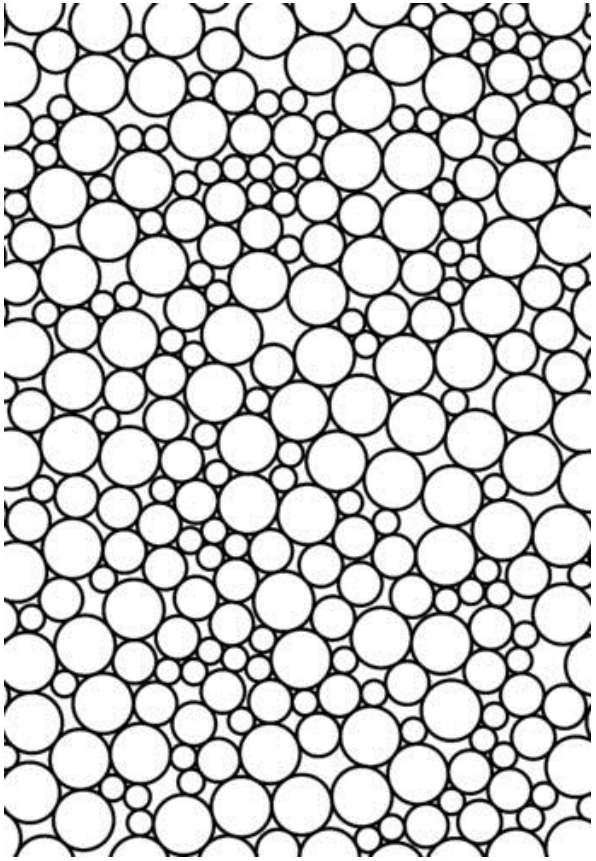
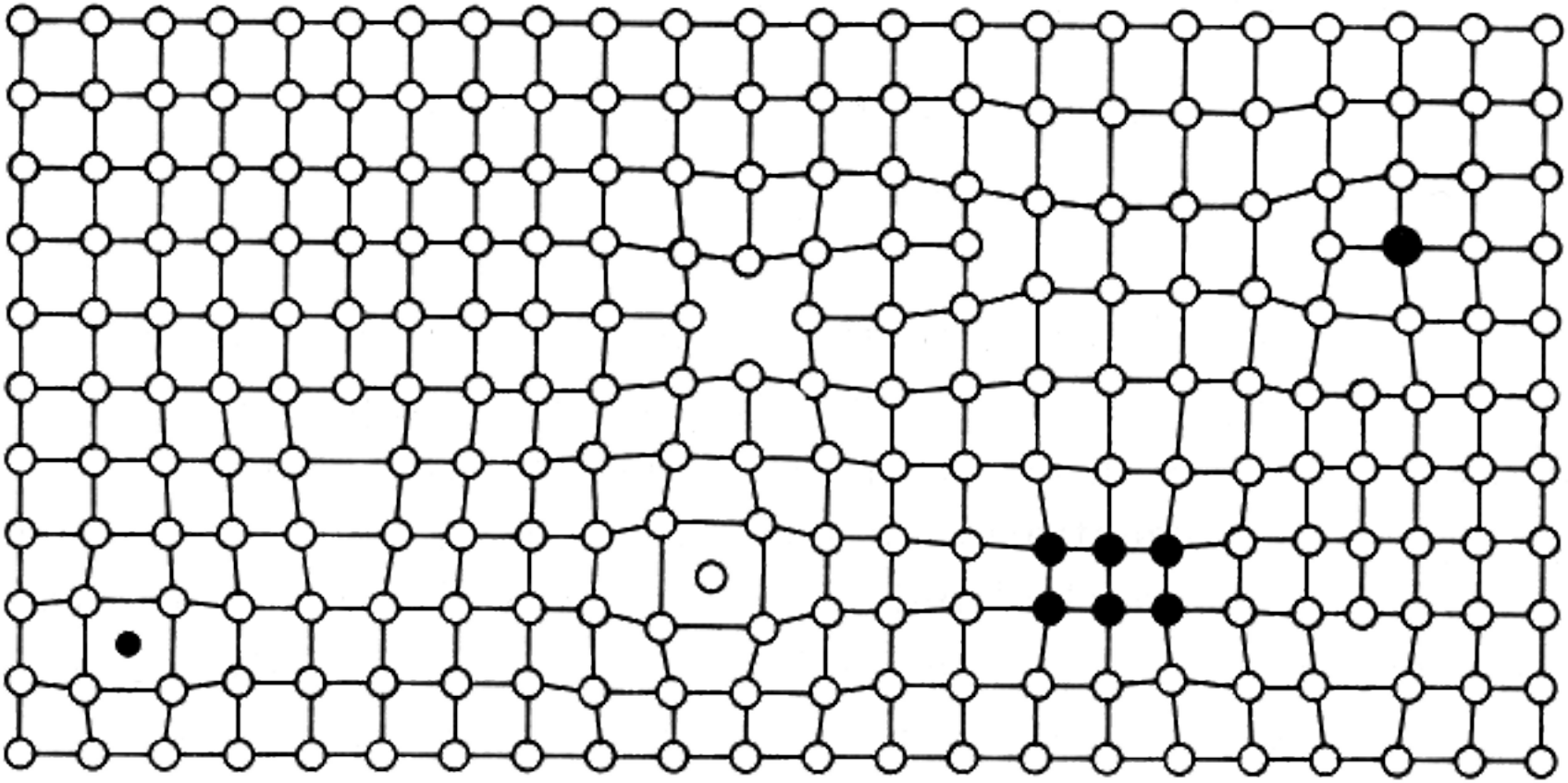

