



Guide 2021

National Centres of Competence in Research



SWISS NATIONAL SCIENCE FOUNDATION

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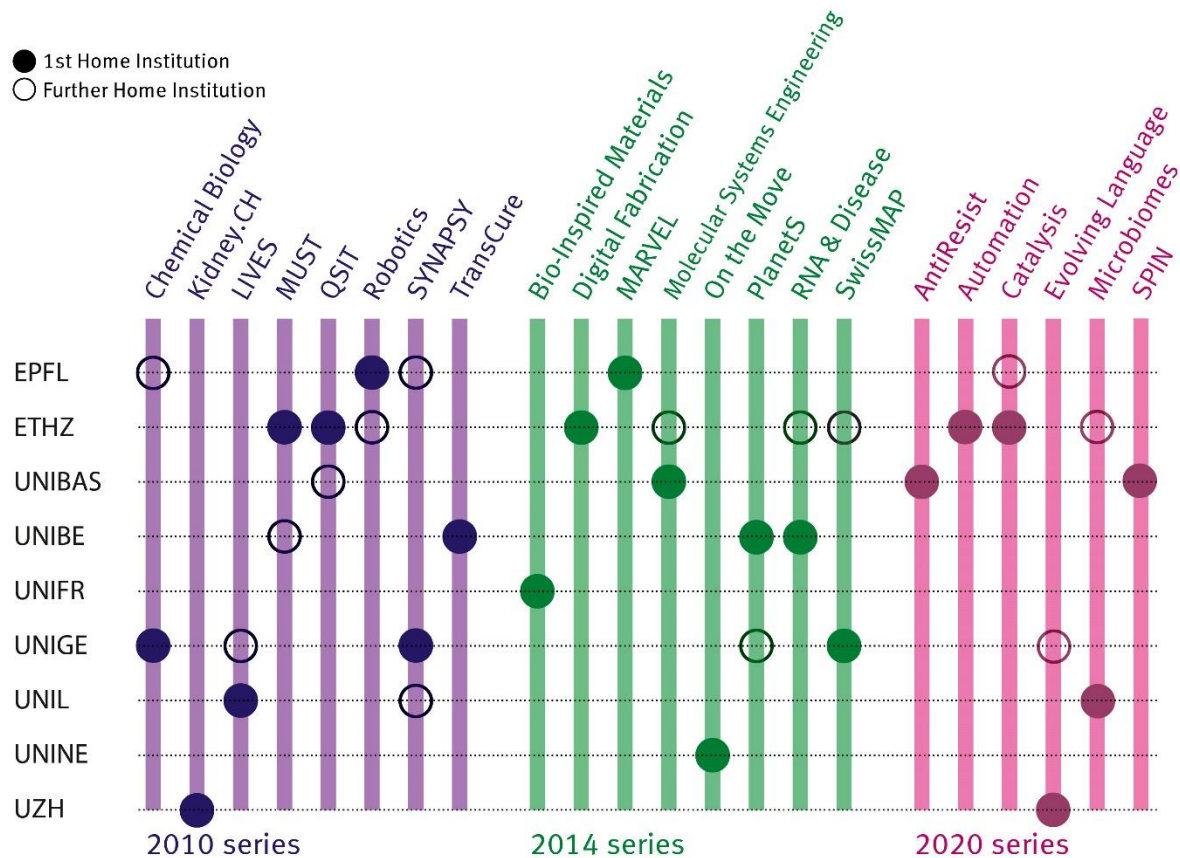
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The NCCRs at a glance

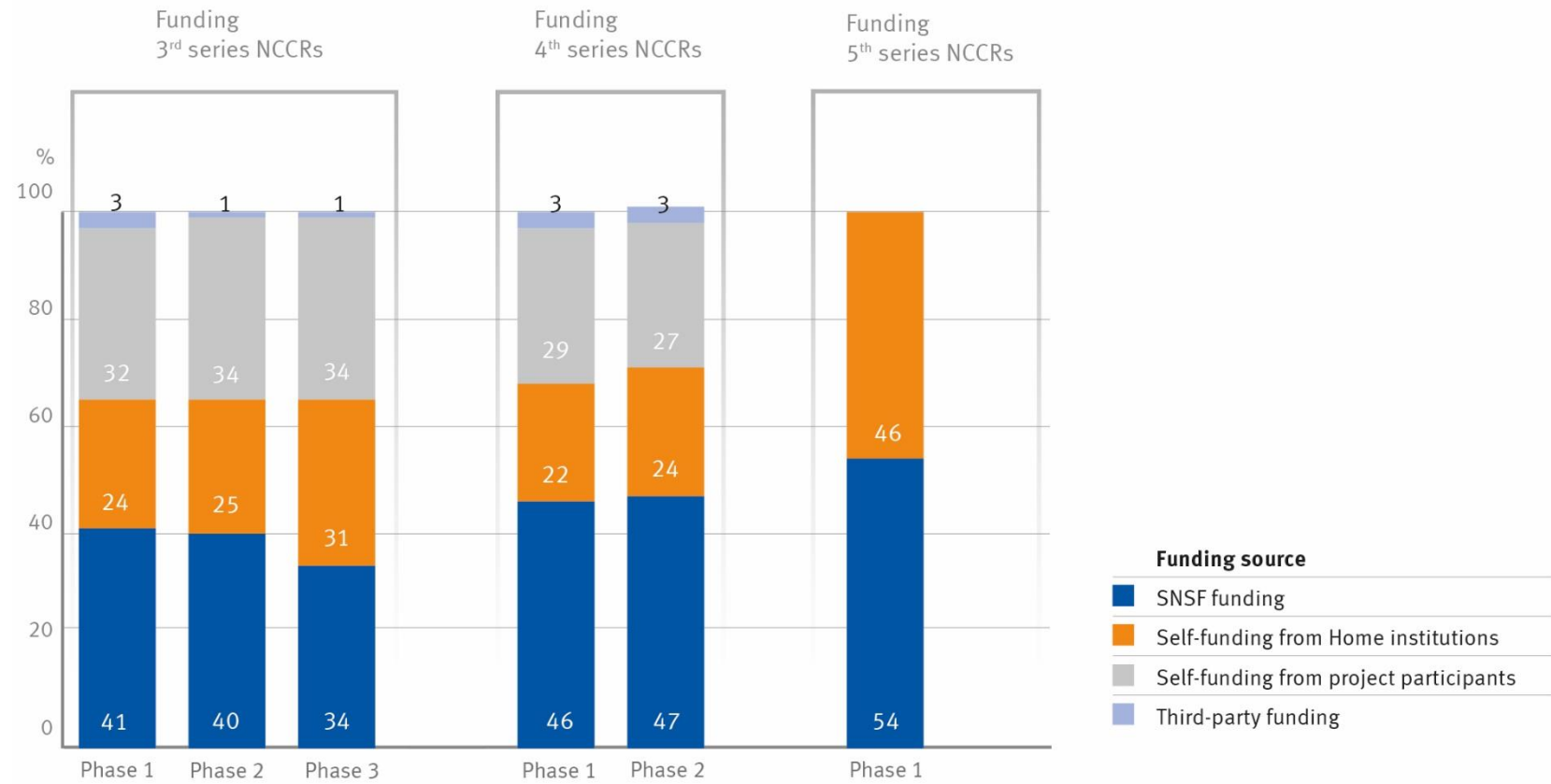
Overview of NCCR Calls

	Submitted pre-proposals	Submitted full proposals	Approved proposals	Years of operation
1 st Call (1999)	82	34	14	2001-2013
2 nd Call (2003)	44	17	6	2005-2017
3 rd Call (2008)	54	28	8	2010-2022
4 th Call (2011)	63	23	8	2014-2026
5 th Call (2017)	54	23	6	2020-2032

The running NCCRs



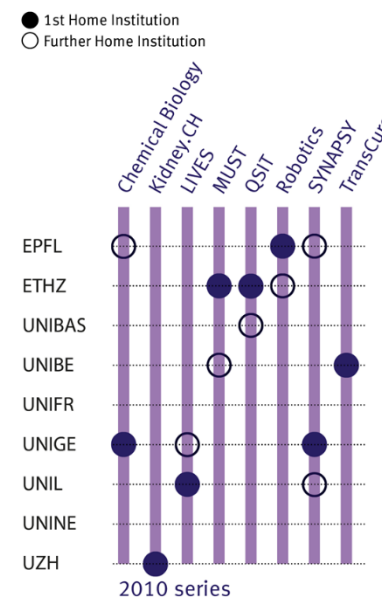
Funding of the NCCRs



NCCR 3rd series at a glance

3rd series of NCCRs (Operation 2010-2022)

Short Name	NCCR-Director	Home Institutions	Starting date
Chemical Biology	Prof. Howard Riezman	University of Geneva, EPFL	December 1, 2010
Kidney.CH	Prof. Johannes Loffing	University of Zurich	August 1, 2010
LIVES	Prof. Dario Spini	University of Lausanne, University of Geneva	January 1, 2011
MUST	Prof. Ursula Keller	ETH Zurich, University of Bern	July 1, 2010
QSIT	Prof. Klaus Ensslin	ETH Zurich, University of Basel	January 1, 2011
Robotics	Prof. Dario Floreano	EPFL, ETH Zurich	December 1, 2010
SYNAPSY	Prof. Camilla Bellone	Universities of Geneva and Lausanne, EPFL	October 1, 2010
TransCure	Prof. Hugues Abriel	University of Bern	November 1, 2010



3rd series of NCCRs: Funding in phase 1, phase 2 and phase 3: 2018-2021

Funding source (CHF)	Phase 1	Phase 2	2018	2019	2020	2021	Phase 3 total
SNSF funding	124'685'356	128'859'352	22'554'354	24'786'933	22'816'666	21'245'373	91'403'326
Self-funding from Home Institutions ¹	72'822'637	81'481'259	18'868'316	19'471'146	22'378'348	21'879'728	82'597'538
Self-funding from project participants	95'700'592	112'749'558	25'964'061	25'295'333	19'538'989	18'350'335	89'148'718
Third-party funding ²	9'461'241	2'763'241	439'133	727'067	814'208	760'232	2'740'640
Total	302'669'826	325'853'410	67'825'864	70'280'479	65'548'211	62'235'668	265'890'222

¹ incl. Funding of transfer projects (strong Swiss franc package), compensation for PhD salaries increase, flexibility grant, mobility grant and open research data grant.

² Personnel costs, equipment and consumables, not included infrastructure and basic equipment

³ Not included is CTI funding"

Persons involved in the NCCRs in the last reporting period (12 months)

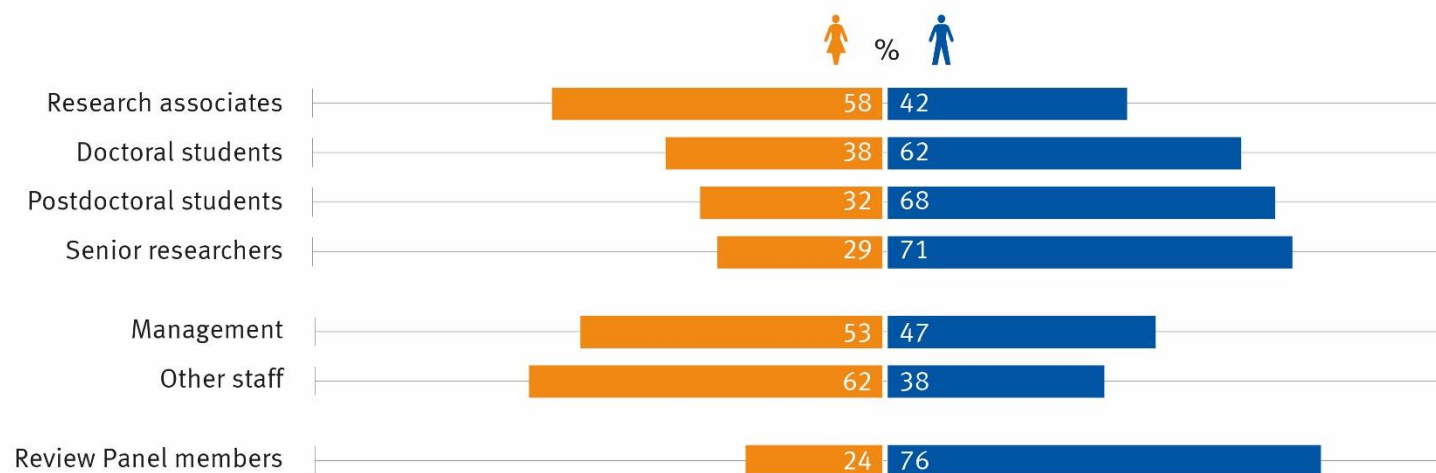
Personnel	Total of Persons	Female	Male	Swiss	Other nationalities
Research associates ¹	67	39	28	27	41
Doctoral students	277	106	171	76	204
Postdoctoral students	171	54	117	19	160
Senior researchers ²	361	106	255	156	229
Management ³	34.44	43	38	46	47
Other staff	139	86	53	79	65
Total	1096	434	662	403	746

¹ Includes graduate scientists (level master) but not registered as doctoral students or undergraduate students participating in research projects.

