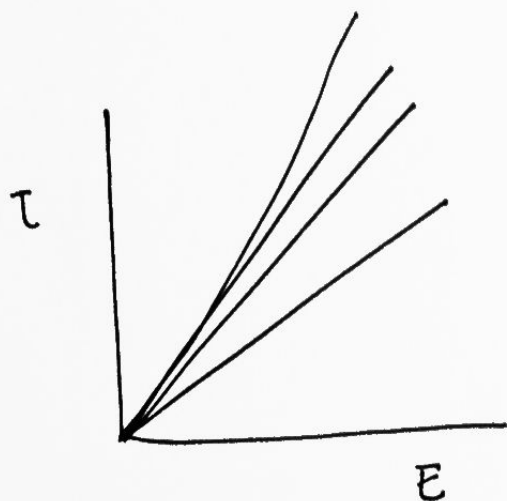# MDA

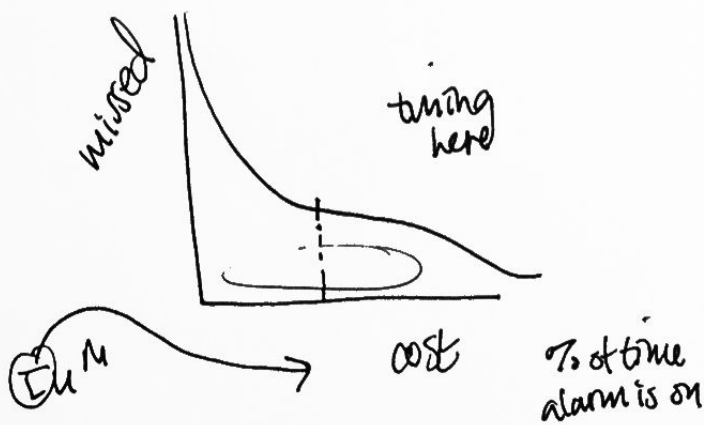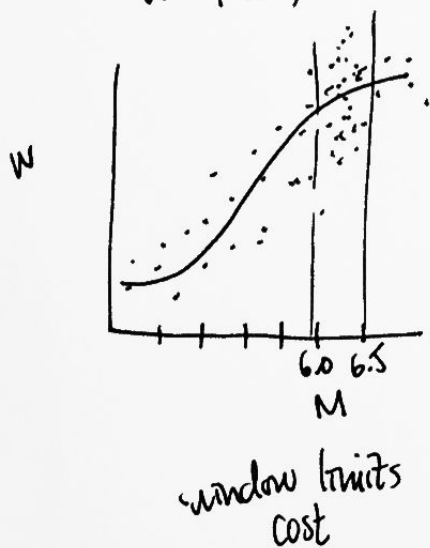$\tau n^M \qquad \tau e^{(n+u)M}$

τE

- consider different cities/
  geographies, and sensitivities
  to earthquakes
  - i.e. infrastructure to sustain
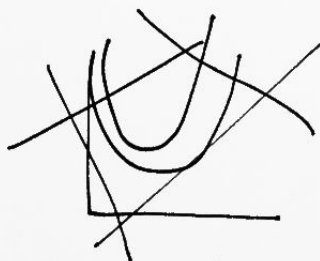   earthquakes

window / duration
$w = f(M)$

W

6.0 6.5
M

window limits
cost

missed

timing
here

τn^M →

cost   % of time
        alarm is on

- pick cost upfront
- u as fixed parameter $w = f(M, cost)$

Linear Programming

optimization,
constraints

$\max_x \boxed{\phi(x)}$ $A\vec{x} \leq \vec{b}$

- setting up the problem
- prove that the function is
  convex

- maximized missed?
- how to evaluate models? → when has section
  → missed   on evaluating, best
  → alarm   way to quantify how
  → how to weight   good model was

convex programming
  ↳ open source

- need mathematical
  function
- solver will know how to
  walk through the
  space

$\omega = f(M)$ $\omega \approx$ window, duration
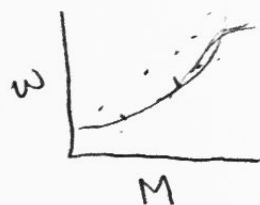
– then what kind of function

* Luen's paper on evaluating Predicters *

$$\max_x \text{ of } \phi(\vec{x}) \quad A\vec{x} \leq \vec{b}$$

← mathematical
function

Linear Programming

⌐ must be linear?

& different parameters
convex functions
– find packages online

•prove function is convex (obv. true if linear)

– area under miss v. cost curve
– work on getting integral estimate
– take in either model

vector so can put in many parameters