# Properties of the Matching Function

Pascal Michaillat
https://pascalmichaillat.org/c2/

m : matching function

$$M = m(S, B)$$

$S$ → # sellers

$B$ → # buyers

# of matches / trades in a given period

Example: labor market

- $M$ = # of hires
- $S$ = # unemployed workers
- $B$ = # vacant jobs

Assumptions about $m$

- $\dfrac{\partial m}{\partial S} > 0$ , $\dfrac{\partial m}{\partial B} > 0$

- $m(0, B) = m(S, 0) = 0$

- $\dfrac{\partial^2 m}{\partial S^2} < 0$ , $\dfrac{\partial^2 m}{\partial B^2} < 0$

- $m$ has <u>constant returns to scale</u>

$$m(\lambda S, \lambda B) = \lambda \cdot m(S, B)$$

- <u>discrete time</u>    $M$ = # trade within time period

$$m(S, B) \leq \min(S, B)$$

- <u>continuous time</u>    $M$ = flow of trades
  (no restrictions)