

Physics of Extreme Sports

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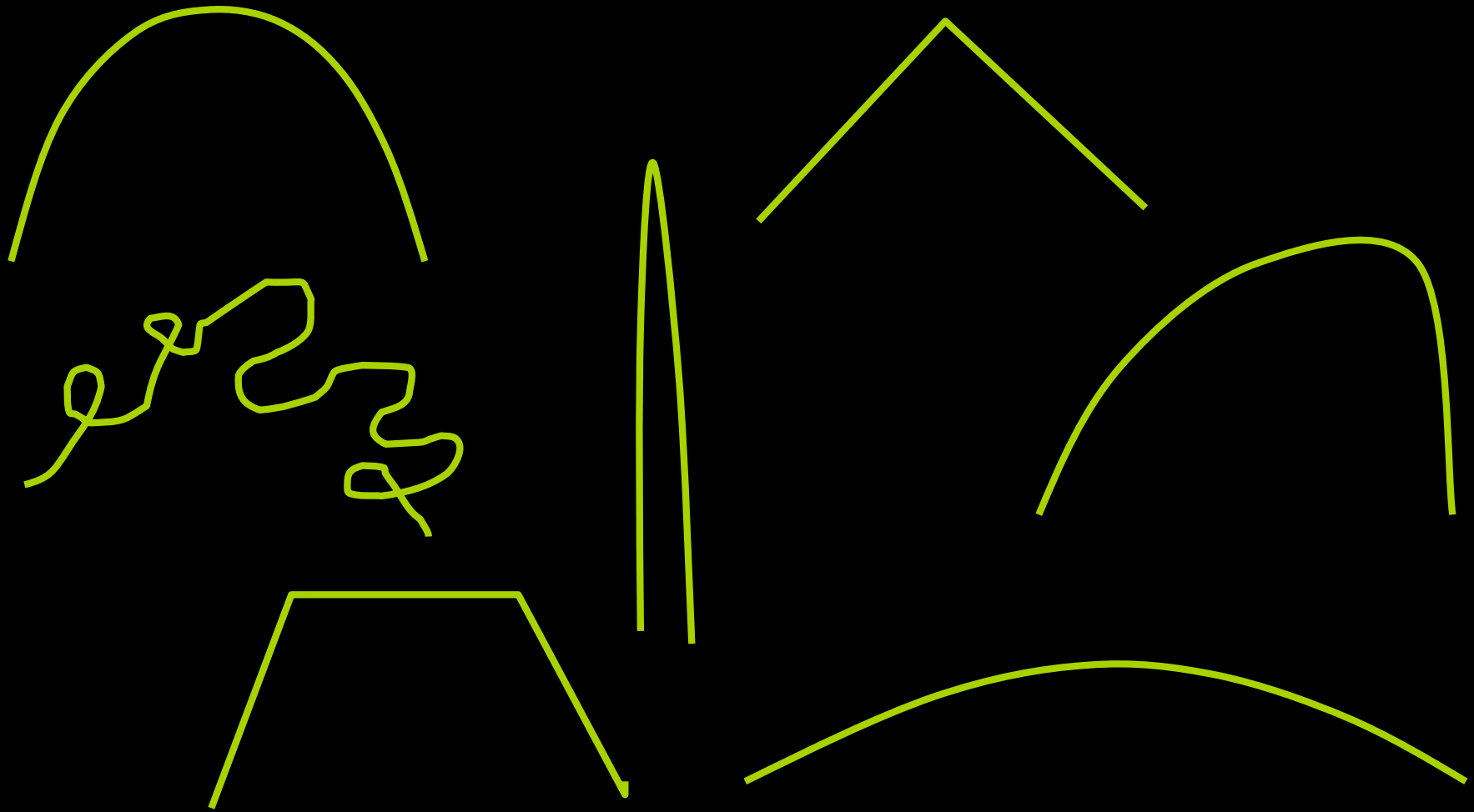
What is free-fall?



What is free-fall?

- Only force acting is gravity
- “Projectile Motion”
- Examples of free-fall in sports?
- Does something have to be going down to be in free-fall?

Possible free-fall paths?