² Including leaders of the individual projects and other organisational units of the NCCRs

³ Full-time equivalent, including NCCR-Director and persons in charge of knowledge and technology transfer, equal opportunities, communication, education and training

Gender in the NCCRs



NCCR Chemical Biology

Visualisation and Control of Biological Processes Using Chemistry

NCCR Director: Prof. Howard Riezman, NCCR Co-Director: Prof. Christian Heinis
Home Institutions: University of Geneva, EPFL
Start date: 1st of December 2010 (3rd NCCR series)

Description

The National Centre of Competence in Research (NCCR) "Chemical Biology - Visualisation and Control of Biological Processes Using Chemistry" uses chemistry tools to obtain a better understanding of life at the molecular level. Until now, few technologies could characterise in detail the countless biochemical activities that constitute a living cell. In the NCCR Chemical Biology, chemists, biochemists, biophysicists and cell biologists develop innovative techniques based on small molecules and proteins to obtain new information about cellular processes and control them in-situ. The new tools are applicable to various biological phenomena like visualising the activity of selected proteins during cell division and investigating how membranes control the activity of proteins in them. The NCCR is also engaged in establishing a platform for chemical screening aimed at developing a new generation of molecules with biological effects. For further information visit: <https://nccr-chembio.ch/>

Heads of Research Groups

Prof. **Andrea Ablasser**, Institut d'Infectiologie, EPFL
Prof. **Charlotte Aumeier**, Département de Biochimie, Université de Genève
Prof. **Yimon Aye**, Institut des sciences et ingénierie chimiques, ISIC, EPFL
Prof. **Bruno Correia**, Faculté des sciences et techniques de l'ingénieur, STI, EPFL
Prof. **Lyndon Emsley**, Institut des sciences et ingénierie chimiques, ISIC, EPFL
Prof. **Beat Fierz**, Institut des sciences et ingénierie chimiques, ISIC, EPFL
Prof. **Anne-Claude Gavin**, Faculté de Médecine, Université de Genève
Prof. **Pierre Gönczy**, Institut suisse de recherche expérimentale sur le cancer (ISREC), EPFL
Prof. **Marcos Gonzalez-Gaitan**, Institut des sciences et ingénierie chimiques, ISIC, EPFL
Prof. **Monica Gotta**, Faculté de Médecine, Université de Genève
Prof. **Christian Heinis**, Institut des sciences et ingénierie chimiques, ISIC, EPFL
Prof. **Sascha Hoogendoorn**, Département de Chimie Organique, Université de Genève
Prof. **Marko Kaksonen**, Département de Biochimie, Université de Genève
Prof. **Karten Kruse**, Département de Biochimie & Département de Physique Théorique appliquée à la Biologie, Université de Genève
Prof. **Robbie Loewith**, Département de Biologie Moléculaire, Université de Genève
Prof. **Suliana Manley**, Institut de physique des systèmes biologiques, EPFL
Prof. **Stefan Matile**, Département de Chimie Organique, Université de Genève
Dr. **Dimitri Moreau**, Département de Biochimie, Université de Genève
Prof. **Howard Riezman**, Département de Biochimie, Université de Genève
Prof. **Pablo Rivera-Fuentes**, SB ISIC LOCBP, EPFL
Prof. **Aurélien Roux**, Département de Biochimie, Université de Genève
Dr. **Gerardo Turcatti**, Plateformes technologiques SV, EPFL
Prof. **Gisou van der Goot**, Institut de recherche en infectiologie, EPFL
Prof. **Jérôme Waser**, Institut de recherche en infectiologie, EPFL
Prof. **Nicolas Winssinger**, Département de Chimie Organique, Université de Genève

[Overview of all Research Projects](#)

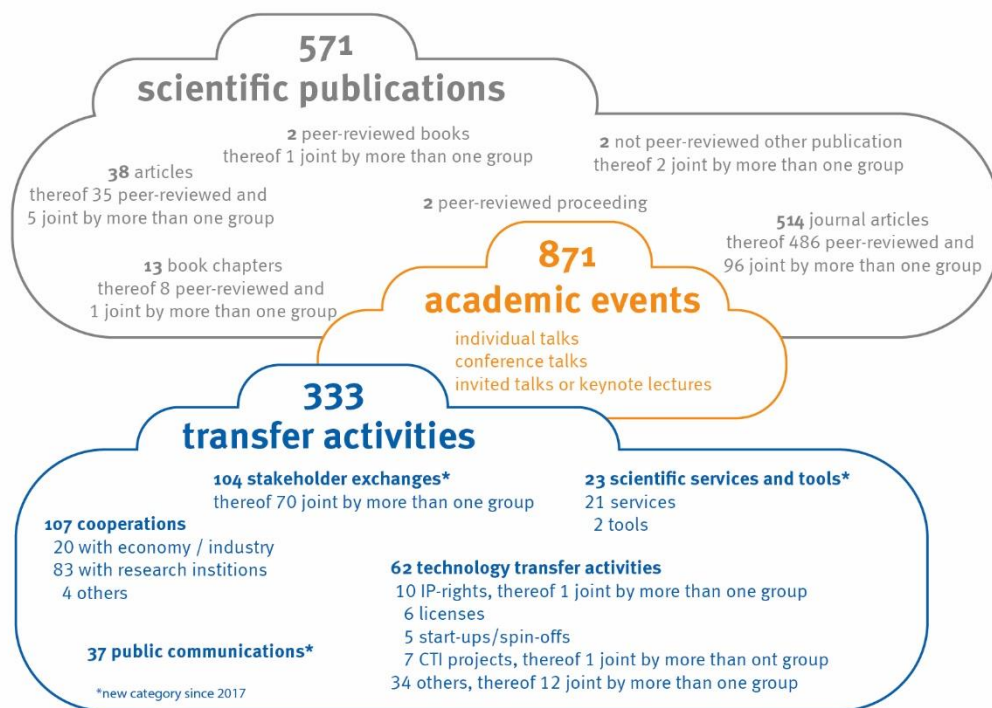
Participating Institutions

Université de Genève (12 groups)/EPFL (13 groups)



- Home Institutions
- Partner Institutions

Output Data Data: since start



Key collaborations with third parties

Academia

Biozentrum, University of Basel, CH
 CNRS, Grenoble, FR
 Institut Curie, Paris, FR
 ETHZ, Zurich, CH
 INSERM, University of Lyon, Lyon, FR
 Laboratory of Computational Systems Biotechnology LCSB, EPFL, CH
 Max Planck Institute for Colloids and Surfaces, Potsdam-Golm, DE
 MPI Physics of Complex systems, Dresden, DE
 UCLA, Los Angeles, US
 Dartmouth University, US
 University of California, San Francisco, US
 University of Auckland, NZ
 TU Munchen, DE
 Strasbourg University, FR
 Ben Gurion University, Beer-Shiva, IL
 EMBL Heidelberg, DE

Private and public sector

Avanti Polar lipids, Alabama, US
 Spirochrome, Geneva, CH
 Networks, New York, US
 Novartis Forschungsstiftung, Basel, CH
 TCI Europe N.V., Zwijndrecht, BE

Funding

Funding Source (CHF)	Total Phase 1 2010 - 2013	Total Phase 2 2014 - 2017	Total Phase 3 2018 - 2021	2018	2019	2020	2021	Phase 3 %
SNSF-funding ¹	13'510'000	14'712'738	10'778'236	2'648'486	3'420'000	2'703'250	2'006'500	33
Self-funding from Home Institution ²	13'145'250	9'122'351	10'833'005	1'812'859	3'046'625	3'265'261	2'708'260	33
Self-funding from project participants	3'631'371	7'839'172	11'107'644	2'515'537	2'692'107	2'800'000	3'100'000	34
3rd party-funding ³	130'596	18'400	0	0	0	0	0	0
Total	30'417'217	31'692'661	32'718'885	6'976'882	9'158'732	8'768'511	7'814'760	100

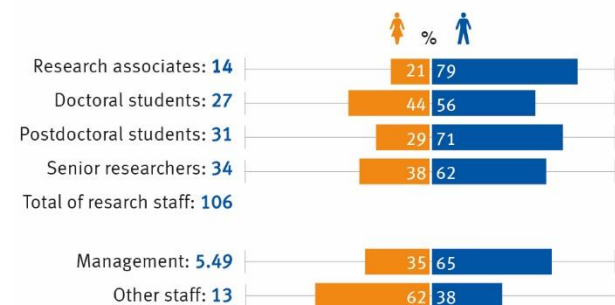
¹ incl. funding of transfer projects (strong Swiss franc package) in 2012, compensation for PhD salaries increase in 2014, flexibility grant in 2017, 2018, 2019 and 2020, mobility grant in 2018 and 2019 and open research data grant in 2019

² Personnel costs, equipment and consumables, not included infrastructure and basic equipment

³ Not included is CTI funding

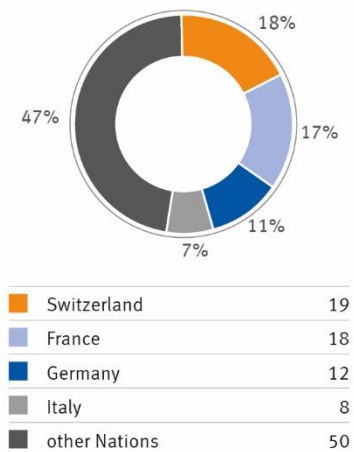
Persons involved

Data: current year



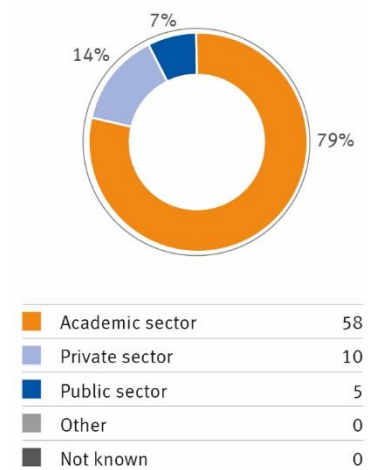
Nationalities of research staff

Data: current year



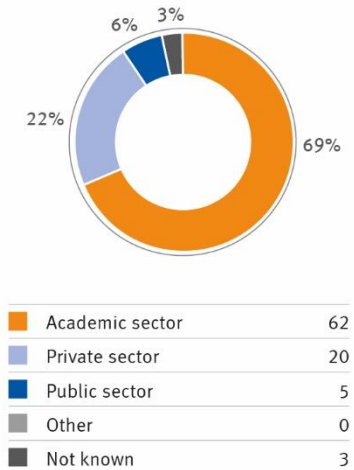
Next employer of doctoral students

Data: since start



Next employer of postdoctoral students

Data: since start



NCCR Kidney.CH

Kidney Control of Homeostasis

NCCR Director: Prof. Johannes Loffing
Home Institutions: University of Zurich
Start date: 1st of August 2010 (3rd NCCR series)

Description

The National Centre of Competence in Research (NCCR) "Kidney.CH – Kidney Control of Homeostasis" is the world's first research network to explore the physiological processes in healthy and diseased kidneys across a broad thematic spectrum.

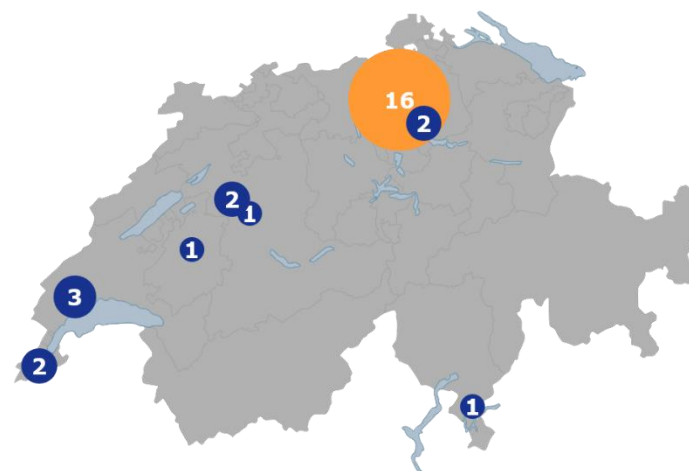
The aim is to seek insights for new preventive, diagnostic and therapeutic approaches to treating kidney patients. The motivation being that kidney diseases have increased dramatically in recent years. Patients with chronic kidney diseases risk exposure to further secondary diseases such as high blood pressure or osteoporosis. Reduced kidney function has drastic consequences for the body as the kidneys are responsible for maintaining the balance between the most varied of substances in the body (homeostasis). Homeostasis is of central importance to body functions and thus a healthy life. For further information visit: <https://www.nccr-kidney.ch/>

Heads of Research Groups

Prof. **Ruxandra Bachmann-Gagescu**, Institut für Medizinische Genetik, Universität Zürich
Prof. **Felix Beuschlein**, Klinik für Endokrinologie, Diabetologie und Klinische Ernährung, Universitätsspital Zürich
Prof. **Murielle Bochud**, Institut Universitaire de Médecine Sociale et Préventive, Université de Lausanne
Prof. **Olivier Bonny**, Département de pharmacologie et de toxicologie, Université de Lausanne
Prof. **Sophie De Seigneux**, Département Physiologie cellulaire et métabolisme, Université de Genève
Dr. **Diane De Zélicourt**, Physiologisches Institut, Universität Zürich
Prof. **Olivier Devuyst**, Physiologisches Institut, Universität Zürich
Dr. **Daniela Egli-Spichtig**, Physiologisches Institut, Universität Zürich
Prof. **Eric Feraille**, Département Physiologie cellulaire et métabolisme, Université de Genève
Prof. **Daniel Fuster**, Departement Nephrologie / Hypertonie, Universitätsspital Bern
Prof. **Andrew Hall**, Anatomisches Institut, Universität Zürich
Prof. **Edith Hummler**, Département de Pharmacologie et Toxicologie, Université de Lausanne
Prof. **Uyen Huynh-Do**, Departement Nephrologie / Hypertonie, Universitätsspital Bern
Dr. **Pedro Imenez Silva**, Physiologisches Institut, Universität Zürich
Dr. **Anna Keppner**, Abteilung Medizin, Universität Freiburg
Prof. **Vartan Kurtcuoglu**, Physiologisches Institut, Universität Zürich
Prof. **Soeren Lienkamp**, Anatomisches Institut, Universität Zürich
Prof. **Johannes Loffing**, Anatomisches Institut, Universität Zürich
Prof. **Johan Lorenzen**, Klinik für Nephrologie, Universitätsspital Zürich
Dr. **Matthias Moor**, Department for BioMedical Research (DBMR), Universität Bern
Dr. **Stellor Nlandu Khodo**, Physiologisches Institut, Universität Zürich
Dr. **Ganesh Pathare**, Anatomisches Institut, Universität Zürich
Dr. **David Pentón Ribas**, Anatomisches Institut, Universität Zürich
Dr. **Anna Rinaldi**, Ospedale Regionale di Lugano
Dr. **Carsten Scholz**, Physiologisches Institut, Universität Zürich
Dr. **Natsuko Tokonami**, Physiologisches Institut, Universität Zürich

Participating Institutions

Université de Genève (2 groups)/Université de Lausanne (3 groups)
Universität Zürich (16 groups)/Universität Bern (1 group)/Universität Freiburg (1 group)/Universitätsspital Bern (2 groups)/Universitätsspital Zürich (2 groups)/Ospedale Regionale di Lugano (1 group)

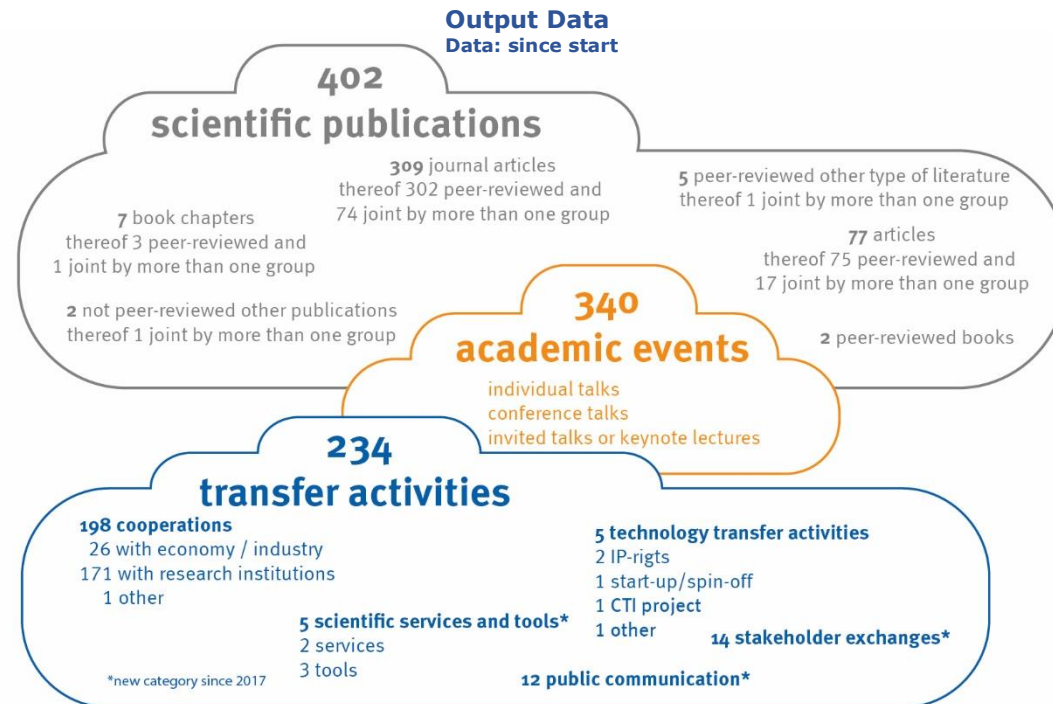


● Home Institutions
● Partner Institutions

Heads of Research Groups (continued)

