

# Seongsik Kim

FIPs in the ALPs Les Houches School  
Round Table - BRIEF Self introduction

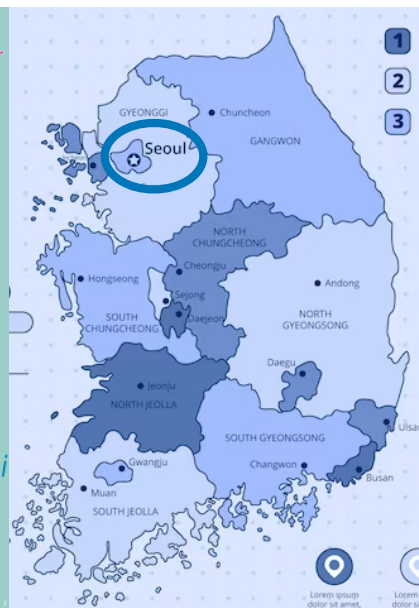
2nd

~~3rd~~ year Ph.D Student on Chung-Ang University, South Korea

Supervisor : Hyun Min Lee

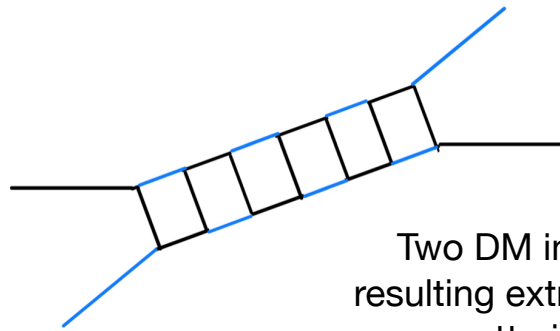
Main work-field : Dark Matter Phenomenology, BSM

Includes WIMP, SIDM, FIMP, and ANYTHING



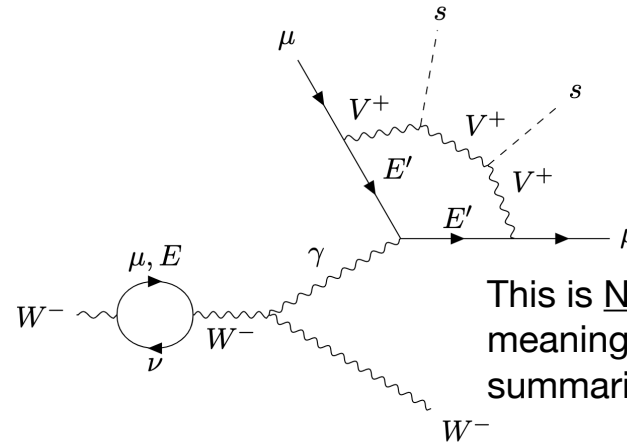
# My Work and Future

New Mechanism for Sommerfeld Enhancement  
 arXiv:2202.13717, arXiv:2108.06278



Two DM interacts resonantly,  
 resulting extreme enhancement of  
 scattering cross-section

muon  $g - 2$  and  $W$  mass anomaly with Dark Matter  
 arXiv:2205.04016

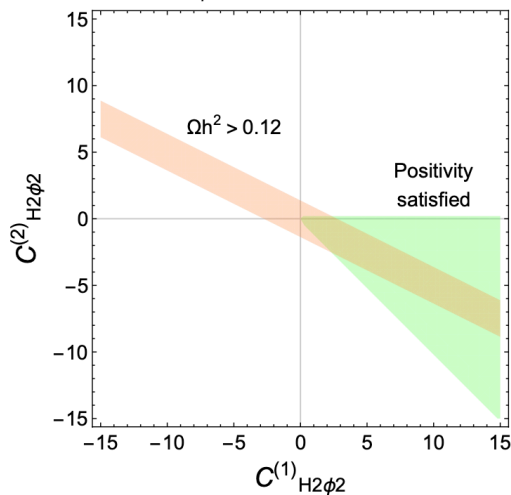


This is NOT a physically  
 meaningful diagram But  
 summarizes our models

Dark Matter EFT and Positivity Bounds

arXiv:2302.02879

$\Lambda = 2 \text{ TeV}, m_\phi = 950 \text{ GeV}, c_3 = d_3 = c'_3 = d'_4 = 0$



Constrain general  
 DM theory  
 interacting with  
 Higgs

And will work on  
 FIP Dark Matter!

Maybe next project. Maybe