

# Nano-Tera.ch

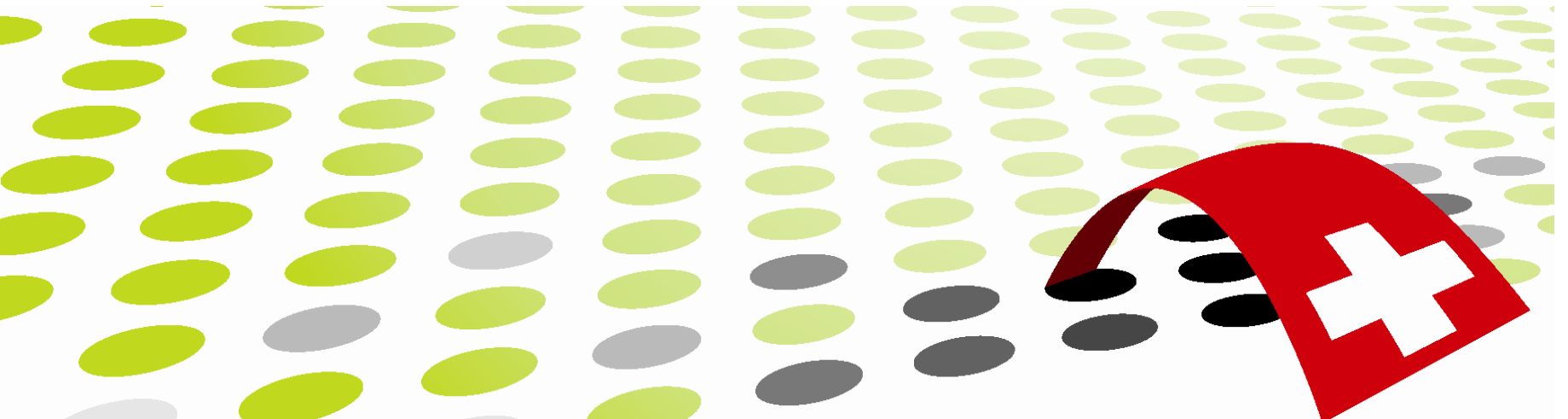
## Engineering Complex Systems

*Alex Dommann, Executive Committee*

*Giovanni De Micheli, Program Leader*

*Martin Rajman, Executive Director*

*Patrick Mayor, Scientific Coordinator*



# Nano-Tera.ch

**A very successful Swiss research program  
funding large collaborative multi-discipline projects  
aiming at the engineering of complex systems  
for applications in the domains of Health  
and the Environment**




# Mission

**Research, Design & Engineering of complex **tera-scale** systems  
using **nano-scale** devices and technologies**

**Foster research and crossbreeding of technologies**

**Main application domains are **Health** and **Environment**,  
with **Energy** and **Security** as transversal support areas**

- 
- **Develop new markets**
  - **Improve living standards**
  - **Better the quality of health and environment**
  - **Foster a vision of engineering with social objectives**
  - **Promote related educational programs**



# Phase I: Key figures

- **77** Projects  
(19 RTD – 8 RTD add-on – 15 NTF – 29 ED – 6 SSSTC)
- **36** Research institutions (involved with PIs or CoPIs)  
(**31** Swiss + **5** Chinese institutions)
- **155** Research groups
- **30** Industrial partners
- **~700** Researchers
- **~180** Doctoral theses supported
- **24** Patent applications filed
- **61.8 MCHF** Total Nano-Tera.ch budget (+ matching)
  - Including HES support

# Industry involvement: Phase I

- Most RTD projects receive support from various industrial partners.

