



Building a Community Surface Dynamics Modeling System

A Presentation to the National
Science Foundation and Other
Stakeholders

Why We are Here

- To establish an initiative called the Community Surface-Dynamics Modeling System (CSDMS)
- CSDMS is a modeling environment containing a community-built and freely available suite of integrated, ever-improving software modules predicting the transport and accumulation of sediment and solutes in landscapes and sedimentary basins over a broad range of time and space scales.

Brief History of Initiative

- 1996---U.S. Office of Naval Research STRATAFORM program initiates collaborative efforts to develop an integrated, predictive model for the continental margin sedimentary system
- 1999---Panel convened by NSF Geo/Paleo Program identifies a "Community Sedimentary Model" as a high priority NSF research initiative in sedimentary geology

Brief History of Initiative

- 2000---Science plan of MARGINS Source-to-Sink Program calls for "the progressive development of a community-level suite of earth surface dynamics models for mass routing, deposition, and morphodynamic prediction
- 2000---NSF begins its Information Technology Research (ITR) initiative

Brief History of Initiative

- 2002---NSF funds new Science and Technology Center called the National Center for Earth-surface Dynamics, whose primary mission is to promote the integrated study of surface dynamics
- 2002---Community Sediment Model workshop, funded by NSF MARGINS, produces white paper

Agenda

- **08:30-09:00: Introduction and Rationale (Slingerland)**
- **09:00-09:45: Background (Paola)**
- **09:45-10:30: Nature of a Community Surface
Dynamics Modeling System (Tucker &
Wiberg)**
- **10:30-10:45: Break**
- **10:45-11:30: Implementation Plan (Syvitski)**
- **11:30-12:00: Wrap-up (All)**