

Project title

Your name

Your department

University of Rochester

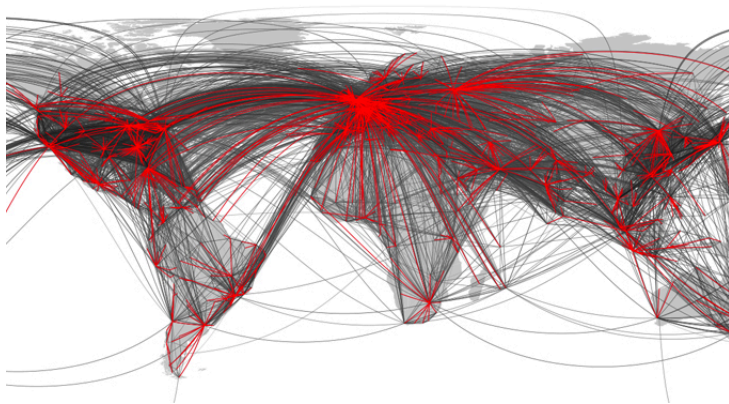
email@rochester.edu

http://www.rochester.edu/~your_website/

February 18, 2015

Section title. Will show up in the table of contents

- ▶ The worldwide air transportation network and its “skeleton”



- ▶ Vertices are ~ 1000 airports, edges are ~ 35000 commercial routes
- ▶ Picture created by D. Grady and collaborators in 2012

- ▶ A **statistical model** specifies a set \mathcal{F} of CDFs to which F may belong
- ▶ A common **parametric model** is of the form $\mathcal{F} = \{f(x; \theta) : \theta \in \Theta\}$
- ▶ Parameter(s) θ are unknown, take values in parameter space Θ
- ▶ Space Θ has $\dim(\Theta) < \infty$, not growing with the sample size n
- ▶ **Ex:** Data come from a Gaussian distribution

$$\mathcal{F}_N = \left\{ f(x; \mu, \sigma) = \frac{1}{\sqrt{2\pi\sigma^2}} e^{-\frac{(x-\mu)^2}{2\sigma^2}}, \mu \in \mathbb{R}, \sigma > 0 \right\}$$

- ▶ This is a two-parameter model: $\theta = [\mu, \sigma]^T$ and $\Theta = \mathbb{R} \times \mathbb{R}_+$
- ▶ A **nonparametric model** has $\dim(\Theta) = \infty$, or $\dim(\Theta)$ grows with n
- ▶ **Ex:** $\mathcal{F}_{All} = \{\text{All CDFs } F\}$

Network	Vertex	Edge
Internet	Computer/router	Cable or wireless link
Metabolic network	Metabolite	Metabolic reaction
WWW	Web page	Hyperlink
Food web	Species	Predation
Gene-regulatory network	Gene	Regulation of expression
Friendship network	Person	Friendship or acquaintance
Power grid	Substation	Transmission line
Affiliation network	Person and club	Membership
Protein interaction	Protein	Physical interaction
Citation network	Article/patent	Citation
Neural network	Neuron	Synapse
⋮	⋮	⋮

Theorem

Your fancy result

Proof.

Which you prove here



Example

And illustrate with an example