

ERABLE

European Research on Algorithms and Biology formal and Experimental



Inria Grenoble Rhône-Alpes

at

Laboratory of Biometry and Evolutionary Biology

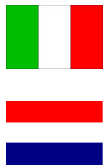
CNRS UMR 5558 & University Lyon 1

Together also with Insa-Lyon

Plus (since 2015)

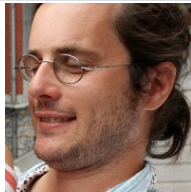
Sapienza University of Rome

Center for Mathematics and Computer Science (CWI) Amsterdam

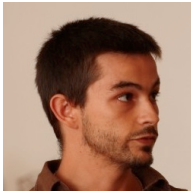


**Together with Universities of Florence, Roma Tor Vergata, Pisa
and Free University Amsterdam**

ERABLE Team



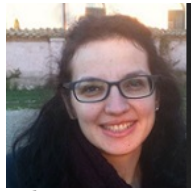
Vincent Lacroix



A. Mary



M.-F. Sagot



Blerina Sinimeri



Alain Viari



Pierluigi Crescenzi
Univ Florence
Agreement with La Sapienza



Giuseppe Italiano
Univ Rome Tor Vergata



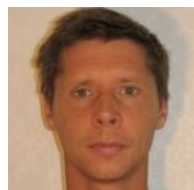
Nadia Pisanti
Univ Pisa
Agreement with La Sapienza



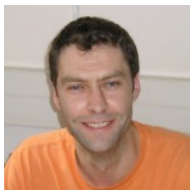
Roberto Grossi
Univ Pisa
Agreement with La Sapienza



Alberto Marchetti-Spaccamela
Sapienza Univ Rome



Hubert Charles



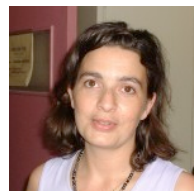
Fabrice Vavre



Alexander Schönhuth
CWI Amsterdam



Leen Stougie
Free Univ Amsterdam
& **CWI Amsterdam**



Cristina Vieira



Laurent Jacob



Susana Vinga

External members

Team very pluridisciplinary



**Discrete
mathematicians**

Algorithmicists



**Biologists
(even a chemist)**

**Including
experimentalists**

With two major objectives

The first:

“Exactness” / “Exhaustiveness”

Clear formalisation of initial problem

(clear definition of model and objects sought)

Exact algorithms (when possible)

Enumeration/Listing (when there is more than one solution)

One main reason: Provide reliable and interpretable answers

With two major objectives

The second:

Species interactions (“symbiosis” understood in its largest sense)

Explored from many different points of view:

Metabolism

Leen will talk a little bit about one small aspect

Regulation (at different levels)

Evolution and coevolution

Without forgetting genomics old and new

And different final applications:

Mainly health

but also environmental + a few others



Place to Leen Stougie



Photo taken at
Café Kobalt
around 2010
during math
modelling step