Extended Objects

- What part of an extended object follows the free-fall curve?



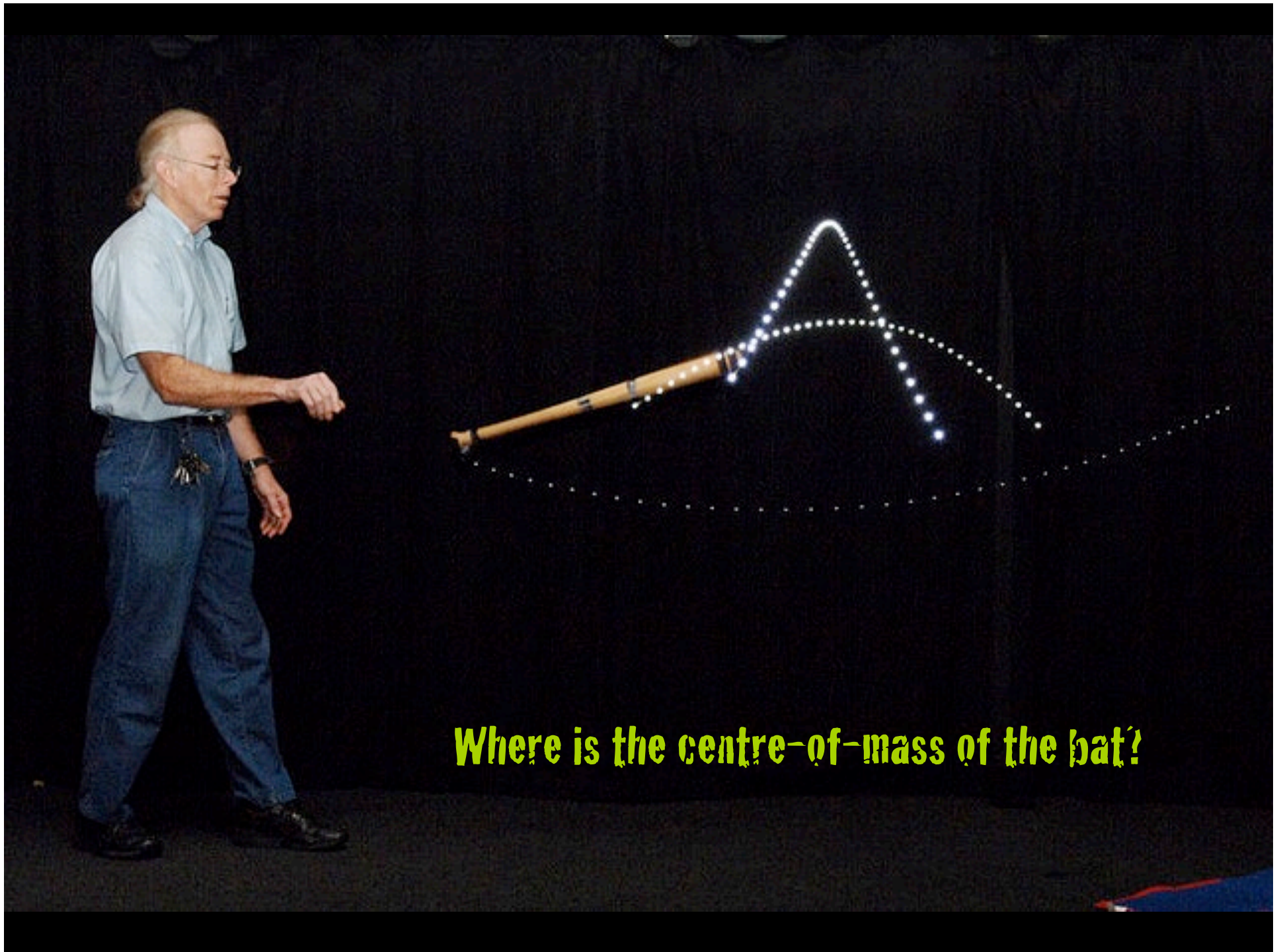
Extended Objects

- What part of an extended object follows the free-fall curve?

