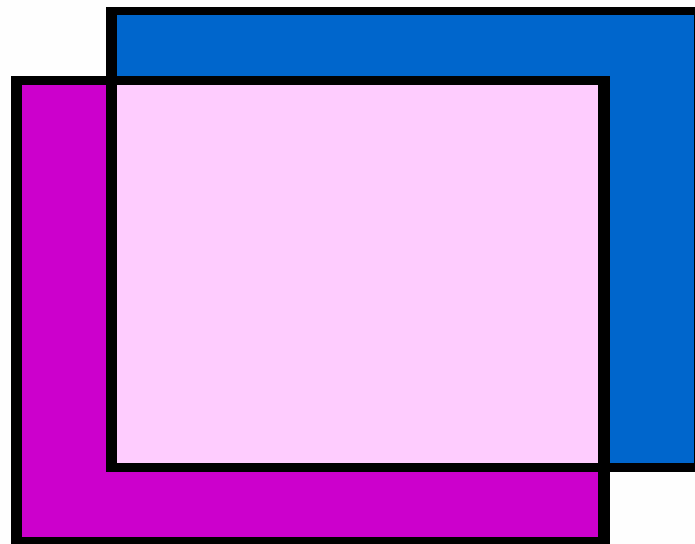


COMBSTRU
Combinatorial Structure of
Intractable Problems
EU HPRN-CT2002-00278



COMBSTRU

Partecipating Institutions

Location	Institute	Local Leader
Barcelona	UPC	Josep Diaz (Coordinator)
Berlin	Freie Univ., Humboldt Univ.	Helmut Alt
Bielefeld	Bielefeld Univ.	Rudolph Ahlswede
Bordeaux	Univ. Bordeaux I	Andre Raspaud
Budapest	Renyi Institute	Ervin Gyori
Oxford	Oxford Univ.	Dominic Welsh
Patras	CTI	Paul Spirakis
Pisa	CNR-IIT	Marco Pellegrini
Prague	Charles University	Jaroslav Neseřil

COMBSTRU: A Marie Curie RTN for Combinatorics

Combinatorial structure lies at the core of many decision, optimization and counting problems, which are difficult to compute and are relevant in many scientific, technological and social areas. Since the early development of complexity theory in the early 70's, an important mainstream of the research towards solving difficult problems has focused in what features on intractable problems distinguish the easy and the hard instances.

Scientific Approach:

We aim to study intractable problems arising in **bioinformatics, networking and internet applications** by using models from graph theory, combinatorics and computational geometry.

- stressing their differences and common features.
- classifying instances of particular problems by useful invariants or parameters.
- building common frameworks for apparently unrelated problems.

DIMATIA: *Discrete Mathematics, Theoretical Informatics and Applications*

Integral part of our collective research experience is the European consortium **DIMATIA**, (*Discrete Mathematics, Theoretical Informatics and Applications*), which includes seven institutions involved in the project (Barcelona, Bielefeld, Bordeaux, Budapest, Pisa, Patras, and Prague) <http://www.ms.mff.cuni.cz/acad/kam/dimatia>.

The center, formed in 1996 is generally viewed as the only European counterpart of DIMACS (*Discrete Mathematics and Computer Science*), a highly successful center which is in existence for more than 15 years, one of the national research centers in the US located at Rutgers university).