Prof. **Carsten Wagner**, Physiologisches Institut, Universität Zürich
 Prof. **Roland Wenger**, Physiologisches Institut, Universität Zürich

Overview of all Research Projects



Key collaborations with third parties

Academia

Department of Physiology, University College London, GB
 Human Genetics Unit, Medical Research Council, Edinburgh, GB
 Institute of molecular bioscience, University of Tokyo, JP
 Institute of Veterinary Physiology, University of Zurich, CH
 Internal Medicine, National Center of Integrative Biomedical Informatics, Ann Arbor, US
 Internal Medicine, CHUV - Centre Hospitalier Universitaire Vaudois, Lausanne, CH
 Mineral metabolism clinic, Ut Southwestern Medical Centre, Dallas, TX, US
 Department of Medicine, University of Aarhus, DK
 Institute of Physiology, University of Kiel, DE
 Centre de Recherche des Cordeliers, Paris, FR
 Department of Anesthesiology, Vanderbilt University Medical Center, Nashville, US

Private and public sector

Novartis, Basel, CH
 Calciscon AG, Bern CH
 VIFOR, Villars-sur-Glâne CH
 Prosalix, Allschwil CH

Funding

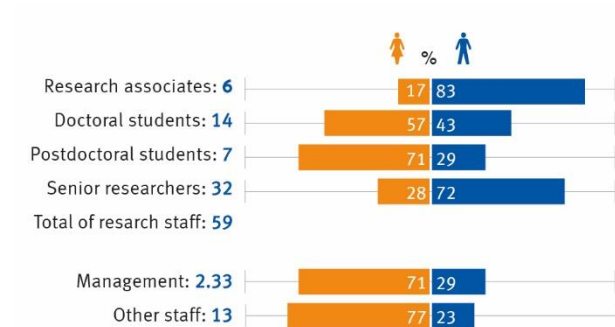
Funding Source (CHF)	Total Phase 1 2010 – 2013	Total Phase 2 2014 – 2017	Total Phase 3 2018 – 2021	2018	2019	2020	2021	Phase 3 %
SNSF-funding	16'530'000	16'568'958	10'580'000	2'892'750	2'762'417	2'562'417	2'362'416	59
Self-funding from Home Institution ¹	2'168'316	4'709'507	3'921'442	1'068'181	522'785	1'013'378	1'317'098	22
Self-funding from project participants	5'271'515	3'333'162	3'491'558	850'183	421'375	1'110'000	1'110'000	19
3rd party-funding ²	146'955	0	0	0	0	0	0	0
Total	24'116'786	24'611'627	17'993'000	4'811'114	3'706'577	4'685'795	4'789'514	100

¹ Personnel costs, equipment and consumables, not included infrastructure and basic equipment

² Not included is CTI funding

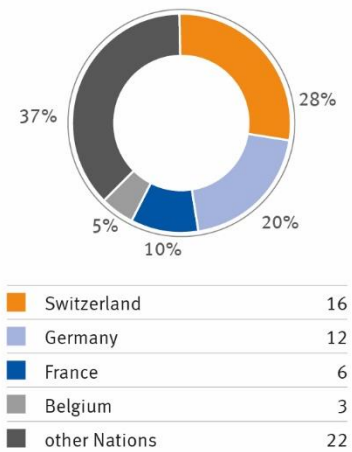
Persons involved

Data: current year



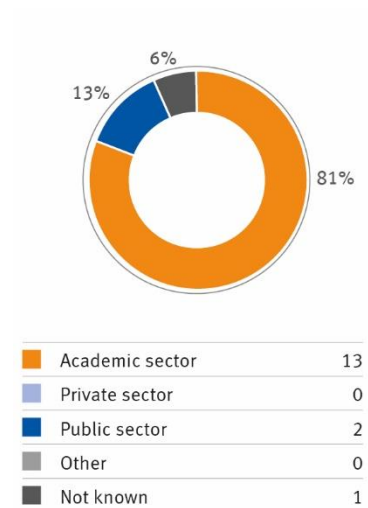
Nationalities of research staff

Data: current year



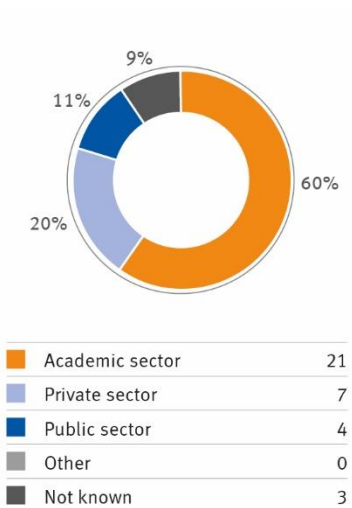
Next employer of doctoral students

Data: since start



Next employer of postdoctoral students

Data: since start



NCCR LIVES

Overcoming vulnerability: life course perspectives

NCCR Director: Prof. Dario Spini, NCCR Co-Director: Prof. Eric Widmer
Home Institutions: University of Lausanne, University of Geneva
Start date: 1st of January 2011 (3rd NCCR series)

Description

The National Centre of Competence in Research (NCCR) "LIVES – Overcoming Vulnerability: Life Course Perspectives" analyzes the burdensome effects of post-industrial economies and societies on the development of vulnerability in terms of social exclusion or precariousness.

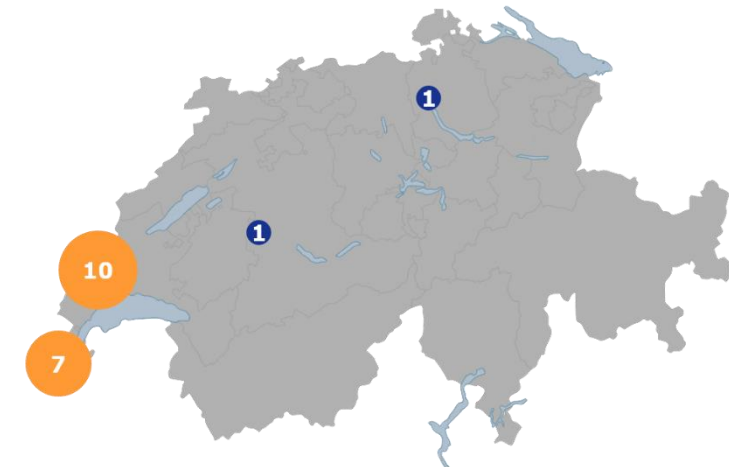
It conducts comparative, longitudinal analysis to examine the impact of socio-structural and personal resources on overcoming vulnerability. Hosted by the Universities of Lausanne and Geneva, the NCCR brings together national and international researchers to examine life courses as developmental processes, as outcomes of institutional regulation and policies, or as biographical meanings. Life trajectories of about 25'000 people will be studied across health, family, work, and institutional domains in order to develop innovative social policy measures. For further information visit: <http://www.lives-nccr.ch/en/>

Heads of Research Groups

Prof. **André Berchtold**, Centre de recherche sur les parcours de vie et les inégalités, Université de Lausanne
Prof. **Laura Bernardi**, Centre de recherche sur les parcours de vie et les inégalités, Université de Lausanne
Prof. **Jean-Michel Bonvin**, Institut de socio-économie, Université de Genève
Prof. **Claudine Burton-Jeangros**, Département de Sociologie, Université de Genève
Prof. **Eric Davoine**, Chaire Ressources Humaines et Organisation, Université de Fribourg
Prof. **Paolo Ghisletta**, Groupe méthodologie et analyse de données, Faculté de psychologie et des sciences de l'éducation, Université de Genève
Prof. **Daniela Jopp**, Faculté des sciences sociales et politiques, Université de Lausanne
Prof. **Matthias Kliegel**, Laboratoire du Vieillissement Cognitif, Université de Genève
Prof. **Nicky Le Feuvre**, Laboratoire de sociologie, Université de Lausanne
Prof. **Jürgen Maurer**, Département d'économie, Université de Lausanne
Prof. **Daniel Oesch**, Institut des Sciences Sociales, Université de Lausanne
Prof. **Michele Pellizzari**, Département des Sciences Économiques, Université de Genève
Prof. **Clémentine Rossier**, Institut de démographie et socio économie, Université de Genève
Prof. **Jérôme Rossier**, Laboratoire de psychologie du développement, conseil et Intervention, Université de Lausanne
Prof. **Alexandra Freund**, Psychologisches Institut, Universität Zürich
Prof. **Dario Spini**, Centre de recherche sur les parcours de vie et les inégalités, Université de Lausanne
Prof. **Leen Vandecasteele**, Faculté des sciences sociales et politiques, Université de Lausanne
Prof. **Eric Widmer**, Département de Sociologie, Université de Genève

Participating Institutions

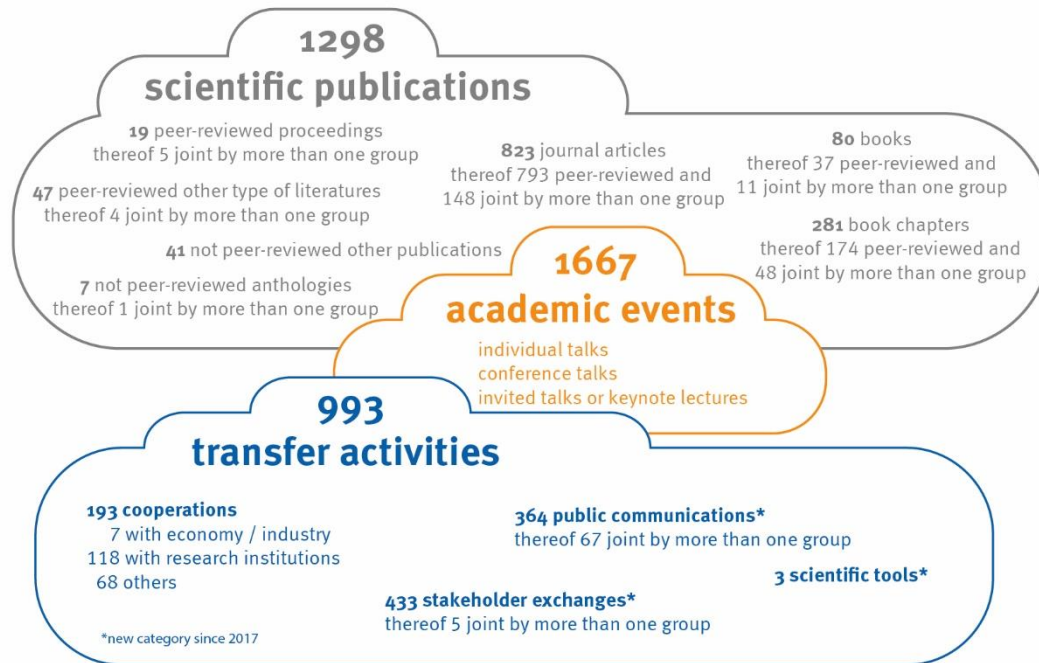
Université de Fribourg (1 group)/Université de Genève (7 groups)
Université de Lausanne (10 groups)/Universität Zürich (1 group)



● Home Institutions
● Partner Institutions

[Overview of all Research Projects](#)

Output Data
Data: since start



Key collaborations with third parties

Academia

Institut National Etude Démographiques (INED), Paris, FR
 NCCR On the move, University of Neuchatel, CH
 Oregon State University, Center for Healthy Ageing Research and Hallie, US
 Jacobs Centre for Productive Youth Development, University of Zurich, CH
 Bremen International Graduate School of Social Sciences (BIGSSS), University of Bremen, DE
 Centre on Aging and the Life Course, Purdue University, US
 Millenium Nucleus for the Study of the Life Course and Vulnerability, Santiago de Chile, CHI
 International Centre for Life Course Studies in Society and Health, University College London, UK
 Institute for Life Course and Society, Galway, IRA
 Population Europe – Network of Europe’s leading demographic research centres, Berlin, DE
 University College London, International Centre for Lifecourse Studies in Society and Health, UK
 University of Bremen, Institut für Soziologie, Bremen, DE

Private and public sector

Centre de compétence suisse en sciences sociales (FORS), Lausanne, CH
 Centre for Economic Policy Research, London, GB
 Département de la santé et de l’action sociale du Canton de Vaud, Lausanne, CH
 Départements des affaires régionales, de l’économie et de la santé du Canton de Genève, CH
 Fondation Leenards, Lausanne, CH
 Organisation for Economic Co-operation and Development, Paris, FR
 Federal Social Insurance Office (OFAS), Bern, CH
 Pro Senectute Switzerland, Basel, Bern, Valais, Vaud, CH
 State Secretariat of Economic Affairs, Bern, CH

Funding

Funding Source (CHF)	Total Phase 1 2011 - 2014	Total Phase 2 2015 - 2018	Total Phase 3 2019 - 2022	2019	2020	2021	2020	Phase 3 %
SNSF-funding ¹	14'551'895	14'778'648	10'763'995	2'561'031	3'346'589	2'685'458	2'170'917	24
Self-funding from Home Institution ²	5'636'219	13'983'831	20'346'781	4'627'127	4'605'558	5'469'904	5'644'192	46
Self-funding from project participants	13'721'239	12'886'243	12'571'286	3'140'194	3'278'520	3'261'863	2'890'709	29
3rd party-funding ³	5'440'407	955'918	568'499	133'054	133'367	236'346	65'732	1
Total	39'349'760	42'604'640	44'250'561	10'461'406	11'364'034	11'653'571	10'771'550	100

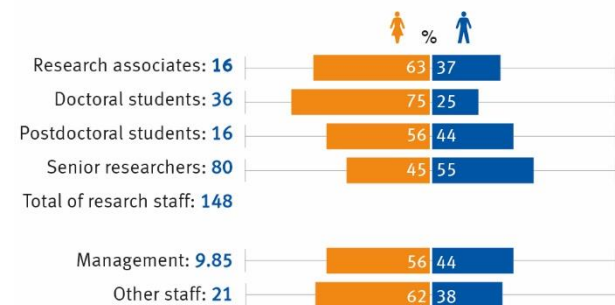
¹ incl. Mobility-grant in 2014, 2015 and 2019, compensation for PhD salaries increase in 2015, flexibility grant in 2015, 2016, 2017, 2018 and 2019 and open research data grant in 2019.

