

SIDDHI KRISHNA

pronounced like "city"

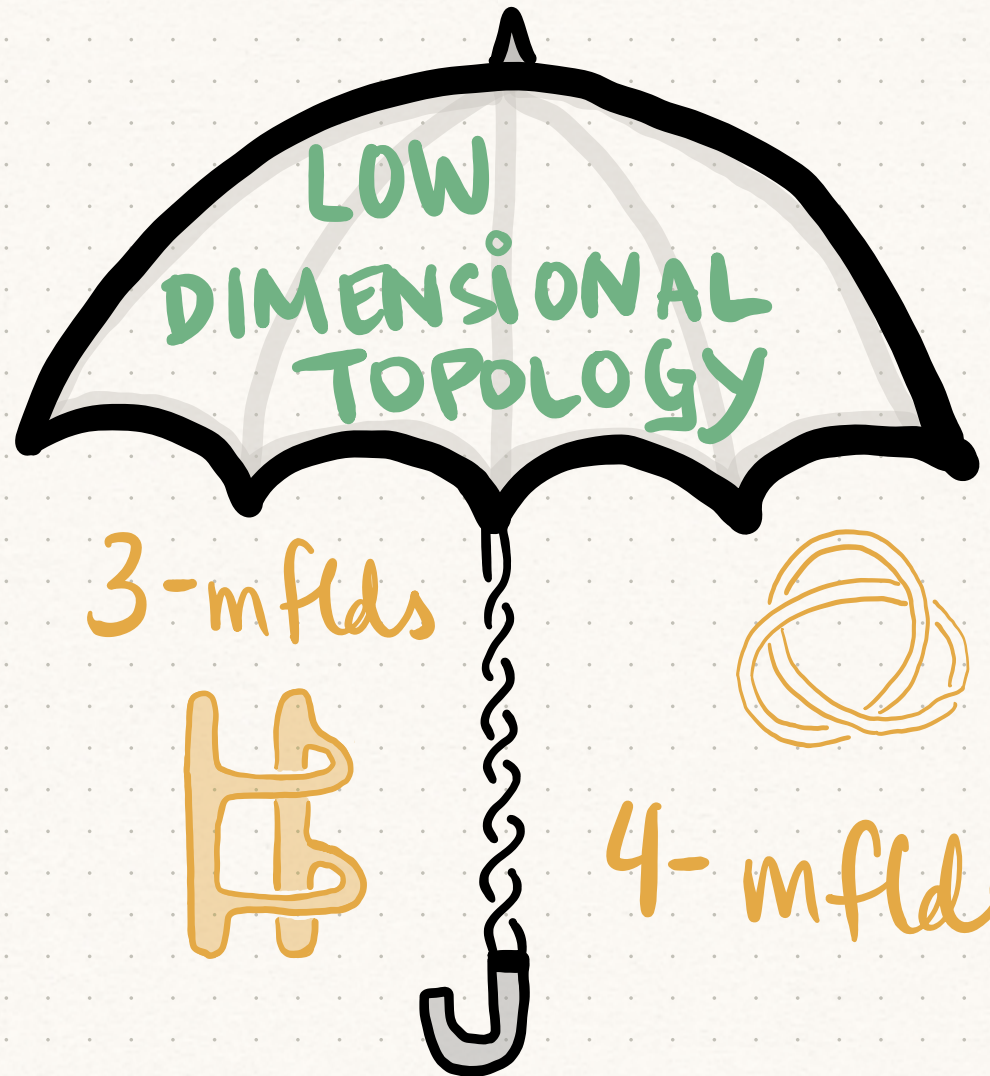


NOW:

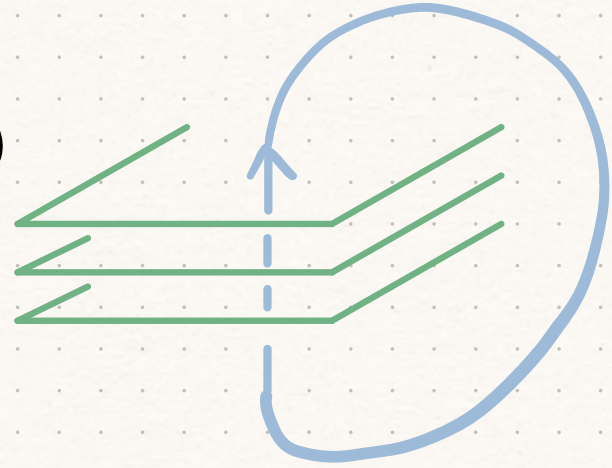
* COLUMBIA UNIVERSITY
(RFA + NSF POSTDOC)