tagged by Facebook
faces identified by Facebook
Update your Plunderin'
Add a Portrait/Bewitched Portrait
— wit' Colin Lauer n' Hannah Eve
Who were you with?
Mateys (+)
Make yer mark
Hannah Eve
Colin Lauer
Who is this?
Recent claims:
Emma-Leigh Marie J...
Colin Lauer
Bonnie Lauer
Christina Morrow
John Lauer
Lindsey Houghton L...
Luke Lauer
Patricia Morrow
Mark J Lauer
Chris Morrow



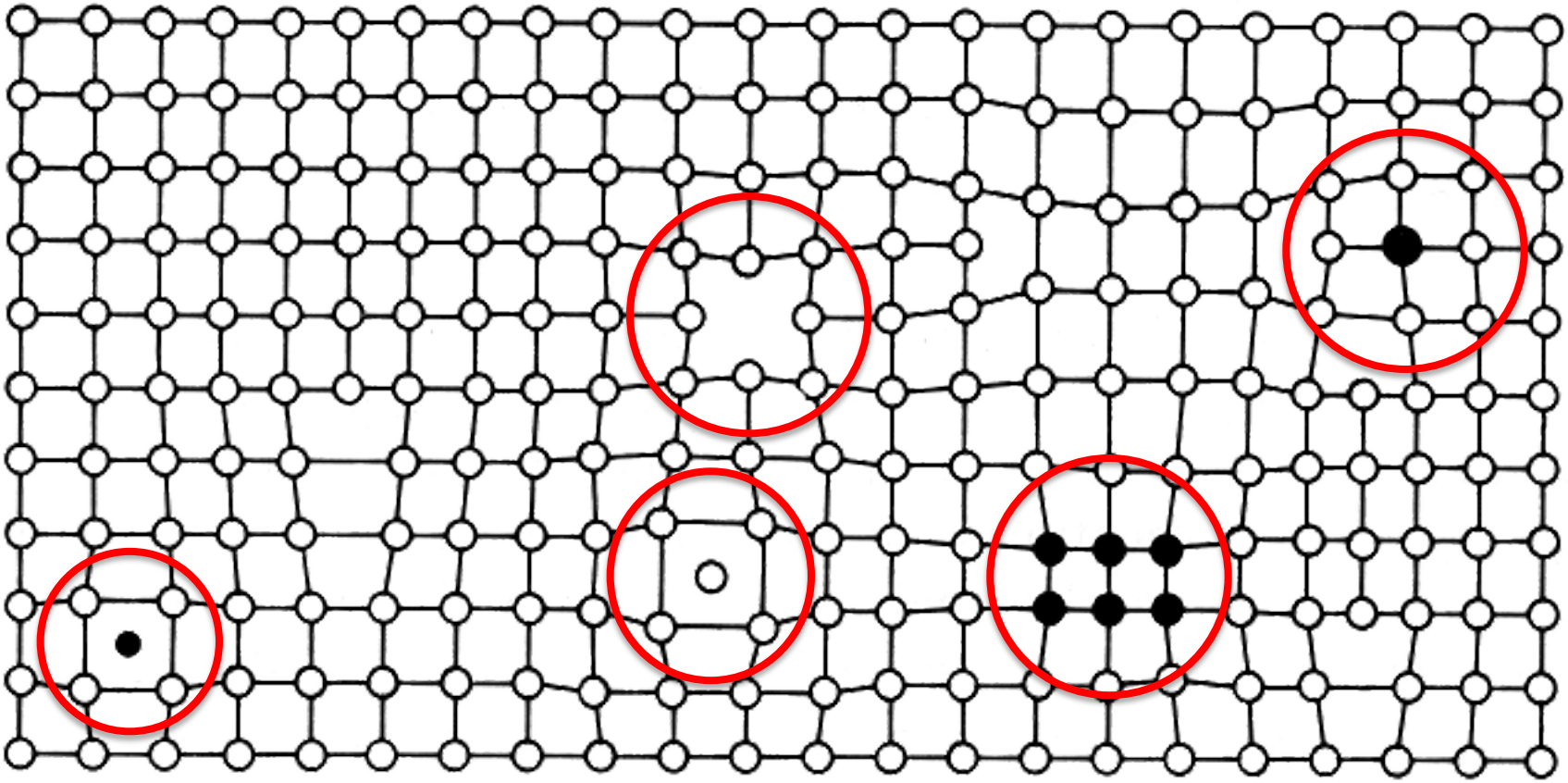
crystalline materials



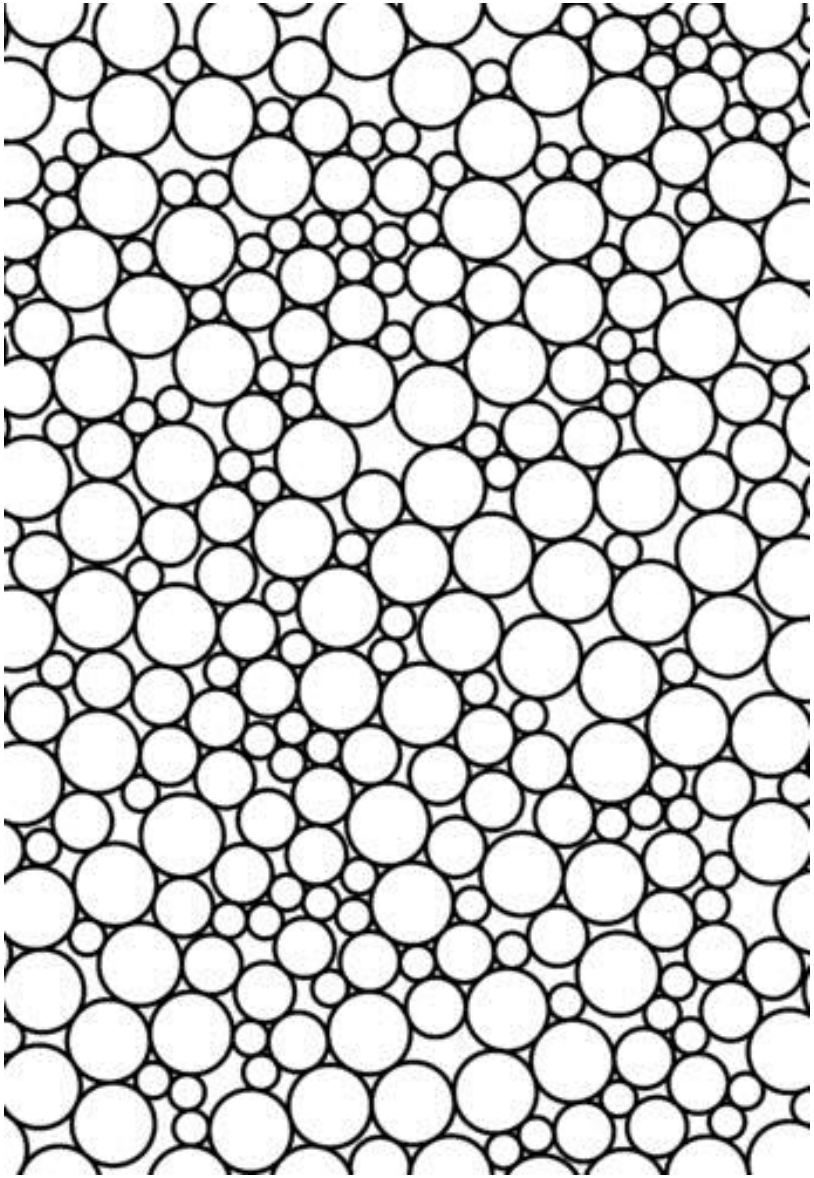
amorphous material



defects in a crystalline material



defects in a crystalline material



no obvious defects
or areas of
rearrangement

defects → areas of rearrangement

rearrangement → particles move relative to each other

We call these areas soft spots.

