

## Redirection of PhD project – Sohyun Park

What the original supervision focused on	What the supervision could potentially support	What the supervision cannot focus on
<ul style="list-style-type: none"> <li>- Surface phase transitions in active matter</li> <li>- Critical behavior in active fluids</li> <li>- Statistical mechanics of active fluids</li> <li>- Particle-based simulations of active fluids</li> <li>- Theory of phase transitions</li> </ul>	<ul style="list-style-type: none"> <li>- Study of microscopic origin of hydrophobic interactions</li> <li>- Nature of superhydrophobic surfaces</li> <li>- Algorithms to sample nonequilibrium ensembles (e.g. active grand-canonical ensemble)</li> <li>- Thermal machines based on surface energies of wetting (simulation)</li> <li>- Simulation methods for measuring solid-liquid surface tension</li> <li>- Techniques for, and physics of, active/passive solvation</li> <li>- Coexistence and gas adsorption in porous media (clathrates)</li> </ul>	<p>Anything not listed in second column including:</p> <ul style="list-style-type: none"> <li>- Origin of life</li> <li>- Design of vapes or similar engineering problems</li> <li>- Epistemology</li> <li>- Notions of time and space (e.g. in either general relativity or theories such as quantum loop gravity)</li> <li>- Foundations of Modern Physics</li> <li>- Biological networks</li> <li>- Neural networks and neuroscience</li> </ul>