PAST: * BOSTON COLLEGE
(advised by JOSH GREENE)

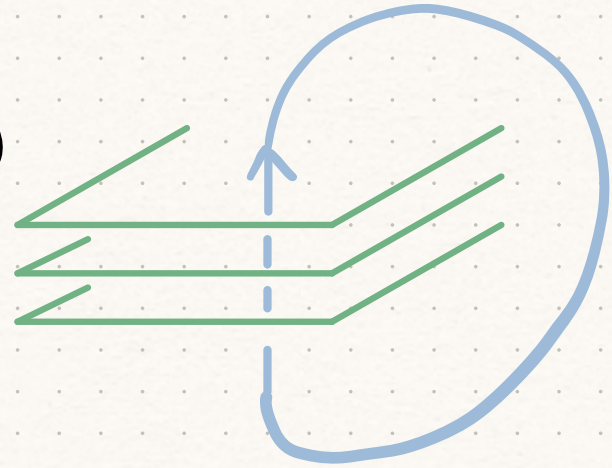
* GEORGIA TECH
(RTG POSTDOC; 2020 - 2021)



When does M^3
have a taut
foliation?



When does M^3
have a taut
foliation?



Knots

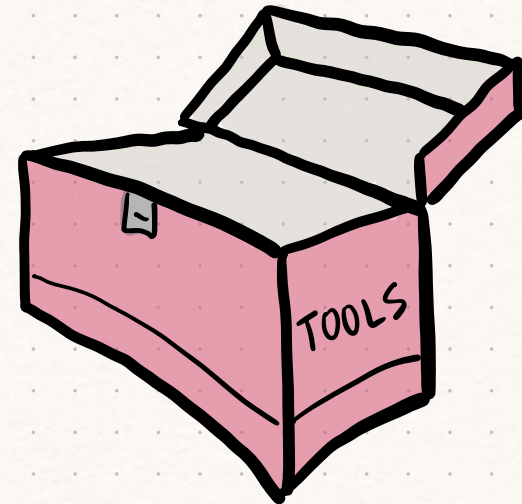
Floer
homology

Braids

surface
diffeos

Dehn
surgery

sutured mflds



When does M^3
have a taut
foliation?

THE L-SPACE
CONJECTURE :

Suppose M is a 3mfld s.t.

$$H_*(M^3; \mathbb{Q}) \cong H_*(S^3; \mathbb{Q}). \text{ TFAE:}$$

- ① Y admits a TAUT FOLIATION. *geometry*
- ② Y is a NON-L-SPACE. *Heegaard Floer Homology*
- ③ $\pi_1(Y)$ is LEFT ORDERABLE. *algebra*

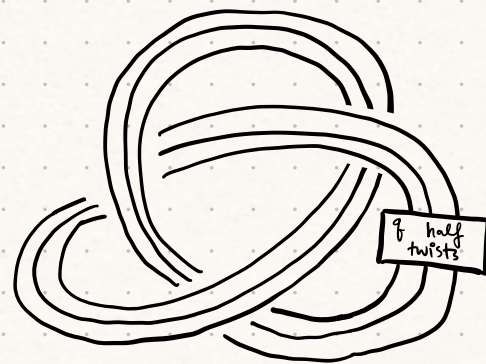


Q: When can I construct a taut
foliation in M^3 , if M is
obtained via Dehn Surgery
along a positive braid knot? \circ

Q: When can I construct a **taut foliation** in M^3 , if M is obtained via **Dehn Surgery** along a **positive braid knot**?

THM (K.):

$K_{n,1}$ is braid positive $\iff K \approx \mathcal{U}$.
"(n,1)-cable of K"



3- & 4- dim'l
Invtz of Knots,
Links, & Braids

geometric
structures
on 3- & 4-
mflds

Constructing
"interesting"
surfaces
inside
4-mflds

M^3
Dehn Surgery
Knots

