**Brief Bio and (PR)**: Problems & Pitches – Raves & Rants by Soma Sanyal

In preparation for the Modeling Science Workshop on May 21st, 2006 at Indiana University, Bloomington, we ask you to provide a brief bio and short answers to the questions below.

We plan to make your input available at [http://vw.indiana.edu/places&spaces/meeting_060521.php](http://vw.indiana.edu/places&spaces/meeting_060521.php) before the meeting to help introduce the participants to each other and to more effectively structure the workshop.

Thank you for your time.

**Biography (about 250 words)**
*(Please provide a photo of yourself and a link to your home page and relevant sites. Please list relevant publications.)*

I am a Postdoctoral research associate currently working with Katy Borner and Rob Goldstone. I have a Ph.D in Physics and my current homepage is at:
[http://ella.slis.indiana.edu/~ssanyal/ssanyal-home.html](http://ella.slis.indiana.edu/~ssanyal/ssanyal-home.html)

**General Questions**

What is your main interest in attending the workshop?
Interested to know what kind of questions are most relevant for people who are interested in studying the Evolution of Science. Would like to know more about current modeling approaches and their drawbacks.

What is your main interest in ‘modeling science’ and/or in modeling in general?

I am working on a project that aims to model the structure and evolution of knowledge on a global scale. My immediate aim is to try and build a model of a bipartite co-authorship and citation network, which would reflect the same nature of citation pattern as observed in real world datasets.

**Specific Questions**

What are the major empirical patterns by which science progresses?

How can one best model the interplay of time (including aging of people, papers, and fields), geography, topics, and resources (e.g., funding) that affect the evolution and diffusion of scholarly knowledge?

How can one best model feedback cycles, e.g., highly cited publications increasing the chance of receiving funding, leading to better resources, more highly cited papers, etc.?

How can we model the dynamics of growth and decline of scientific topics over time, as well as changes to topics and their interrelations?
What are the current limitations of the various modeling approaches?

*Please send the completed document by Thursday May 18th, 2006 to Katy Borner <katy@indiana.edu>*