## XIIth Quark Confinement and the Hadron Spectrum



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## Liberation on walls in gauge theories and quantum anti-ferromagnets

Thursday 1 September 2016 17:30 (30 minutes)

I will discuss the phenomenon of quark liberation on domain walls in gauge theories which are confining in the bulk. Specifically I will discuss confinement-preserving compactifications of such theories. These are confining due to the magnetic bion mechanism. I will show that liberation on domain walls becomes natural in such theories. I will also discuss the spin-1/2 or "spinon"confinement in the valence bond solid phase of quantum anti-ferromagnets in two spatial dimensions. This phase generically has a degenerate ground state and allows for stable domain walls. I will discuss the circumstances under which spinon excitations are liberated on the domain wall, and present numerical evidence of this phenomenon.

## **Summary**

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