² Personnel costs, equipment and consumables, not included infrastructure and basic equipment

³ Not included is CTI funding

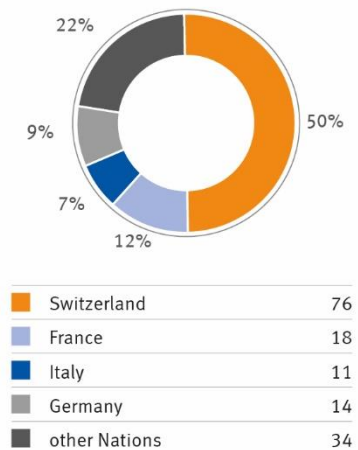
Persons involved

Data: current year



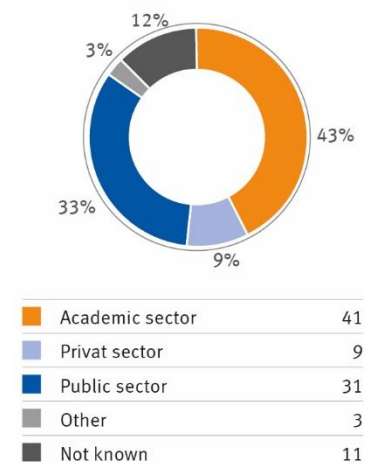
Nationalities of research staff

Data: current year



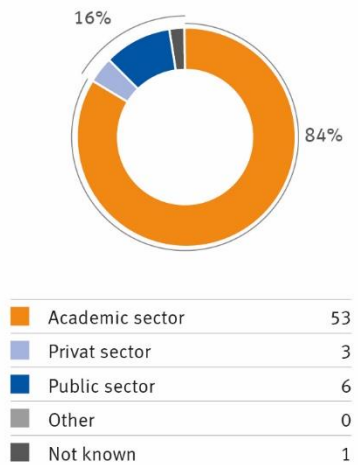
Next employer of doctoral students

Data: since start



Next employer of postdoctoral students

Data: since start



NCCR MUST

Molecular Ultrafast Science and Technology

NCCR Director: Prof. Ursula Keller, NCCR Co-Director: Prof. Thomas Feurer
Home Institutions: ETH Zurich, University of Bern
Start date: 1st July 2010 (3rd NCCR series)

Description

The National Centre of Competence in Research (NCCR) "MUST - Molecular Ultrafast Science and Technology", opens up new perspectives for the study of molecular systems and time-resolved structural investigations in physics, chemistry and biology.

The NCCR "MUST" focuses on the multidisciplinary development of experimental and theoretical tools. Therefore researchers will investigate chemical reactions and energy-transfer processes at the atomic and molecular level, as well as electron and proton transfer processes with ultra short temporal and spatial resolution. A deeper understanding of matter at microscopic level is crucial for dealing with important social challenges such as the quest for alternative energy sources, the synthesis of complex, functional medicines, or the development of new electronic devices. For further information visit: <http://www.nccr-must.ch/home.html>

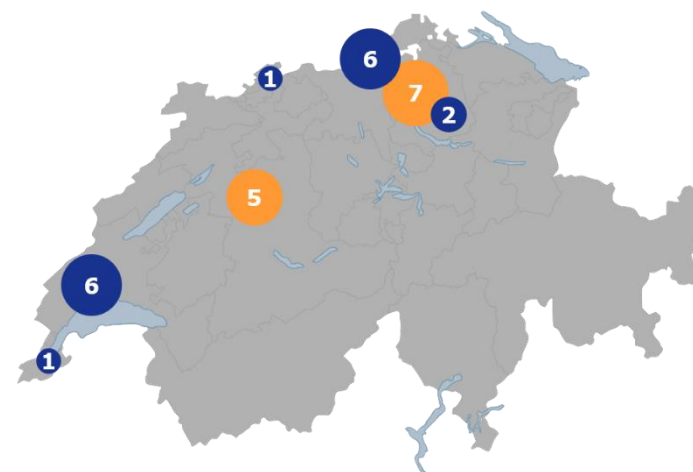
Heads of Research Groups

Prof. **Natalie Banerji**, Departement für Chemie und Biochemie, Universität Bern
Dr. **Paul Beaud**, Laboratory for Synchrotron Radiation – Condensed Matter, PSI Villigen
Prof. **Christoph Bostedt**, PSI Villigen/Institut des Sciences et Ingénierie Chimiques, EPFL
Prof. **Andrea Cannizzo**, Institut für Angewandte Physik, Universität Bern
Prof. **Fabrizio Carbone**, Institute de Physique, EPFL
Prof. **Adrian Cavalieri**, PSI Villigen/Institut für Angewandte Physik, Universität Bern
Prof. **Majed Chergui**, Institut des Sciences et Ingénierie Chimiques, EPFL
Prof. **Thomas Feurer**, Institut für Angewandte Physik, Universität Bern
Prof. **Manfred Fiebig**, Departement Materialwissenschaft, ETH Zürich
Prof. **Peter Hamm**, Physikalisch-Chemisches Institut, Universität Zürich
Prof. **Robert Häner**, Departement für Chemie und Biochemie, Universität Bern
Prof. **Steve Johnson**, PSI Villigen/Institut für Quantenelektronik, ETH Zürich
Prof. **Ursula Keller**, Institut für Quantenelektronik, ETH Zürich
Prof. **Markus Meuwly**, Departement Chemie, Universität Basel
Dr. **Chris Milne**, SwissFEL Alva, PSI Villigen
Prof. **Jacques-E. Moser**, Institut des Sciences et Ingénierie Chimiques, EPFL
Prof. **Jürg Osterwalder**, Physik-Institut, Universität Zürich
Prof. **Jeremy Richardson**, Laboratorium für Physikalische Chemie, ETH Zürich
Prof. **Ursula Röthlisberger**, Institut des Sciences et Ingénierie Chimiques, EPFL
Prof. **Daniela Rupp**, Laboratorium für Festkörperphysik, ETH Zürich
Dr. **Jörg Standfuss**, Department of Biology and Chemistry, PSI Villigen
Dr. **Urs Staub**, Laboratory for Synchrotron Radiation – Condensed Matter, PSI Villigen
Prof. **Ruth Signorell**, Laboratorium für Physikalische Chemie, ETH Zürich
Prof. **Jiri Vanicek**, Institut des Sciences et Ingénierie Chimiques, EPFL
Prof. **Jean-Pierre Wolf**, Groupe de Physique Appliquée, Université de Genève
Prof. **Hans Jakob Würner**, Laboratorium für Physikalische Chemie, ETH Zürich

[Overview of all Research Projects](#)

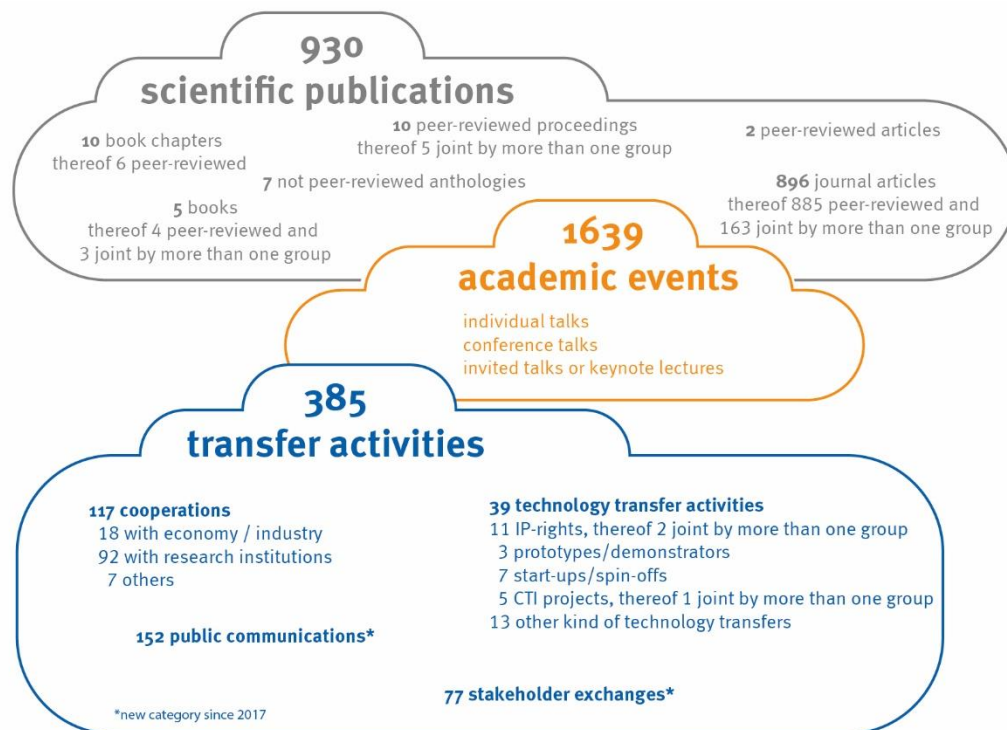
Participating Institutions

Universität Basel (1 group)/Universität Bern (5 groups)/Université de Genève (1 group)/Universität Zürich (2 groups)/EPFL (6 groups)/ETH Zürich (7 groups)/Paul Scherrer Institut PSI (6 groups)



● Home Institutions
● Partner Institutions

Output Data
Data: since start



Key collaborations with third parties

Academia

Cluster of Excellence – RESOLV, Bochum, DE
 Elettra Sincrotrone and FERMI, Trieste, IT
 EPFL, Laboratory of Photonics and Interfaces, CH
 European X-Ray Free electron laser, Hamburg, DE
 Fritz-Haber-Institut der MPG, Berlin, DE
 ICFO, Barcelona, Spain
 Imperial College London, Department of Physics, UK
 KIT Karlsruhe, Institute of Applied Physics, DE
 Leibnitz Institut für Kristal Züchtung, Berlin, DE
 Massachusetts Institute of Technology, Department of Chemistry, Cambridge, US
 Max Born Institute for Nonlinear Optics and Short Pulse Spectroscopy, Berlin, DE
 Max-Planck-Institut für Physik Komplexer Systeme, Dresden, DE
 Max-Planck-Institut für Struktur und Dynamik der Materie/CFEL, Hamburg, DE
 Newcastle University, Department of Chemistry, UK
 Ruhr-Universität Bochum, DE
 SACLA X-ray Free electron Laser (RIKEN), Hyogo, Japan
 Stanford Linear Accelerator Center, Menlo Park CA, US

Private and public sector

Google, Zürich, CH
 8photonics, Bern CH
 Aekip SA, Saint Sulpice, CH

Funding

Funding Source (CHF)	Total Phase 1 2010 - 2013	Total Phase 2 2014 - 2017	Total Phase 3 2018 - 2021	2018	2019	2020	2021	Phase 3 %
SNSF-funding ¹	17'766'000	17'401'769	12'682'152	3'045'902	3'253'417	3'191'417	3'191'416	34
Self-funding from Home Institution ²	9'616'456	6'517'233	5'397'283	1'449'605	1'331'678	1'307'000	1'309'000	14
Self-funding from project participants	14'445'287	17'855'201	18'204'674	4'873'692	5'588'418	4'061'282	3'681'282	48
3rd party-funding ³	867'189	173'346	1'299'347	24'835	275'512	407'000	592'000	4
Total	42'694'932	41'947'549	37'583'456	9'394'034	10'449'025	8'966'699	8'773'698	100

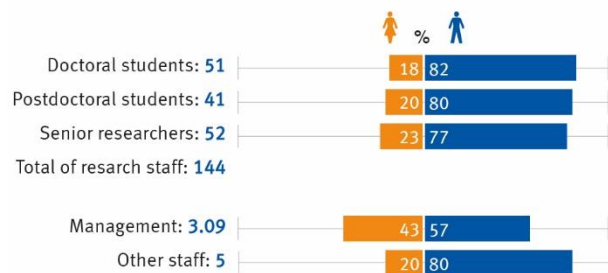
¹ incl. funding of transfer projects (strong Swiss franc package) in 2020, compensation for PhD salaries increase in 2014, flexibility grant in 2013, 2014, 2015, 2016, 2017, 2018 and 2019 and open research data grant in 2019.

² Personnel costs, equipment and consumables, not included infrastructure and basic equipment

³ Not included is CTI funding

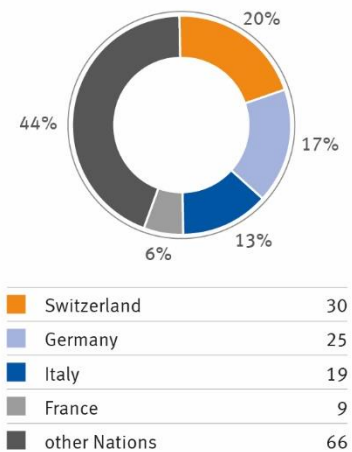
Persons involved

Data: current year



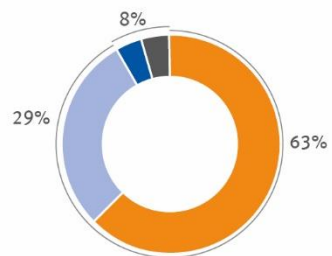
Nationalities of research staff

Data: current year



Next employer of doctoral students

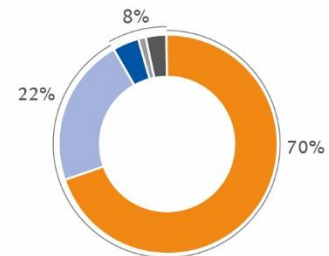
Data: since start



Academic sector	43
Private sector	20
Public sector	3
Other	0
Not known	3

Next employer of postdoctoral students

Data: since start



Academic sector	96
Private sector	30
Public sector	6
Other	1
Not known	4

NCCR QSIT

Quantum Science and Technology

NCCR Director: Prof. Klaus Ensslin, NCCR Co-Director: Prof. Martino Poggio
Home Institutions: ETH Zurich, University of Basel
Start date: 1st of January 2011 (3rd NCCR series)

Description

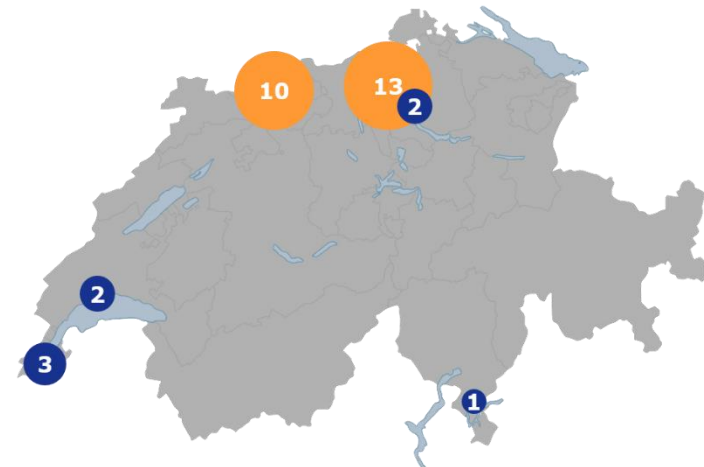
The National Centre of Competence in Research (NCCR) "QSIT – Quantum Science & Technology" is active in a field which unites the key discoveries of the 20th century: quantum physics and information theory. In future, research in this field will strongly influence science and technology. Potential applications are primarily focused in the area of computer science and sensors. The NCCR "QSIT" takes a multi-disciplinary approach, combining concepts from physics, chemistry, engineering and computer sciences. Researchers from many Swiss universities and basic researchers from industry work together in the NCCR network. Their two common goals are to develop applications in the area of quantum computer science and to investigate new paradigms in physical basic research such as the order and states of material. For further information visit: <https://nccr-qsit.ethz.ch/>