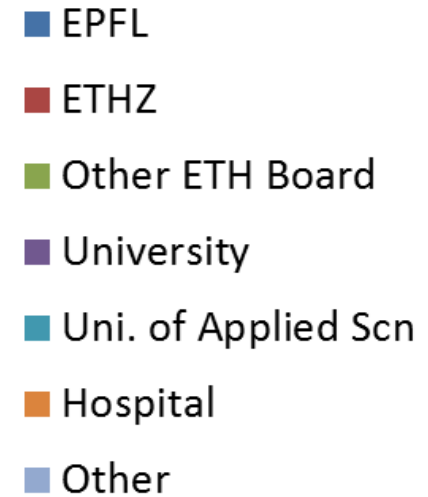
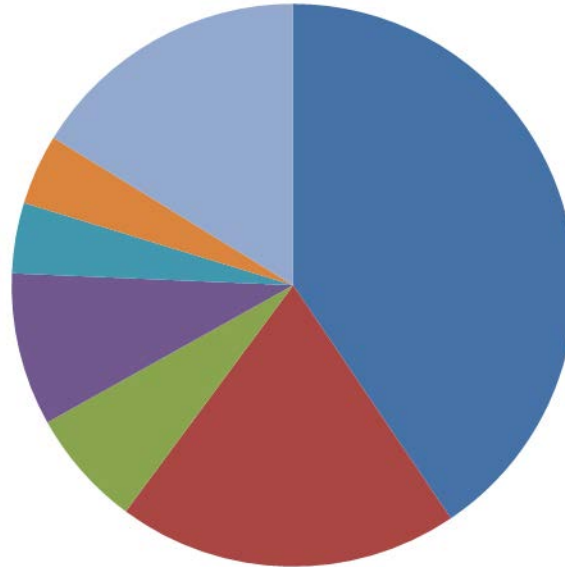
**30** industrial partners involved in Phase I RTD & RTD add-on projects

	Number of projects	Number of industrial partners	Contributions (CHF)
RTD 2009	10	17	2'375'986
RTD 2010	9	8	3'342'201
RTD add-on	8	5	931'387
	<b>27</b>	<b>30</b>	<b>6'649'574</b>

# Partner distribution by institution

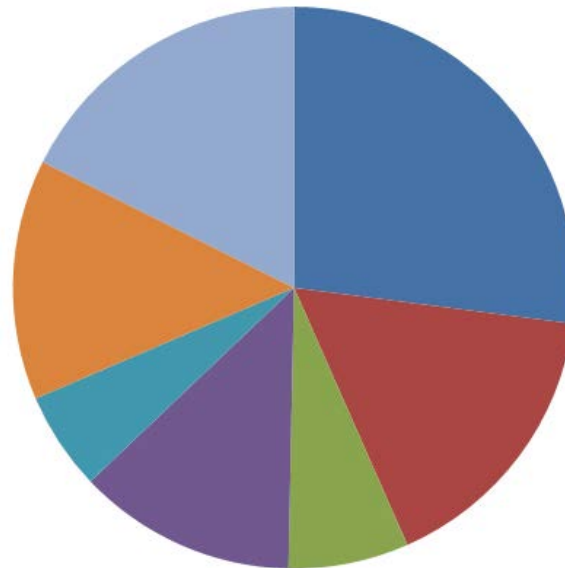
## Phase I

(Projects  
2009-2013)



## Phase II

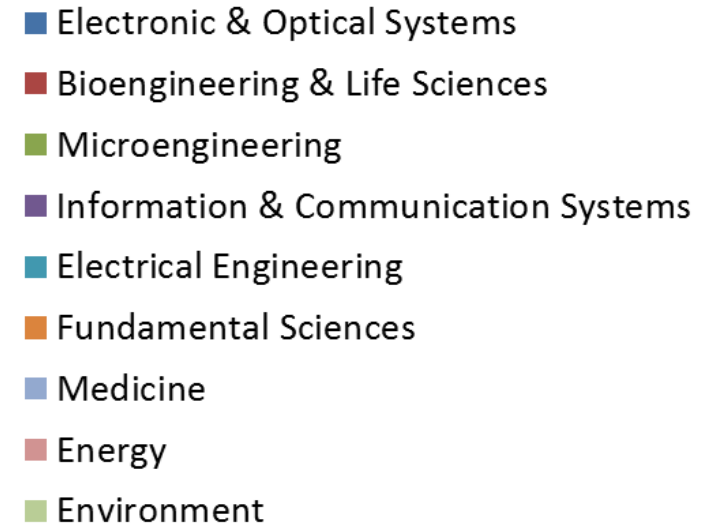
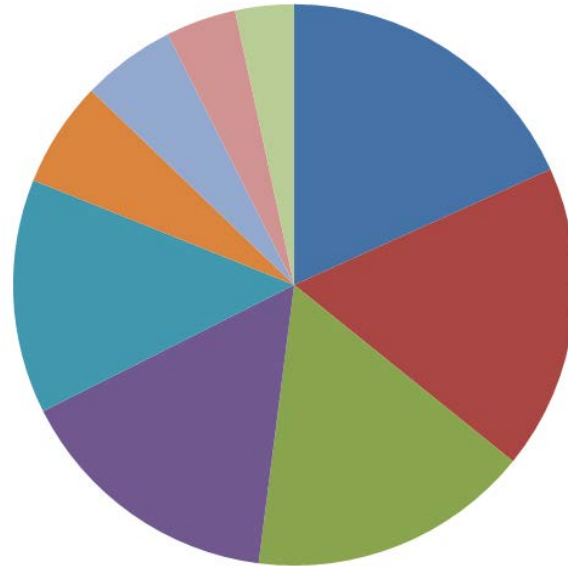
(Projects  
2013-2017)



