

# ICM 2006

## CLOSING ROUND TABLE

*Are pure and applied  
mathematics drifting apart?*

Ronald Coifman

## The opportunity for mathematics in the digital age

- The complexities of digital data being generated by the scientist and information analyst are overwhelming.
- The mathematician role is to help discover the language, enabling organization and "geometric structures" underlying massive complexity .

- Mathematics needs to be invented. We are at a pre Newtonian stage in many fields, such as biology, social science , neurology finance etc.
- We see the emergence of many empirical methods in machine learning , bioinformatics, computer science who are quite successful, why?