Heads of Research Groups

Prof. **Johann Blatter**, Institut für Theoretische Physik, ETH Zürich
Prof. **Christoph Bruder**, Departement Physik, Universität Basel
Prof. **Nicolas Brunner**, Département de Physique Théorique, Université de Genève
Prof. **Christian Degen**, Laboratorium für Festkörperphysik, ETH Zürich
Prof. **Klaus Ensslin**, Laboratorium für Festkörperphysik, ETH Zürich
Prof. **Tilman Esslinger**, Institut für Quantenelektronik, ETH Zürich
Prof. **Jérôme Faist**, Institut für Quantenelektronik, ETH Zürich
Prof. **Anna Fontcuberta i Morral**, Laboratoire des matériaux semiconducteurs, EPFL
Dr. **Andreas Fuhrer**, IBM Research – Zürich Rüschlikon
Prof. **Jonathan Home**, Institut für Quantenelektronik, ETH Zürich
Prof. **Thomas Ihn**, Laboratorium für Festkörperphysik, ETH Zürich
Prof. **Atac Imamoglu**, Institut für Quantenelektronik, ETH Zürich
Prof. **Tobias Kippenberg**, Laboratoire de photonique et mesures quantiques, EPFL
Prof. **Jelena Klinovaja**, Departement Physik, Universität Basel
Prof. **Daniel Loss**, Departement Physik, Universität Basel
Prof. **Patrick Maletinsky**, Departement Physik, Universität Basel
Prof. **Alberto Morpurgo**, Département de physique de la matière quantique, Université de Genève
Prof. **Lukas Novotny**, Department Informationstechnologie und Elektrotechnik, ETH Zürich
Prof. **Martino Poggio**, Departement Physik, Universität Basel
Prof. **Renato Renner**, Institut für Theoretische Physik, ETH Zürich
Dr. **Gian Salis**, IBM Research - Zürich Rüschlikon
Prof. **Christian Schönenberger**, Departement Physik, Universität Basel
Prof. **Philipp Treutlein**, Departement Physik, Universität Basel
Prof. **Andreas Wallraff**, Laboratorium für Festkörperphysik, ETH Zürich
Prof. **Richard Warburton**, Departement Physik, Universität Basel
Prof. **Werner Wegscheider**, Laboratorium für Festkörperphysik, ETH Zürich
Prof. **Stefan Willitsch**, Departement Chemie, Universität Basel
Prof. **Stefan Wolf**, Facoltà di Lugano, Scienze informatiche, Università della Svizzera Italiana

Participating Institutions

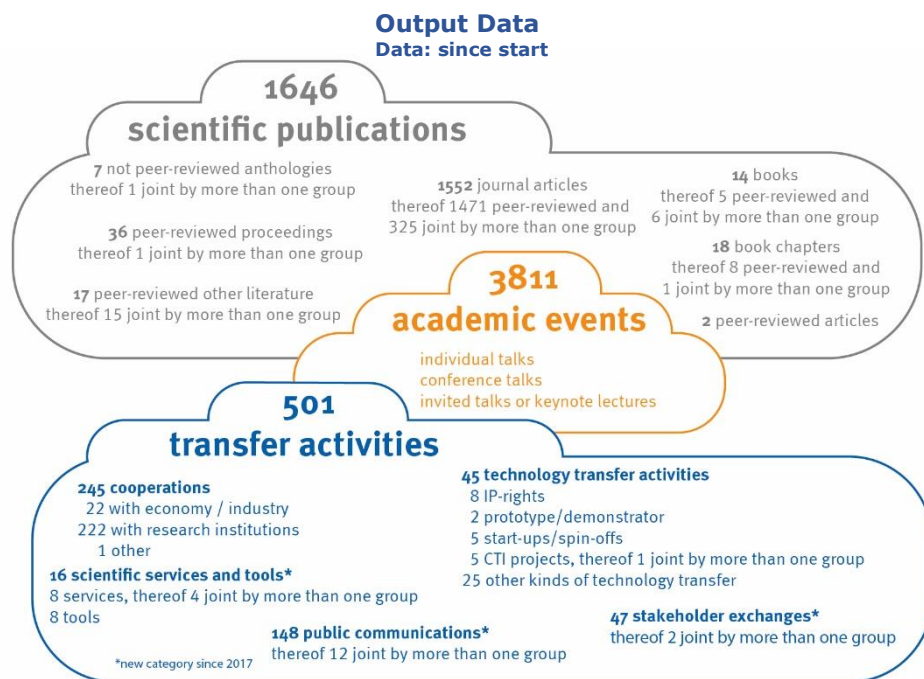
Universität Basel (10 groups)/Université de Genève (3 groups)/Università della Svizzera Italiana Lugano (1 group)/EPFL (2 groups)/ETH Zürich (13 groups)/IBM Research Laboratory Rüschlikon (2 groups)



● Home Institutions
● Partner Institutions

Heads of Research Groups (continued)

Prof. **Vanessa Wood**, Department Informationstechnologie und Elektrotechnik, ETH Zürich
 Prof. **Hugo Zbinden**, GAP-Quantum Technologies, Université de Genève
 Prof. **Dominik Zumbühl**, Departement Physik, Universität Basel



Key collaborations with third parties

Academia

Keio University Yokohama, ITOH group, JP
 Dept. of Physics, National University, SIN
 Inst. für Theoretische Physik, University of Innsbruck, AT
 Ecole normale supérieure, FR
 Quantum optics laboratory, Harvard University, Cambridge, US
 Niels Bohr Institute, Copenhagen, DK
 Department of material science, Tohoku University, JP
 Département de Physique, Université de Sherbrooke, CAN
 Kavli Institute of NanoScience, Technische Universität Delft, NL
 Stanford University, Stanford, US
 University of Texas, Austin, US
 National Institute for Material Science, Tsukuba, JP
 NIST National Institute of Standards and Technology, Gaithersburg, US
 Princeton University, US
 University of Sydney, AUS
 University of California, Berkeley, US
 University of Oxford, UK
 Imperial College London, UK
 Max Planck Institute of Quantum Optics, DE
 Laboratory for Micro and Nanotechnology, Paul Scherrer Institute, CH
 University of Bristol, UK
 Université Libre de Bruxelles, BE
 The University of Queensland, AUS
 ICFO – The Institute of Photonic Sciences, ES

Private and public sector

Microsoft Corporation, US
 ID Quantique, CH
 Zurich Instruments, CH
 IBM, Yorktown Heights, US
 Qnami, CH
 QZabre, CH
 Magnebotix, CH

Funding

Funding Source (CHF)	Total Phase 1 2011 - 2014	Total Phase 2 2015 - 2018	Total Phase 3 2019 - 2022	2019	2020	2021	2022	Phase 3 %
SNSF-funding ¹	17'301'437	20'703'916	14'975'000	3'591'000	3'811'334	3'786'333	3'786'333	29
Self-funding from Home Institution ²	17'394'837	17'374'595	14'305'991	3'790'748	3'227'411	3'680'832	3'607'000	28
Self-funding from project participants	18'759'166	29'395'878	22'237'006	5'854'526	5'805'792	5'713'344	4'863'344	43
3rd party-funding ³	171'450	0	0	0	0	0	0	0
Total	53'626'890	67'474'389	51'517'997	13'236'274	12'844'537	13'180'509	12'256'677	100

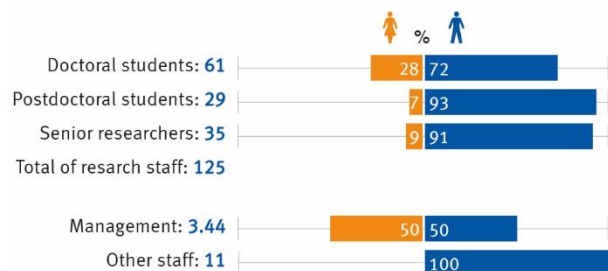
¹ incl. compensation for PhD salaries increase in 2015, flexibility grant in 2014, 2015, 2016, 2017, and 2018 and open research data grant in 2020.

² Personnel costs, equipment and consumables, not included infrastructure and basic equipment

³ Not included is CTI funding

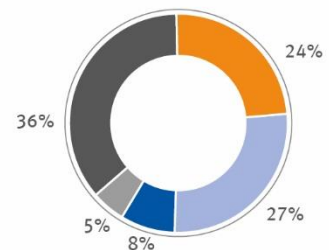
Persons involved

Data: current year



Nationalities of research staff

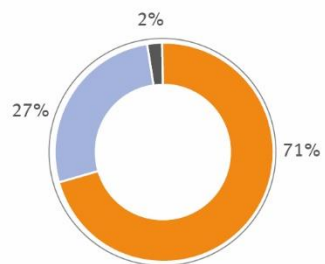
Data: current year



Switzerland	31
Germany	35
Italy	10
China	6
other Nations	47

Next employer of doctoral students

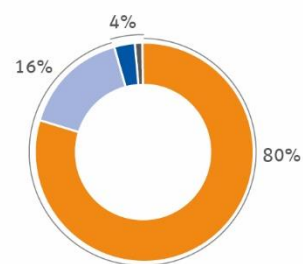
Data: since start



Academic sector	70
Private sector	27
Public sector	0
Other	0
Not known	2

Next employer of postdoctoral students

Data: since start



Academic sector	122
Private sector	25
Public sector	5
Other	0
Not known	2

NCCR Robotics

Intelligent Robots for Improving the Quality of Life

NCCR Director: Prof. Dario Floreano, NCCR Co-Director: Prof. Robert Riener
Home Institutions: EPFL, ETH Zurich (since the 1st of December 2014)
Start date: 1st of December 2010 (3rd NCCR series)

Description

The National Centre of Competence in Research (NCCR) "Robotics – Intelligent Robots for Improving the Quality of Life" encompasses a promising field of engineering which aims at developing new, human-oriented robotic technology. In the near future, intelligent robots will play an important role in improving quality of life. For example, "care robots" will help elderly people to stay in their familiar surroundings longer; "neuroprosthetic" and "exoprosthetic" robots will increase the mobility and autonomy of disabled person; "educational robots" will support the training of a new generation of scientists and engineers; "environmental robots" will keep our world cleaner and safer. In order to progress towards this vision, the NCCR "Robotics" is working towards developing fundamental insights in terms of technology, materials, and control mechanisms. For further information visit: <http://www.nccr-robotics.ch/>

Heads of Research Groups

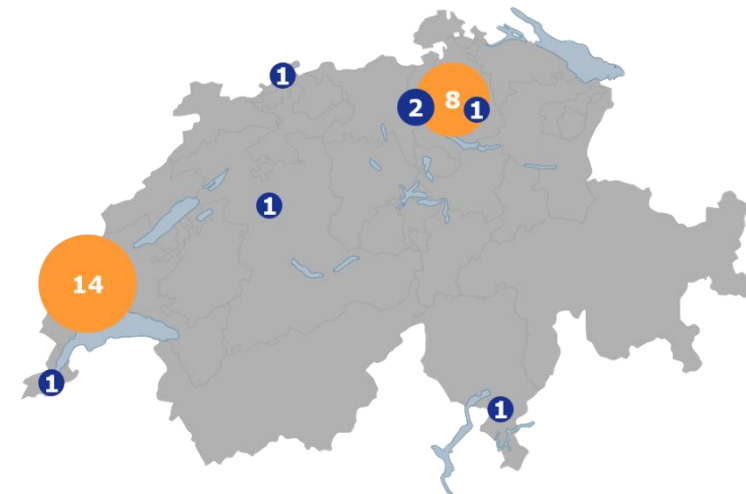
Prof. **Aude Billard**, Learning Algorithms and Systems Lab (LASA), EPFL
Prof. **Margarita Chli**, Vision for Robotics Lab (V4RL), ETH Zürich
Prof. **Grégoire Courtine**, G-Lab UPCourtine (G-Lab), EPFL
Prof. **Tobias Delbruck**, Sensors Group, Universität Zürich
Prof. **Pierre Dillenbourg**, Computer Human Interaction in Learning and Instruction (CHILI), EPFL
Prof. **Dario Floreano**, Laboratory of Intelligent Systems (LIS), EPFL
Prof. **Luca Gambardella**, Robotics Lab, Ist Dalle Molle di Studi sull'Intelligenza Artificiale, IDSIA
Prof. **Roger Gassert**, Rehabilitation Engineering Lab (RELab), ETH Zürich
Prof. **Marco Hutter**, Robotic Systems Lab (RSL), ETH Zürich
Prof. **Auke Ijspeert**, Biorobotics Laboratory (BIORob), EPFL
Prof. **Stéphanie Lacour**, Laboratory for Soft Bioelectronic Interfaces (LSBI), EPFL
Prof. **Laura Marchal-Crespo**, Motor Learning and Neurorehabilitation Lab, Universität Bern
Prof. **Silvestro Micera**, Translational Neural Engineering Lab (TNE), EPFL
Prof. **Francesco Mondada**, Miniature Mobile Robots Group (MOBOTS), EPFL
Prof. **Jamie Paik**, Reconfigurable Robotics Lab (RRL), EPFL
Prof. **Robert Riener**, Sensory-Motor Systems Lab (SMS), ETH Zürich
Prof. **Davide Scaramuzza**, Robotics and Perception Group (RPG), Universität Zürich
Prof. **Roland Siegwart**, Autonomous Systems Lab (ASL), ETH Zürich

Heads of Associated Research Groups

Prof. **Alexandre Alahi**, Visual Intelligence for Transportation Lab (VITA), EPFL
Prof. **David Atienza**, Embedded Systems Lab (ESL), EPFL
Prof. **Ori Bar-Nur**, Laboratory of Regenerative and Movement Biology, ETH Zürich
Prof. **Olaf Blanke**, Laboratory of Cognitive Neuroscience (LNCO), EPFL
Prof. **Stelian Coros**, Computational Robotics Lab (CRL), ETH Zürich
Prof. **Mirko Kovac**, Materials and Technology Centre of Robotics, Empa
Prof. **Stanisa Raspopovic**, Neuroengineering Lab (NeuroEng), ETH Zürich
Prof. **Georg Rauter**, Bio-Inspired Robots for Medicine Lab (BIROMED), Universität Basel
Prof. **Selman Sakar**, MicroBioRobotic Systems Lab (MICROROBS), EPFL
Prof. **Herbert Shea**, Soft Transducers Lab (LMTS), EPFL