# Partner distribution by discipline

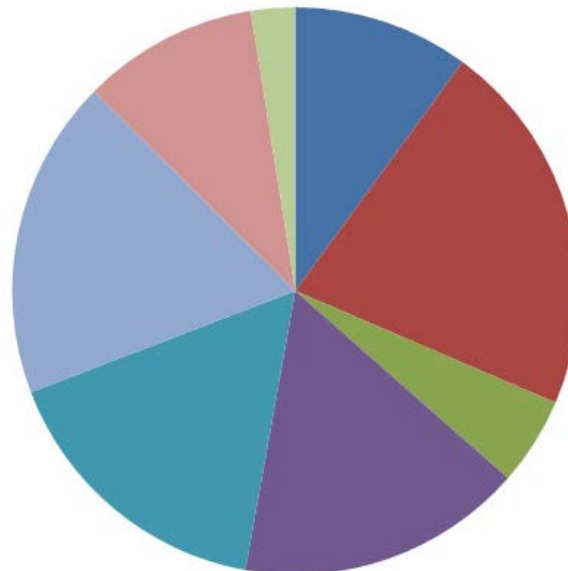
## Phase I

(Projects  
2009-2013)




## Phase II

(Projects  
2013-2017)




# 31 Swiss institutions: Phase I



**Part of ETH-Board**



ÉCOLE POLYTECHNIQUE FÉDÉRALE DE LAUSANNE



Eidgenössische Technische Hochschule Zürich  
Swiss Federal Institute of Technology Zurich

PAUL SCHERRER INSTITUT

**Part of OPET (BBT)**



Haute Ecole Spécialisée de Suisse occidentale  
Fachhochschule Westschweiz  
University of Applied Sciences Western Switzerland



Fachhochschule Nordwestschweiz



FHO Fachhochschule Ostschweiz

**Part of SUK / CUS**



Universität Zürich



UNIVERSITÄT BERN



UNIVERSITÉ DE GENÈVE



Université de Neuchâtel



UNIL | Université de Lausanne



UNI BASEL



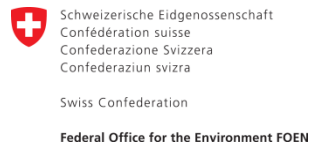
University of Applied Sciences and Arts of Southern Switzerland



