Topical Lunch – Carla Gomes and Chris Barrett
"Developing electronic resources and computational techniques for targeting humanitarian and development interventions"

May 19, 2010
12:00 – 1:00 PM
300 Rice Hall

Attendees
Host - Chris Barrett, cbb2
Host - Carla Gomes, carla.gomes@gmail.com
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Mark Lawrence, mal64
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Aurelie Harou (AEM PhD student, aph53)
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Regrets
Robbert van Renesse, ryr@cs.cornell.edu
Susan Fussell, sfussell@cornell.edu
Frank DiSalvo, fjd3
Anurag Agrawal, aa337
Geri Gay, gkg
Zellman Warhaft, zw16

Others
Laura Forlano, lef45@columbia.edu
Zellman Warhaft

Notes
We were missing many of the development economists due to timing conflicts and we should try to tap the ORIE people and perhaps disease modelers worrying about developing countries.
Developing Electronic Resources and Computational Techniques for Targeting Humanitarian and Development Interventions

Chris Barrett and Carla Gomes
Cornell Center for a Sustainable Future
Topical Lunch
May 19, 2010
The challenge

- **Renewed interest and funding** for interventions targeted toward hunger and poverty reduction.
- **Increased flexibility** in instruments (e.g., no longer just food aid in responding to food emergencies).
- Rapid growth in **data availability**.
- Need to translate more dollars and data into **better choices**, now that there are choices to be made.
- **Need to know:**
  1. who is poor or hungry and how to identify them?
  2. what is best response to help them?
- Emerging computational challenges /opportunities.
- 4 brief examples follow.
Identifying the poor is the first essential step

**Poverty maps:**

- Use multiple data sets to estimate and map poverty patterns not directly measured.
- Machine learning and related methods can permit more efficient use of data from varied sources.

New collaboration between Cornell economists and computer scientists

Example: 2002 Uganda poverty map
Targeting the best response to reduce poverty

Targeting maps:

- Machine learning methods enable more efficient estimation of spatially explicit, time-varying returns to different interventions, tapping multiple data sources.

Nascent collaboration between Cornell economists and computer scientists

Example: Uganda targeting map
Which response to address food insecurity?

**Market information for food insecurity response analysis (MIFIRA):**
Decision support tool for humanitarian agencies - in a given food emergency, do they distribute food or cash? If food, where to procure? Data mining and artificial intelligence tools can help a lot.

Nascent collaboration between Univ. of Rochester computer scientists, Cornell economists, international NGOs (CARE, Catholic Relief Services) and World Food Program.
How to protect pastoral lives and livelihoods?


New collaboration between Cornell economists and computer scientists.
Emergent Groups, But No Real Movement Yet

**Artificial Intelligence for Development (AI-D)**
Emergent new research community, with limited academic engagement and based mainly in computer science and with public health applications.

Spring symposium at Stanford this year.

**Global Alliance for Information Technology for Development (UN-GAID)** – more focused on bring ICT to poor populations than on research

**Information for Development (infoDev) program**
World Bank-based, inter-agency ICT4D financing program.
There is considerable demand among donors, international humanitarian organizations for **effective decision support tools** to help them make better use of **newfound flexibility** in aiding **hunger and poverty reduction** through humanitarian and development interventions.

Thank you for your interest.