How does this connect to Facebook?

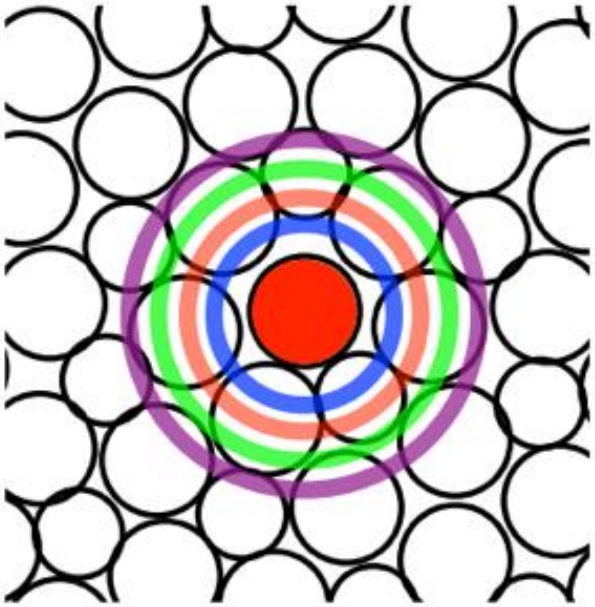
input	output
pictures tagged by you	pictures tagged by Facebook
rearrangements identified by you	soft spots identified by algorithm

Machine learning algorithm uses variables associated with each particle.

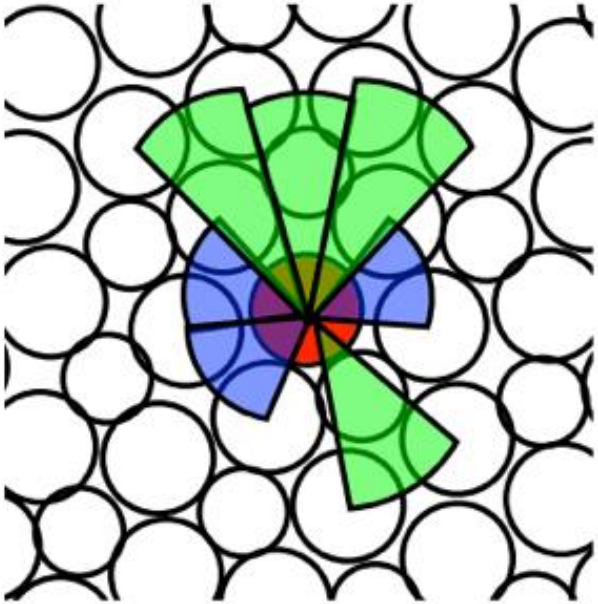
distance between eyes, distance from ear to ear, length of mouth