Università della Svizzera italiana



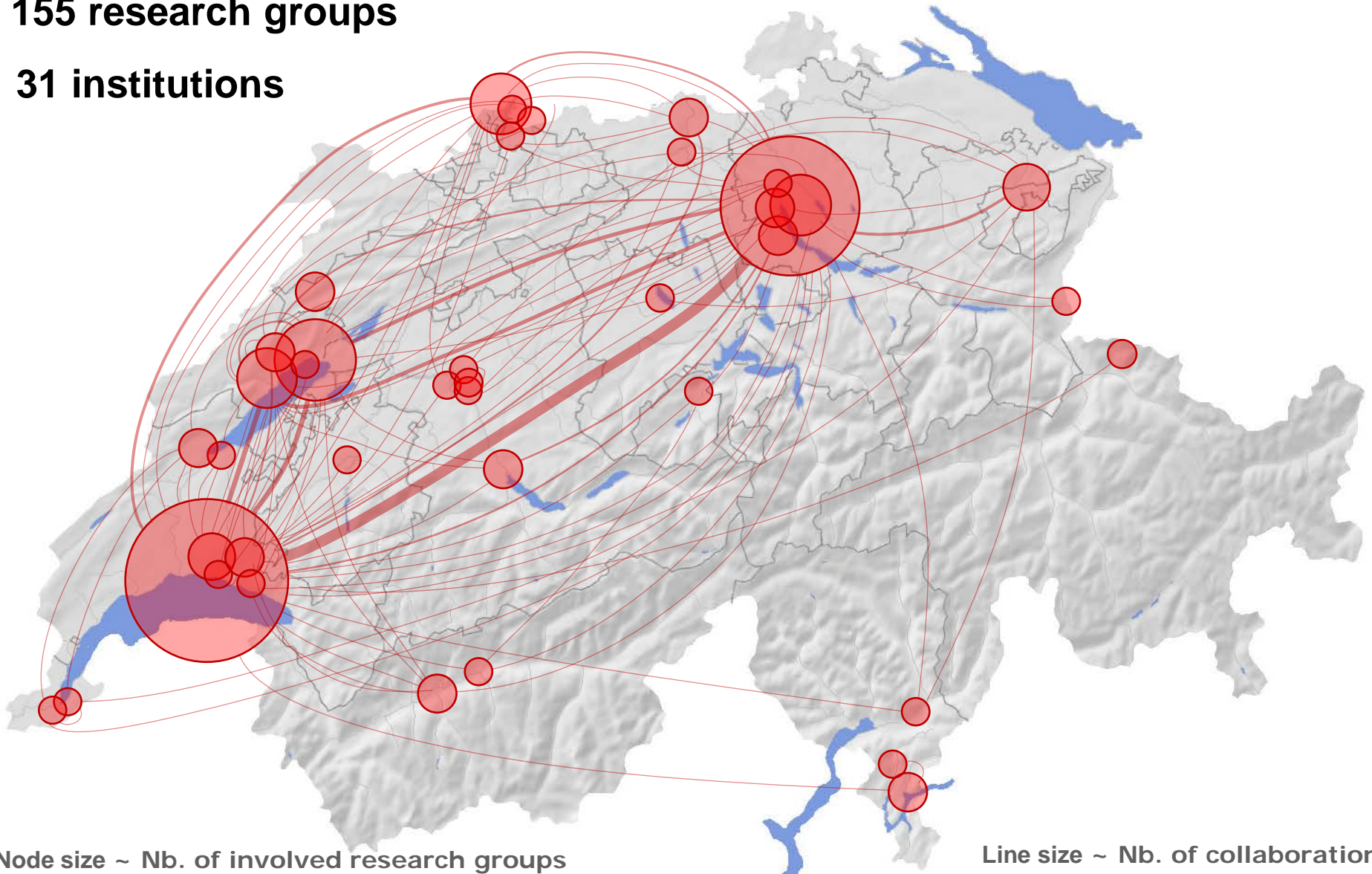
UNIVERSITAS FRIBURGENSIS  
UNIVERSITÉ DE FRIBOURG SUISSE  
UNIVERSITÄT FREIBURG SCHWEIZ



# Distribution of research groups: Phase I

155 research groups

31 institutions



Node size ~ Nb. of involved research groups

Line size ~ Nb. of collaborations

# Looking forward



# Phase II: Key figures

- **43** Projects selected (including 25 RTD projects)
- **37** Research institutions (involved with PIs or CoPIs)
- **189** Research groups
- **~120** Doctoral theses supported
- Most RTD projects receive support from various industrial partners and hospital end-users

	Number of projects	Number of industrial partners	Number of hospital partners	Contributions (CHF)
RTD Call 2011	6	9	6	2'326'260
RTD Call 2012	12	10	6	4'266'108
RTD Call 2013	7	15	1	1'621'150
	<b>25</b>	<b>34</b>	<b>13</b>	<b>8'213'518</b>

# 37 Swiss institutions: Phase II

**Part of ETH-Board**



ÉCOLE POLYTECHNIQUE FÉDÉRALE DE LAUSANNE



Eidgenössische Technische Hochschule Zürich  
Swiss Federal Institute of Technology Zurich




aquatic research

**Part of OPET (BBT)**



Haute Ecole Spécialisée de Suisse occidentale  
Fachhochschule Westschweiz  
University of Applied Sciences Western Switzerland