Participating Institutions

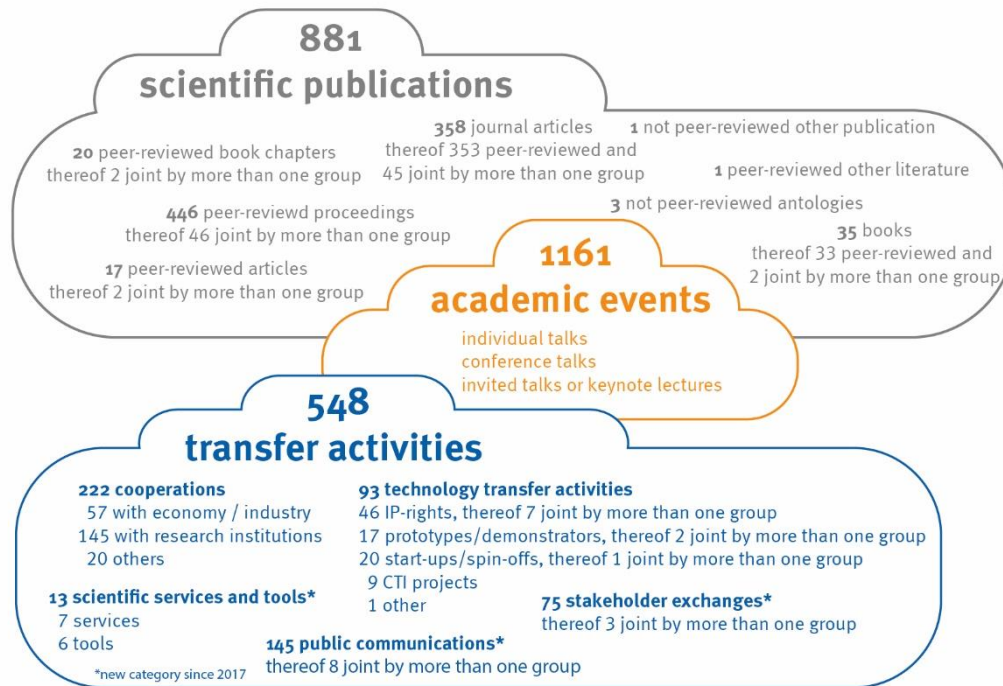
Universität Bern (1 group)/Universität Basel (1 group)/Universität Zürich (2 groups)/EPFL (14 groups)/ETH Zürich (8 groups)/EMPA (1 group)/IDSIA (1 group)



● Home Institutions
● Partner Institutions

[Overview of all Research Projects](#)

Output Data
Data: since start



Key collaborations with third parties

Academia

Bakırköy Mazhar Osman Mental Health and Neurological Diseases Education and Research Hospital, TUR
 The University of Texas, UTA, Austin, TX., USA
 Italian Institute of Technology, Genova, IT
 The Hong Kong University of Science and Technology, HKG
 Tohoku University, JP
 Stanford University, California, USA
 CHUV Department of Clinical Neurosciences, CH
 Clinatéc, Grenoble, FR
 Charité – Universitätsmedizin Berlin, DE
 Bakırköy Mazhar Osman Mental Health and Neurological Diseases Education and Research Hospital, Istanbul, TUR
 The University of Texas, UTA, Austin, TX., USA
 Italian Institute of Technology, Genova, IT

Private and public sector

Huawei, Munich, DE
 Intel, Santa Clara, USA
 Prophesee, Paris, FR
 Force Dimension, Nyon, CH
 Intel, Munich, DE
 Sony, Tokyo, JP
 Armasuisse Wissenschaft und Technologie W+T, CH
 Hocoma AG, CH

Funding

Funding Source (CHF)	Total Phase 1 2010 – 2013	Total Phase 2 2014 - 2017	Total Phase 3 2018 - 2021	2018	2019	2020	2021	Phase 3 %
SNSF-funding ¹	13'391'024	15'336'237	11'250'000	2'676'625	2'924'459	2'824'458	2'824'458	56
Self-funding from Home Institution ²	6'126'703	12'091'453	6'636'664	1'057'585	1'504'079	2'037'500	2'037'500	33
Self-funding from project participants	10'387'838	5'055'707	2'224'546	1'346'400	878'146			11
3rd party-funding ³	115'360		0	0	0	0	0	0
Total	30'020'925	32'483'397	20'111'210	5'080'610	5'306'684	4'861'958	4'861'958	100

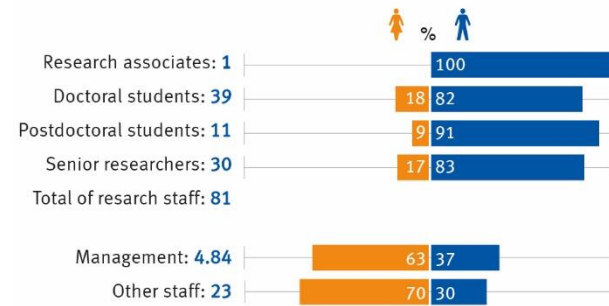
¹ incl. Mobility-grant in 2017, compensation for PhD salaries increase in 2014, flexibility grant in 2017 and 2018 and open research data grant in 2019.

² Personnel costs, equipment and consumables, not included infrastructure and basic equipment

³ Not included is CTI funding

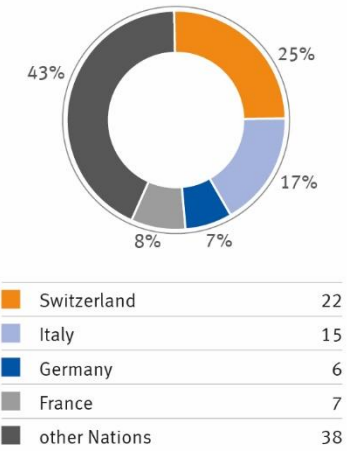
Persons involved

Data: current year



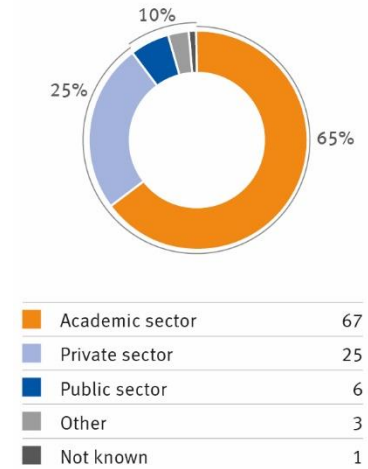
Nationalities of research staff

Data: current year



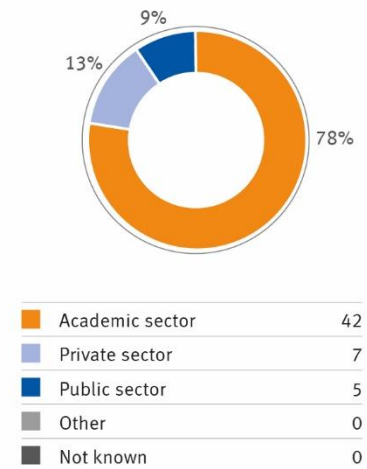
Next employer of doctoral students

Data: since start



Next employer of postdoctoral students

Data: since start



NCCR SYNAPSY

The synaptic bases of mental diseases

NCCR Director: Prof. Camilla Bellone, NCCR Co-Directors: Prof. Carmen Sandi and Prof. Philippe Conus
Home Institutions: University of Geneva, EPFL, University of Lausanne
Start date: 1st of October 2010 (3rd NCCR series)

Description

The National Centre of Competence in Research (NCCR) "SYNAPSY – Synaptic Bases of Mental Diseases" aims to discover the neurobiological mechanisms of mental and cognitive disorders, since one of the major challenges in psychiatry is to achieve a better understanding of how these illnesses originate.

It is hoped that this research will lead to the development of improved diagnostic tools and therapeutic approaches. The NCCR "SYNAPSY" focuses on the interface between preclinical research and clinical development, combining neuroscience with psychiatry. This research focus will help train a new generation of psychiatrists with both high clinical expertise and a sound knowledge of the basic neurobiological aspects of mental functions and dysfunctions.

For further information visit: <https://nccr-synapsy.ch/>

Heads of Research Groups

Prof. **Jean-Michel Aubry**, Service de Psychiatrie générale et Programme troubles de l'humeur, HUG-Hôpitaux Universitaires de Genève

Prof. **Claudia Bagni**, Département des neurosciences fondamentales (DNF) Université de Lausanne

Prof. **Camilla Bellone**, Département des neurosciences fondamentales (NEUFO) Université de Genève

Prof. **Olaf Blanke**, Brain Mind Institute, EPFL

Prof. **Alan Carleton**, Département des neurosciences fondamentales (NEUFO), Université de Genève

Prof. **Pico Caroni**, Friedrich Miescher Institute for Biomedical Research, Universität Basel

Prof. **Philippe Conus**, Service de Psychiatrie générale, Clinique psychiatrique universitaire, Cery-CHUV Lausanne

Prof. **Kim Do**, Centre de neurosciences psychiatriques, Unité de recherche sur la schizophrénie, Cery-CHUV Lausanne

Prof. **Stephan Eliez**, Département de Psychiatrie, Université de Genève

Prof. **Johannes Gräff**, Brain Mind Institute, EPFL

Prof. **Patric Hagmann**, Service de radiodiagnostic et radiologie interventionnelle, CHUV-Université de Lausanne

Prof. **Michael Herzog**, Brain Mind Institute, EPFL

Prof. **Kathryn Hess Bellwald**, Brain Mind Institute, EPFL

Prof. **Anthony Holtmaat**, Département des neurosciences fondamentales (NEUFO), Université de Genève

Prof. **Christian Lüscher**, Département des neurosciences fondamentales (NEUFO), Université de Genève

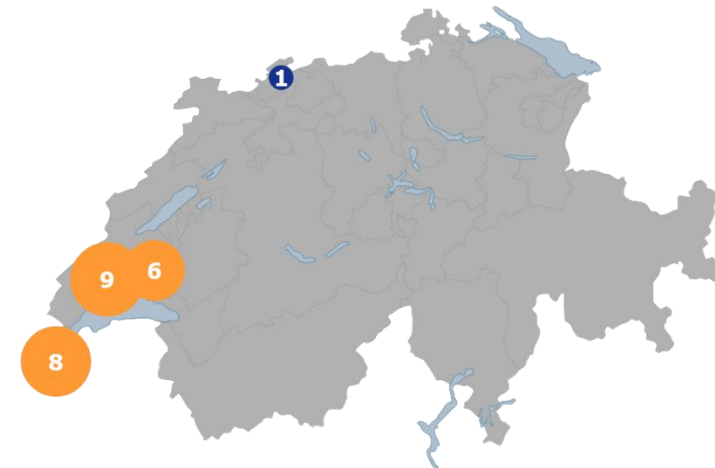
Prof. **Pierre Magistretti**, Centre de Neurosciences psychiatriques, Cery-CHUV Lausanne

Prof. **Pierre Marquet**, Unité mixte internationale en neurodéveloppement et psychiatrie infantile, Dept. Psychiatrie-CHUV, Université de Lausanne et Université Laval; Département de psychiatrie et neuroscience, Université Laval, Québec, Canada

Prof. **Jean Luc Martin**, Centre de Neurosciences psychiatriques, Cery-CHUV Lausanne

Participating Institutions

Universität Basel/Friedrich-Miescher-Institut (1 group)/Université de Genève/HUG Genève (8 groups)/Université de Lausanne/CHUV Lausanne (9 groups)/EPFL (6 groups)



- Home Institutions
- Partner Institutions

Heads of Research Groups (continued)

Prof. **Christoph Michel**, Département des neurosciences fondamentales (NEUFO)

Université de Genève

Prof. **Martin Preisig**, Unité mixte internationale en neurodéveloppement et psychiatrie infantile,

Dept. Psychiatrie-CHUV, Université de Lausanne

Prof. **Carmen Sandi**, Brain Mind Institute, EPFL

Prof. **Marie Schaer**, Département de Psychiatrie, Université de Genève

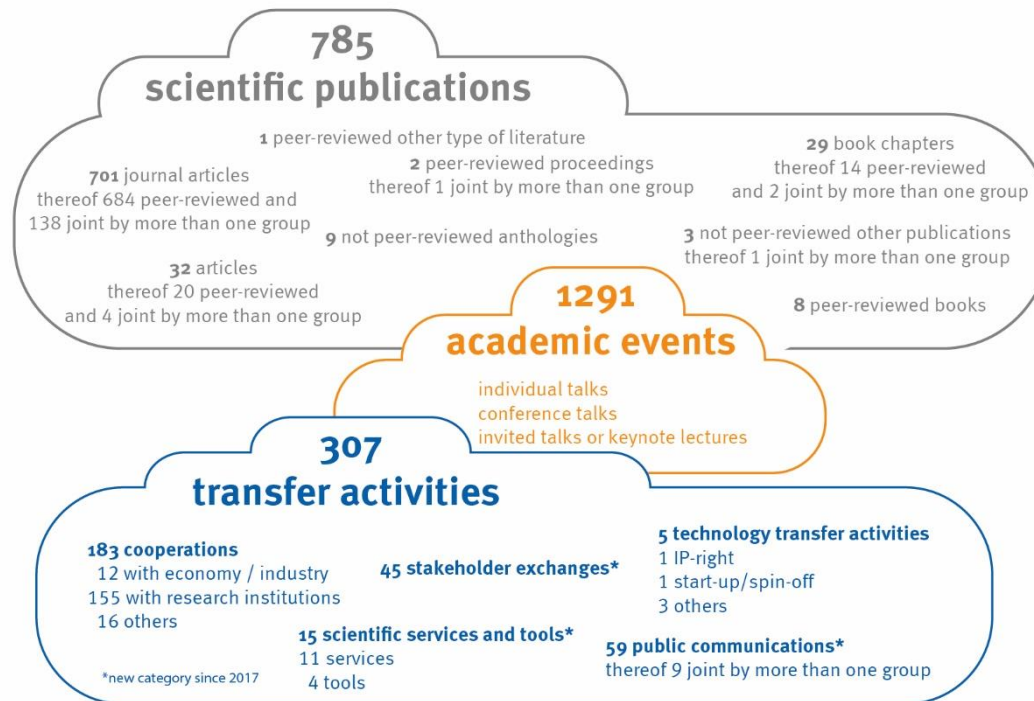
Prof. **Daniel Schechter**, Service de Psychiatrie de l'Enfant et Adolescent (SUPEA), CHUV

Prof. **Ralf Schneggenburger**, Brain Mind Institute, EPFL

Overview of all Research Projects

Output Data

Data: since start



Key collaborations with third parties

Academia

University of Pennsylvania, US

King's College London, UK

Glasgow University, UK

Albert Einstein College of Medicine Bronx, US

Columbia University, US

King's College London, UK

North Carolina University, Chapel Hill, US

Mannheim, DE

NIMH, Bethesda, US

Laval University, CA

Munich University, DE

NeuroSpin, Paris, FR

McLean Hospital, Harvard, Boston, US

Sainte-Anne Hospital, Paris, FR

Simon Fraser University, Vancouver, CA

INSERM, Gif-sur-Yvette, FR

Mount Sinai, US

Radboud University, Nijmegen, NL

Langone School of Medicine NYU, US

University of Oslo, SE

Funding

Funding Source (CHF)	Total Phase 1 2010 - 2013	Total Phase 2 2014 - 2017	Total Phase 3 2018 - 2021	2018	2019	2020	2021	Phase 3 %
SNSF-funding ¹	17'480'000	17'574'634	12'764'760	3'073'760	3'230'334	3'230'333	3'230'333	33
Self-funding from Home Institution ²	14'144'189	13'332'539	16'381'979	3'862'876	4'056'252	4'401'620	4'061'231	42
Self-funding from project participants	15'637'967	23'704'005	9'657'100	5'024'500	4'632'600	0	0	24
3rd party-funding ³	2'254'204	959'270	428'439	80'939	145'000	100'000	102'500	1
Total	49'516'360	55'570'448	39'232'278	12'042'075	12'064'186	7'731'953	7'394'064	100

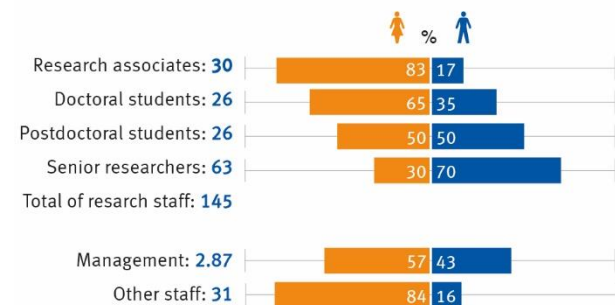
¹ incl. compensation for PhD salaries increase in 2014, flexibility grant in 2016, 2017, and 2018 and open research data grant in 2019.