number of neighbors at a particular radius, angle between neighbors

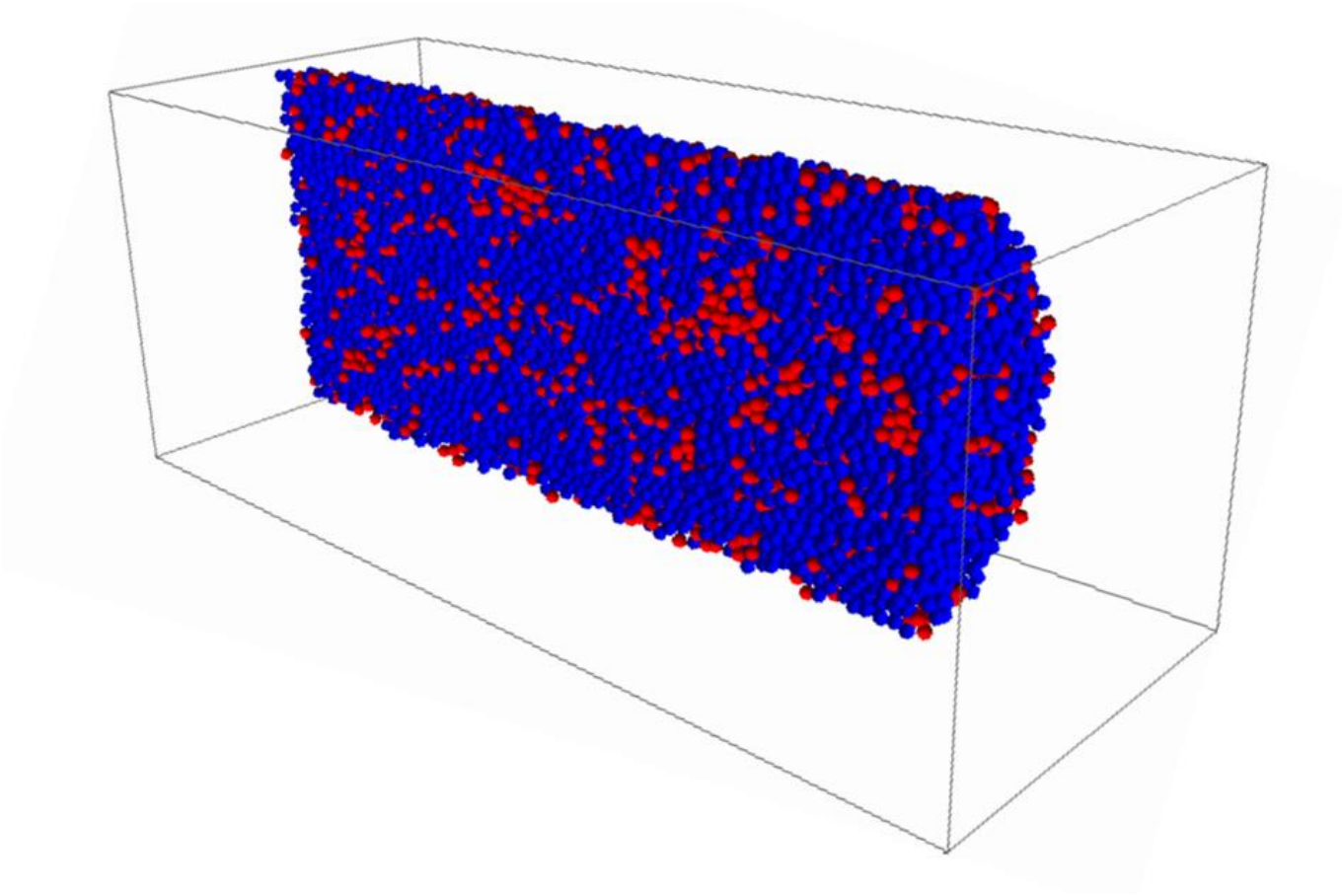
Radial



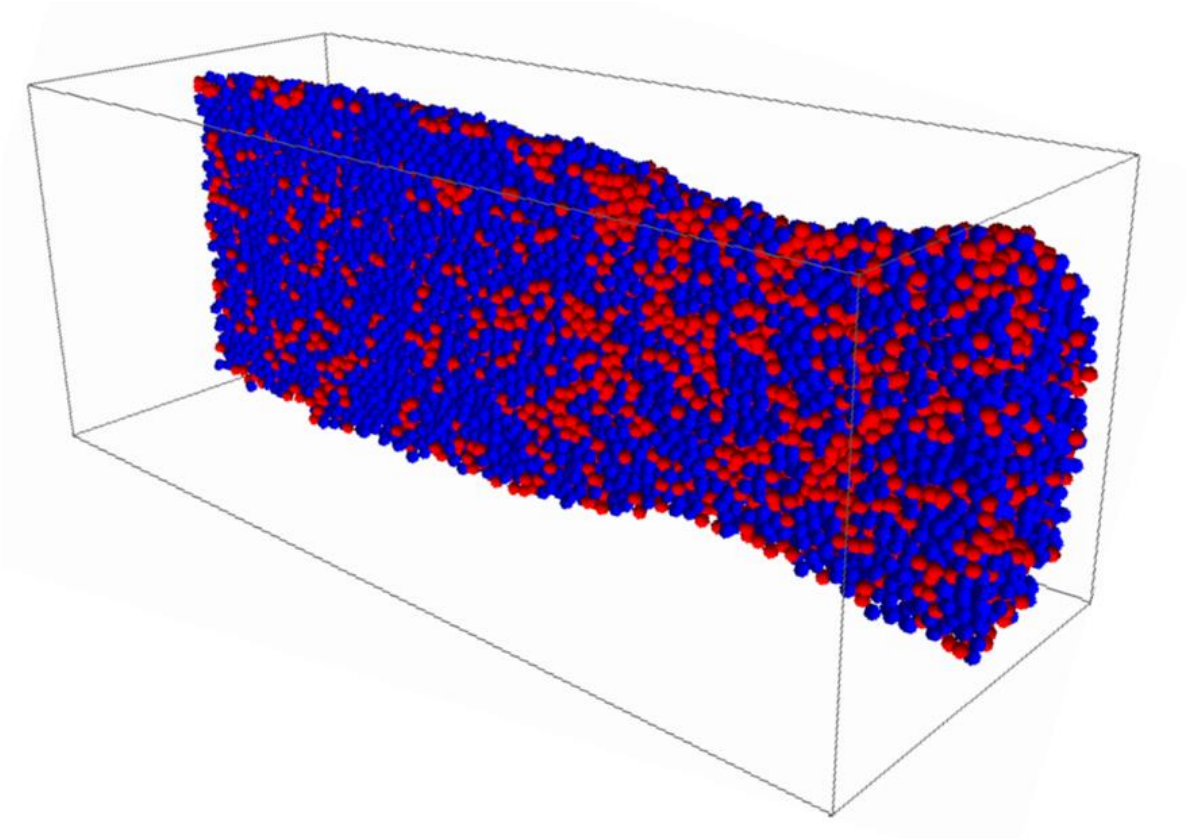
Angular



