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## The Emergence of Gravitational Spaces

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### Abstract content <br> &nbsp; (Max 300 words)

There is a large amount of evidence to indicate that gravity, like pressure, is an emergent phenomenon which may appear as the limit or average of another, more fundamental, theory. I will review the evidence for the emergent interpretation of gravity, discuss how the Einstein Field Equations can be derived as an equation of state like the ideal gas law, and also explore whether or not there exist other gravitational equations of state. This would imply the existence of alternate gravitational field equations and hence a possible departure from the predictions made by Einstein's gravity.

### Apply to be<br> considered for a student <br> &nbsp; award (Yes / No)?

Yes

### Level for award<br>&nbsp;(Hons, MSc, <br> &nbsp; PhD)?

MSc

### Main supervisor (name and email)<br>and his / her institution

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### Would you like to <br> submit a short paper <br> for the Conference <br> Pro- ceedings (Yes / No)?

No

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**Track Classification:** Track G - Theoretical and Computational Physics