² Personnel costs, equipment and consumables, not included infrastructure and basic equipment

³ Not included is CTI funding

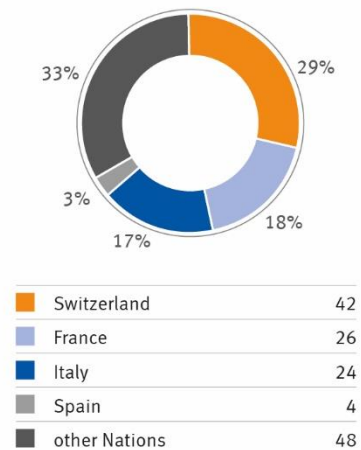
Persons involved

Data: current year



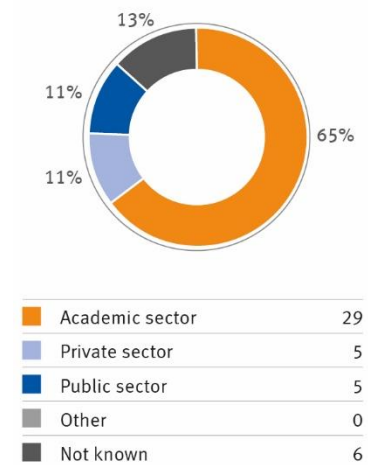
Nationalities of research staff

Data: current year



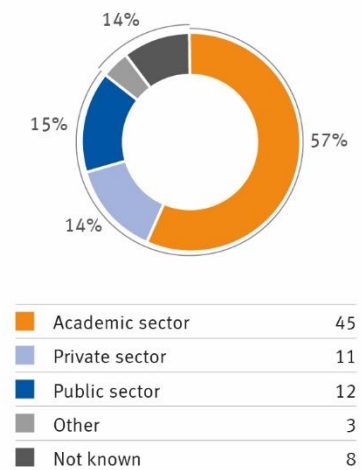
Next employer of doctoral students

Data: since start



Next employer of postdoctoral students

Data: since start



NCCR TransCure

From transport physiology to identification of therapeutic targets

NCCR Director: Prof. Hugues Abriel

Home Institution: University of Bern

Start date: 1st of November 2010 (3rd NCCR series)

Description

The National Centre of Competence in Research (NCCR) "TransCure – From Transport Physiology to Identification of Therapeutic Targets" seeks to integrate the disciplines of physiology, structural biology and chemistry and to develop new therapeutic strategies for treating the most important diseases.

Transport proteins and ion channels play a key role in all physiological processes in the human body. Malfunctions in these proteins may contribute to the occurrence of diseases like diabetes, high blood pressure, osteoporosis and neuro-degeneration, and play a role in heart disease and cancers. The NCCR "TransCure" researchers aim to achieve a more profound understanding of the structures and mechanisms of these proteins. By broadening their knowledge of how transport proteins and channels work, they hope to develop new medicines. For further information visit: <https://www.nccr-transcure.ch/>

Heads of Research Groups

Prof. **Hugues Abriel**, Institut für Biochemie und Molekulare Medizin, Universität Bern

Prof. **Christiane Albrecht**, Institut für Biochemie und Molekulare Medizin, Universität Bern

Prof. **Karl-Heinz Altmann**, Institut für Pharmazeutische Wissenschaften, ETH Zürich

Prof. **Murielle Bochud**, Institut Universitaire de Médecine Sociale et Préventive, Université de Lausanne

Prof. **Raimund Dutzler**, Biochemisches Institut, Universität Zürich

Prof. **Dimitrios J. Fotiadis**, Institut für Biochemie und Molekulare Medizin, Universität Bern

Prof. **Daniel G. Fuster**, Universitätsklinik für Nephrologie und Hypertonie, Inselspital Bern

Prof. **Jürg Gertsch**, Institut für Biochemie und Molekulare Medizin, Universität Bern

Prof. **Wanda Kukulski**, Institut für Biochemie und Molekulare Medizin, Universität Bern

Prof. **Kaspar Locher**, Institut für Molekulare Biologie und Biophysik, ETH Zürich

Prof. **Martin Lochner**, Institut für Biochemie und Molekulare Medizin, Universität Bern

Prof. **Christine Peinelt**, Institut für Biochemie und Molekulare Medizin, Universität Bern

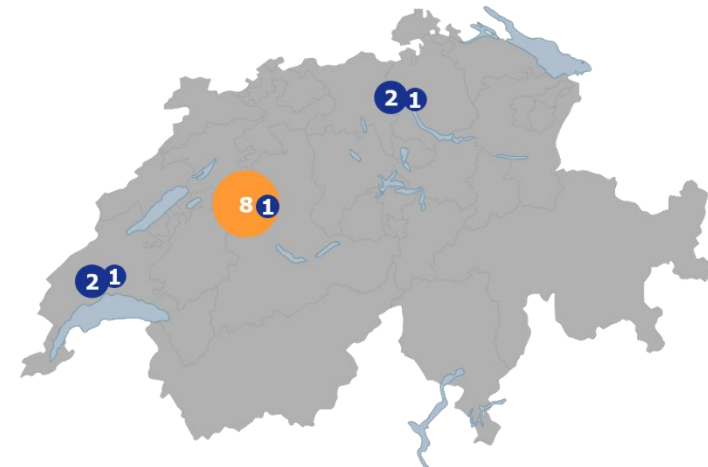
Prof. **Jean-Louis Reymond**, Departement für Chemie und Biochemie, Universität Bern

Prof. **Henning Stahlberg**, Institut de physique, EPFL

Prof. **Andrea Volterra**, Département des neurosciences fondamentales, Université de Lausanne

Participating Institutions

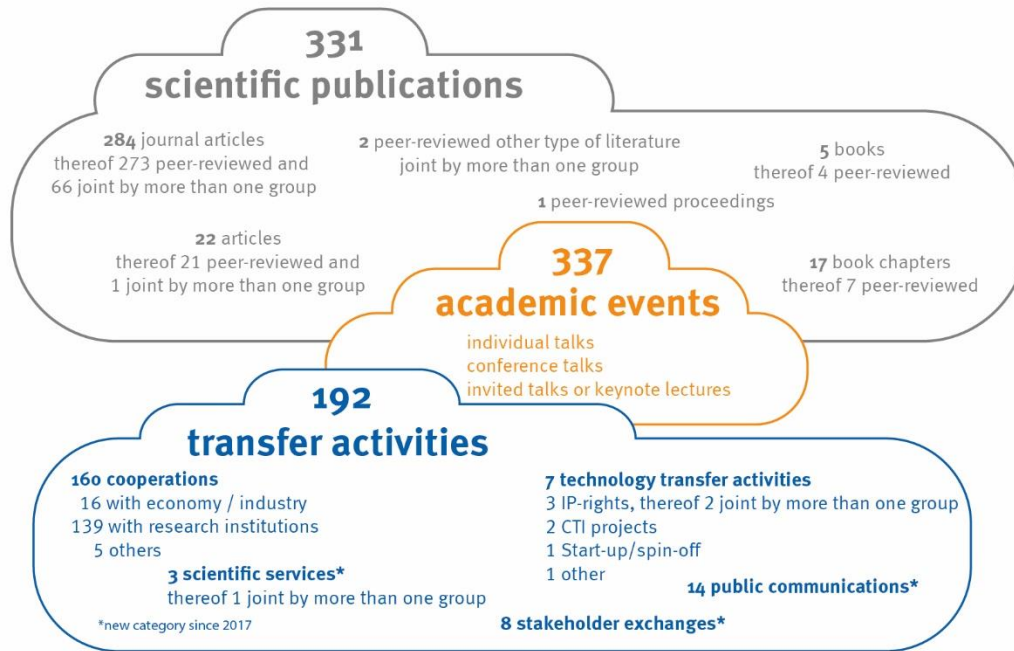
Universität Bern (8 groups)/Université de Lausanne (2 groups)/Universität Zürich (1 group)/EPFL (1 group)/ETH Zürich (2 groups)/Inselspital Bern (1 group)



- Home Institutions
- Partner Institutions

[Overview of all Research Projects](#)

Output Data
Data: since start



Key collaborations with third parties

Academia

Free University of Brussels, Department of Structural Biology, Brussels, BE
 CNCR, Neuroscience Campus Amsterdam, VU University, Amsterdam, NL
 Departments of Pharmacology and Systems, Icahn School of Medicine at Mount Sinai, New York, US
 Computational Biomolecular Dynamics Group, MPI for Biophysical Chemistry, Göttingen, DE
 Inselspital, Urology department, Bern, CH
 Department of Biochemistry and Biophysics, Stockholm University, Stockholm, SWE
 Department of neuroscience, University of Uppsala, Uppsala, SWE
 University Hospital Lausanne, Department of Laboratory, Lausanne, CH
 Food Science & Human Nutrition Dept., University of Florida, Gainesville, US
 Department of Physiology, Johns Hopkins University, Baltimore, US
 Dept. of Physiology, University of Cambridge, Cambridge, UK
 Institut du Thorax, Université de Nantes, Nantes, FR
 Institute of Pharmacy, University of Regensburg, Regensburg, DE
 Division of Child Health, Obstetrics & Gynaecology, University of Nottingham, Nottingham, UK
 Westlake University, Key Laboratory of Structural Biology of Zhejiang Province, Hangzhou, China
 UT Southwestern Medical Center, Nephrology Division, Dallas, USA
 Petrovskiy Russian Scientific Center of Surgery, Moscow, Russia

Private and public sector

Vifor Pharma, Villars-sur-Glâne, CH
 Novartis, Basel, CH

Funding

Funding Source (CHF)	Total Phase 1 2010 - 2013	Total Phase 2 2014 - 2017	Total Phase 3 2018 - 2021	2018	2019	2020	2021	Phase 3 %
SNSF-funding ¹	14'155'000	11'782'452	7'609'184	2'064'800	2'038'384	1'833'000	1'673'000	34
Self-funding from Home Institution ²	4'590'667	4'349'751	4'774'393	1'199'335	1'176'758	1'202'853	1'195'447	21
Self-funding from project participants	13'846'209	12'680'191	9'654'904	2'359'029	1'998'375	2'592'500	2'705'000	43
3rd party-funding ³	335'080	656'305	444'355	200'305	173'188	70'862	0	2
Total	32'926'956	29'468'699	22'482'836	5'823'469	5'386'705	5'699'215	5'573'447	100

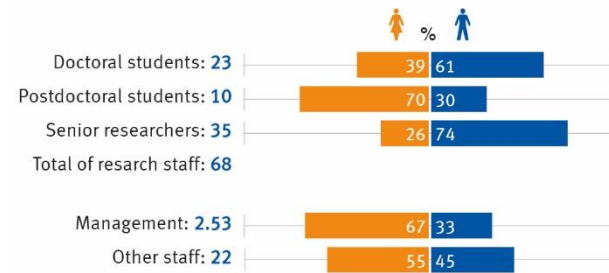
¹ incl. compensation for PhD salaries increase in 2015, flexibility grant in 2015, 2016, 2017, 2018 and 2019, mobility-grant in 2019 and open research data grant in 2019.

² Personnel costs, equipment and consumables, not included infrastructure and basic equipment

³ Not included is CTI funding

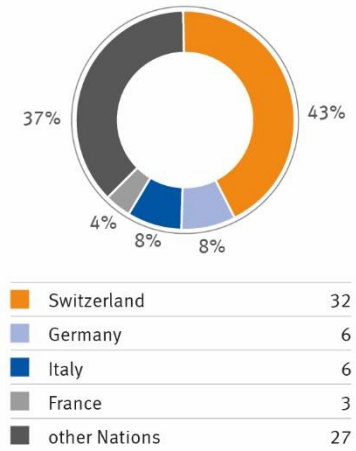
Persons involved

Data: current year



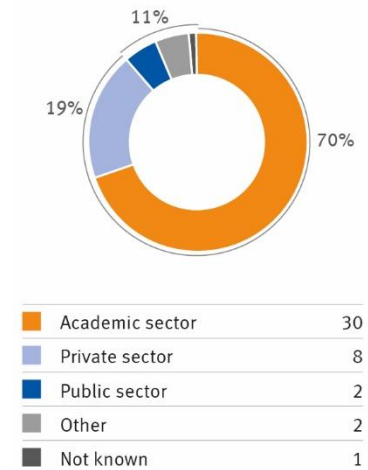
Nationalities of research staff

Data: current year



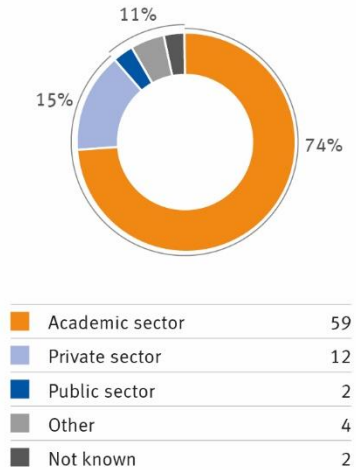
Next employer of doctoral students

Data: since start



Next employer of postdoctoral students

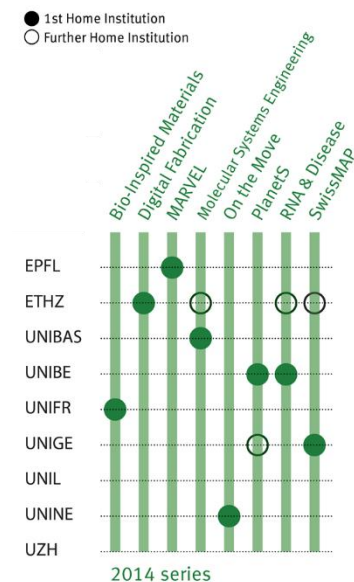
Data: since start



NCCR 4th series at a glance

4th series of NCCRs (Operation 2014-2016)

Short Name	NCCR-Director	Home Institutions	Starting date
Bio-Inspired Materials	Prof. Ullrich Steiner	University of Fribourg	June 1, 2014
Digital Fabrication	Prof. Philippe Block	ETH Zurich	June 1, 2014
MARVEL	Prof. Nicola Marzari	EPFL	May 1, 2014
Molecular Systems Engineering	Prof. Thomas R. Ward	University of Basel, ETH Zurich	July 1, 2014
On the Move	Prof. Gianni D'Amato	University of Neuchatel	June 1, 2014
PlanetS	Prof. Willy Benz	University of Bern, University of Geneva	June 1, 2014
RNA & Disease	Prof. Oliver Mühlemann	University of Bern, ETH Zurich	May 1, 2014
SwissMAP	Prof. Stanislav Smirnov	University of Geneva, ETH Zurich	July 1, 2014



4th series of NCCRs: Funding in phase 1 and phase 2: 2018-2021

Funding source (CHF)	Phase 1	2018	2019	2020	2021	Phase 2 total
SNSF funding ¹	123'402'938	31'904'399	34'324'401	33'165'820	32'977'400	132'372'020
Self-funding from Home Institutions ²	58'759'368	17'602'145	16'034'966	16'457'711	17'441'540	67'536'362
Self-funding from project participants	77'471'915	23'194'725	22'318'530	15'341'525	14'831'824	75'686'604
Third-party funding ³	9'787'557	2'848'391	5'170'239	850'000	176'500	9'045'130
Total	269'421'778	75'549'660	77'848'136	65'815'056	65'427'264	284'640'116

¹ incl. Funding of transfer projects (strong Swiss franc package), compensation for PhD salaries increase, flexibility grant, mobility grant and open research data grant.

