Project presentations

6.885
L23.1
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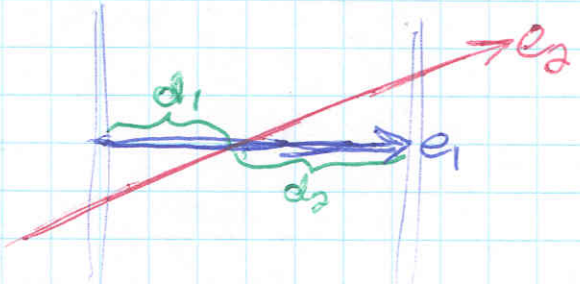
Blaise Gassend: Self-touching linkages — definitions & carpenter's rule

- key idea: self-touching config. is a limit of nontouching configs.
- but the limit loses information e.g.:

- add order function & take its limit too:



take projected lengths d_1, d_2

$\text{order}(e_1, e_2) = d_1 - d_2$

- nontouching configs. are valid
- limits of nontouching configs. are valid
  - during limit, allow edges to stretch & allow extra edges whose lengths $\to 0$.
- seems equivalent to other definition [Connelly, Demaine, Rote 200]
- argue config space is connected & semi-algebraic
  $\Rightarrow$ pathwise connected
  $\Rightarrow$ infinitesimal carpenter's rule theorem
- may extend to definition of folded states of paper