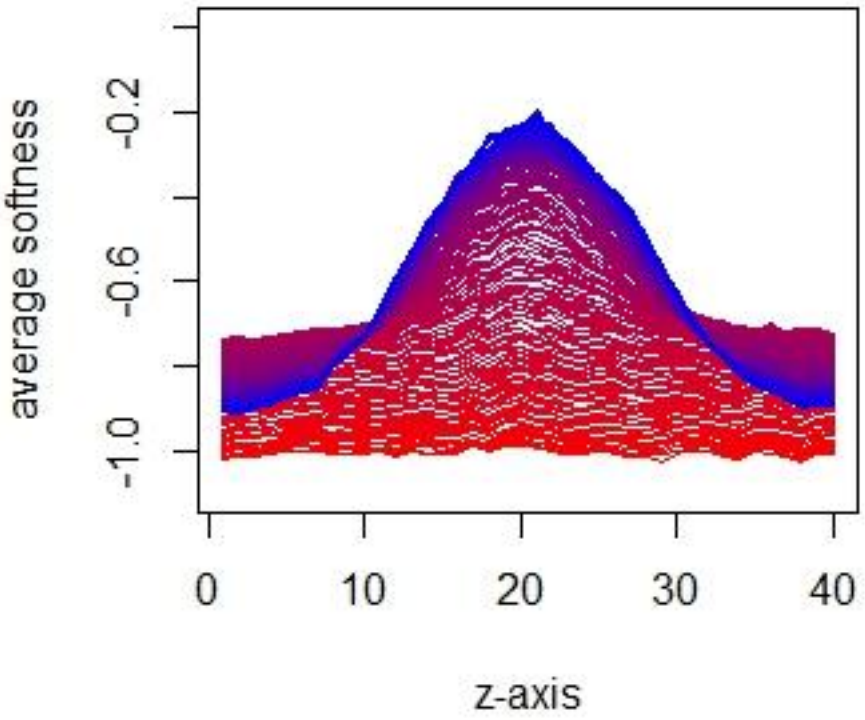
System of 42410 particles (5-mer chains)



System of 42410 particles (5-mer chains)



Questions?


average softness
-0.2
-0.6
-1.0
0
10
20
30
40
z-axis