Centre-of-Mass

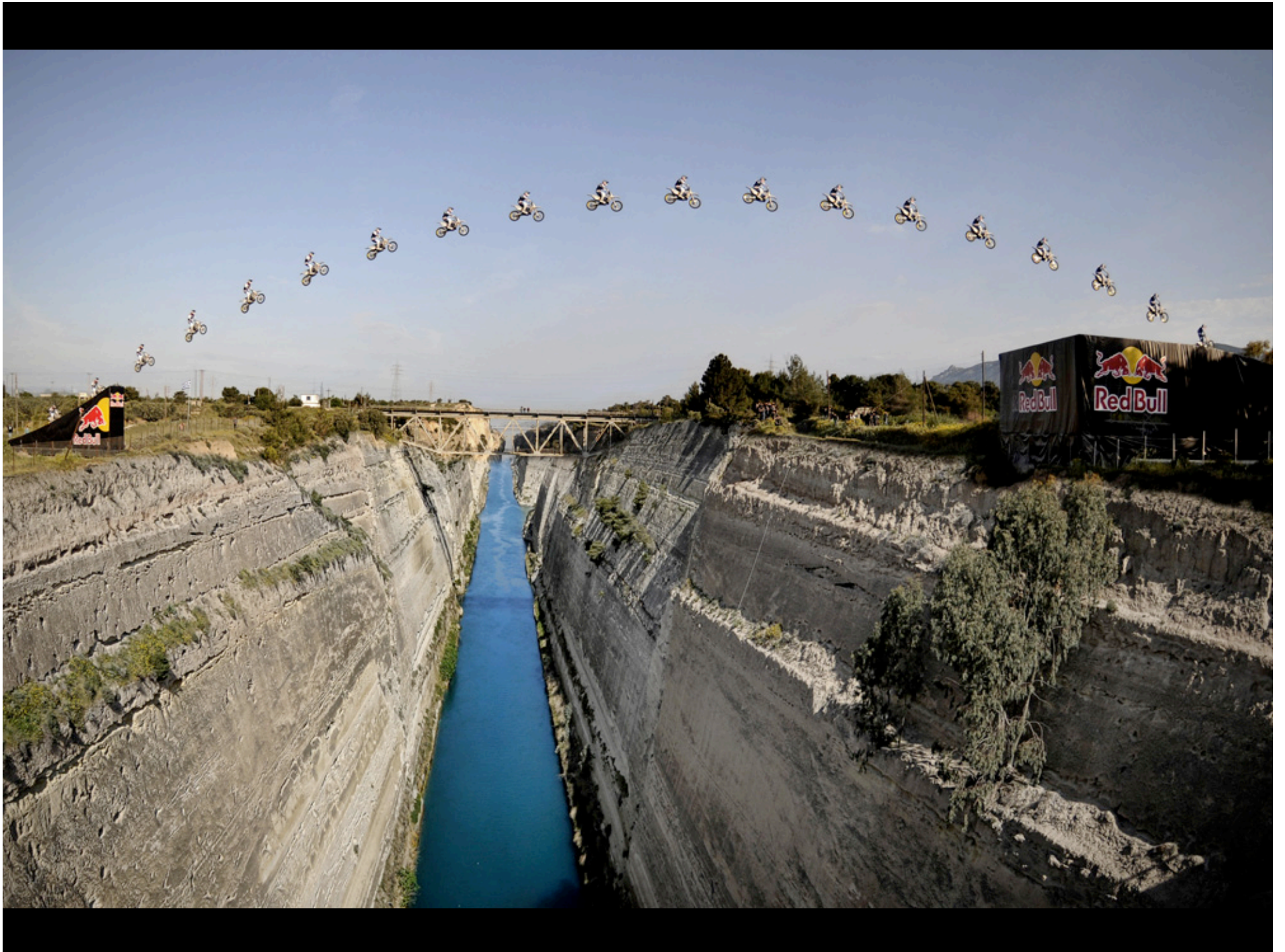
- Where is the Centre-of-Mass of a person?
Is it constant? Can it change?
- Does it have to be a part of the actual body/equipment?





Where is the centre-of-mass of the bat?







Where is the centre-of-mass? Before/after the biker lets go?