Berner Fachhochschule



Fachhochschule Nordwestschweiz

**Hospitals**




UniversitätsSpital Zürich



UNIVERSITÄTSSPITAL BERN  
HOPITAL UNIVERSITAIRE DE BERNE  
BERN UNIVERSITY HOSPITAL



spitäler schaffhausen



UniversitätsSpital Basel



KINDERSPITAL ZÜRICH  
Universitäts-Kinderkliniken · Eleonorenstiftung

**Part of SUK / CUS**



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UNIVERSITÉ DE GENÈVE



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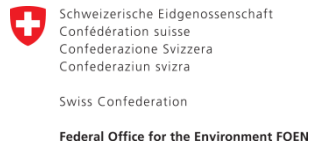
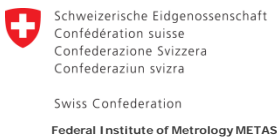
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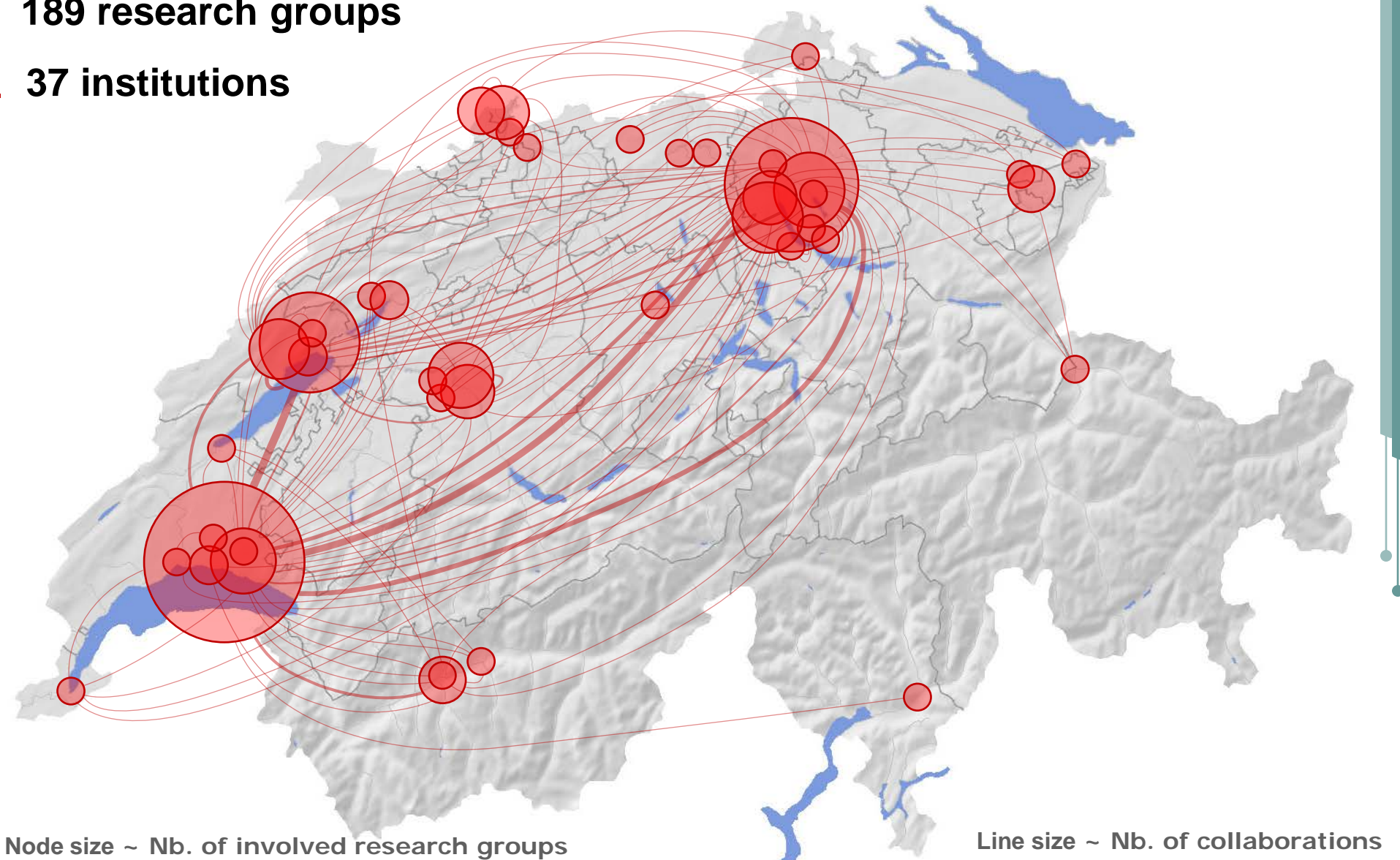
Universität St.Gallen



# Distribution of research groups: Phase II

189 research groups

37 institutions



Node size ~ Nb. of involved research groups

Line size ~ Nb. of collaborations

# Mark your calendars!

Nano-Tera Annual Meeting 2014:

**May 20, 2014**

**Swiss Convention Center, EPFL**





*Thanks for your attention !*

➤ [www.nano-tera.ch](http://www.nano-tera.ch)