² Personnel costs, equipment and consumables, not included infrastructure and basic equipment

³ Not included is CTI funding

Persons involved in the NCCRs in the last reporting period (12 months)

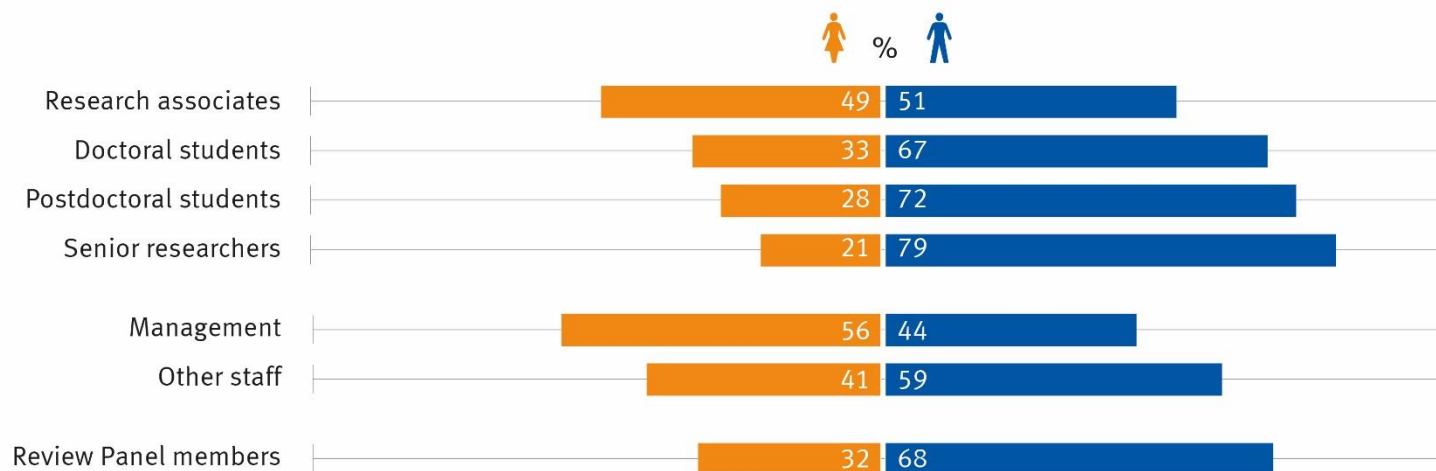
Personnel	Total of Persons	Female	Male	Swiss	Other nationalities
Research associates ¹	57	28	29	25	39
Doctoral students	407	135	272	97	323
Postdoctoral students	283	80	203	21	275
Senior researchers ²	378	80	298	113	282
Management ³	47.15	68	54	71	75
Other staff	116	48	68	47	76
Total	1363	439	924	374	1070

¹ Includes graduate scientists (level master) but not registered as doctoral students or undergraduate students participating in research projects.

² Including leaders of the individual projects and other organisational units of the NCCRs

³ Full-time equivalent, including NCCR-Director and persons in charge of knowledge and technology transfer, equal opportunities, communication, education and training

Gender in the NCCRs



NCCR Bio-Inspired Materials

Using Concepts from Nature to Create "Smart" Materials

NCCR Director: Prof. Ullrich Steiner
Home Institution: University of Fribourg
Start date: 1st of June 2014 (4th NCCR series)

Description

The NCCR "Bio-Inspired Materials – Using Concepts from Nature to Create 'Smart' Materials" aims to pool the expertise of its members in the fields of chemistry, physics, materials science, biology and medicine in order to study and find applications for new smart materials inspired by living organisms. This involves devising new design strategies and rules to create and assemble macromolecules and nanoparticles into ordered structures to produce smart materials with the desired properties. The NCCR conducts the relevant research in four interdisciplinary modules that focus on mechanically responsive materials across different length scales, biologically inspired assembly of optical materials, responsive bio-interfaces and surfaces, and dynamics of interacting cell-material systems.

For further information visit: <https://www.bioinspired-materials.ch/en/>

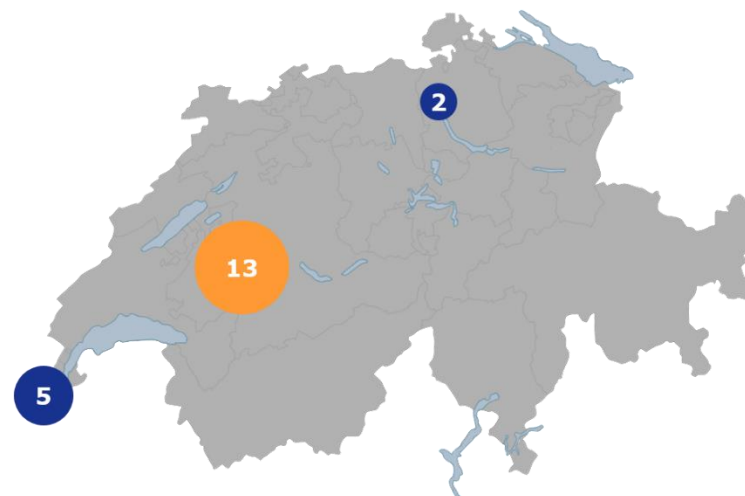
Heads of Research Groups

Prof. **Guillermo Acuna**, Departement Physik, Universität Freiburg
Prof. **Esther Amstad**, Institut de Science et Génie des Matériaux, EPFL
Prof. **Nico Bruns**, Adolphe Merkle Institute, Faculty of Science, Universität Freiburg
Prof. **Eric Robert Dufresne**, Departement Materialwissenschaft, ETH Zürich
Prof. **Alke Fink**, Adolphe Merkle Institute, Faculty of Science, Universität Freiburg
Prof. **Katharina Fromm**, Departement Chemie, Universität Freiburg
Prof. **Andreas Kilbinger**, Departement Chemie, Universität Freiburg
Prof. **Harm-Anton Klok**, Institut de Science et Génie des Matériaux, EPFL
Prof. **Marco Lattuada**, Departement Chemie, Universität Freiburg
Prof. **Matthias Lutolf**, Institut de Bioingénierie, EPFL
Prof. **Michael Mayer**, Adolphe Merkle Institute, Faculty of Science, Universität Freiburg
Prof. **Frank Scheffold**, Departement Physik, Universität Freiburg
Prof. **Ullrich Steiner**, Adolphe Merkle Institute, Faculty of Science, Universität Freiburg
Prof. **Francesco Stellacci**, Institut de Science et Génie des Matériaux, EPFL
Prof. **André Studart**, Departement Materialwissenschaft, ETH Zürich
Prof. **Aleksandra Radenovic**, Institut Interfacultaire de Bioingénierie, EPFL
Prof. **Barbara Rothen-Rutishauser**, Adolphe Merkle Institute, Faculty of Science, Universität Freiburg
Prof. **Curzio Rüegg**, Departement für Medizin, Universität Freiburg
Prof. **Stefano Vanni**, Departement Biologie, Universität Freiburg
Prof. **Christoph Weder**, Adolphe Merkle Institute, Faculty of Science, Universität Freiburg

[Overview of all Research Projects](#)

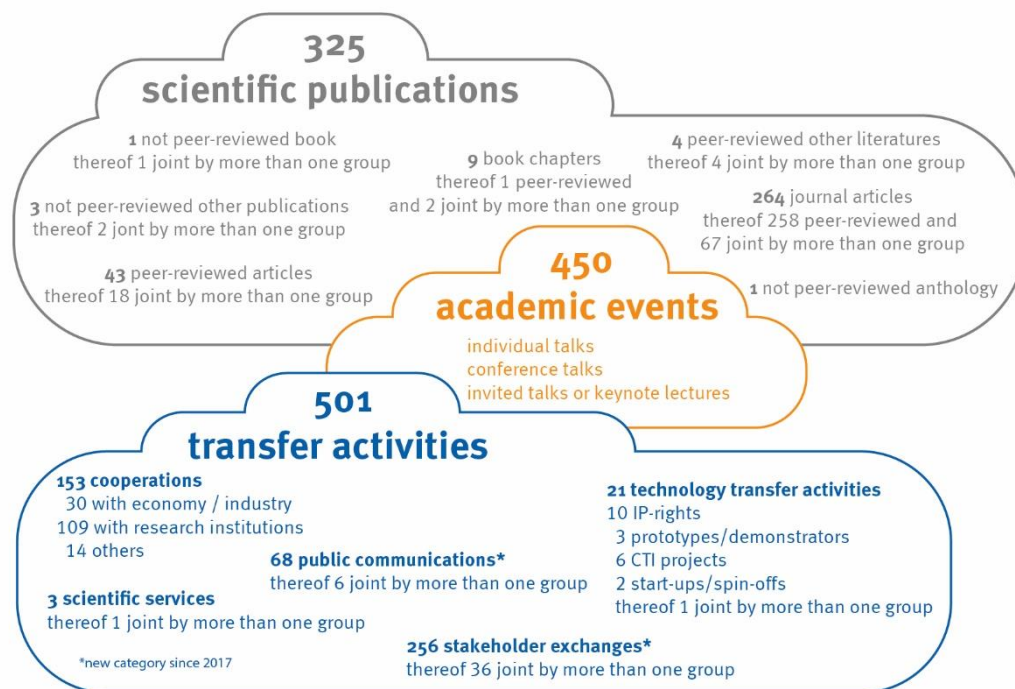
Participating Institutions

Universität Freiburg (13 groups)/EPFL (5 groups)/ETH Zürich (2 groups)



● Home Institutions
● Partner Institutions

Output Data
Data: since start



Key collaborations with third parties

Academia

University of Chicago, US
 Hokkaido University, JP
 University of Cambridge, UK
 Ludwig-Maximilians-University Munich, DE
 Paul Scherrer Institute, CH
 University of Applied Sciences and Arts of Western Switzerland, CH
 Empa, Swiss Federal Laboratories for Materials Science and Technology, CH
 Kent State University, US
 Max Planck Institute for Dynamics and Self-organization, DE
 Max Planck Institute for Polymer Research, DE
 University of Lyon, FR
 University of Genoa, IT
 Research Unit on Applied Molecular Biosciences, PT
 Zurich University of Applied Sciences, CH

Private and public sector

BASF, CH
 Novartis, CH
 Service de la promotion économique du Canton de Fribourg, CH
 Nanolockin, CH
 Medacta International, CH

Funding

Funding Source (CHF)	Total Phase 1 2014 – 2017	Total Phase 2 2018 – 2021	2018	2019	2020	2021	Phase 2 %
SNSF-funding ¹	12'015'719	17'225'000	4'000'000	4'425'000	4'400'000	4'400'000	46
Self-funding from Home Institution ²	6'853'694	7'059'879	1'636'818	1'420'443	1'471'215	2'531'403	19
Self-funding from project participants	8'111'990	12'519'919	3'066'795	3'168'014	3'140'505	3'144'605	34
3rd party-funding ³	783'905	419'340	-56'660	199'500	100'000	176'500	1
Total	27'765'308	37'224'138	8'646'953	9'212'957	9'111'720	10'252'508	100

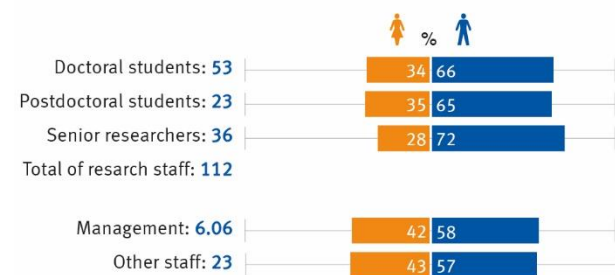
¹ incl. flexibility grant in 2017 and open research data grant in 2019.

² Personnel costs, equipment and consumables, not included infrastructure and basic equipment

³ Not included is CTI funding

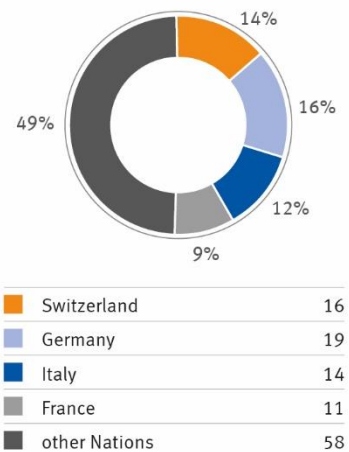
Persons involved

Data: current year



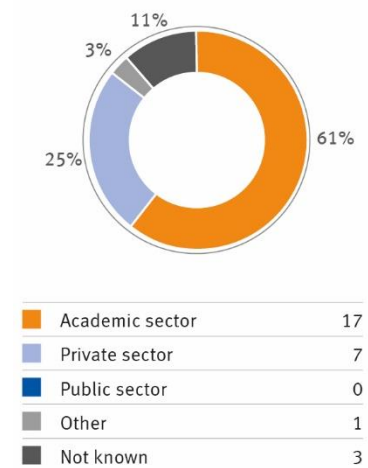
Nationalities of research staff

Data: current year



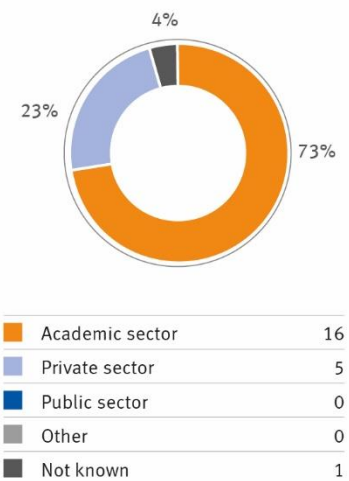
Next employer of doctoral students

Data: since start



Next employer of postdoctoral students

Data: since start



NCCR Digital Fabrication

Innovative Building Processes in Architecture

NCCR Director: Prof. Philippe Block
Home Institution: ETH Zurich
Start date: 1st of June 2014 (4th NCCR series)

Description

The NCCR "Digital Fabrication – Innovative Building Processes in Architecture" aims to secure a leading position for Switzerland in this new and highly interesting sector, which is fast becoming a core discipline of architecture. Through a multidisciplinary approach the disciplines of architecture, engineering, robotics, and material and computer sciences are brought together in an ambitious partnership to establish digital technology as an essential part of future building processes. This new approach combines digitally mediated architectural design with robotic construction technologies to augment contemporary construction processes. The benefits of digital construction are evident: efficient use of production resources, material-specific concepts and durability, thanks to the seamless integration of design and fabrication. For further information visit: <http://www.dfab.ch/>

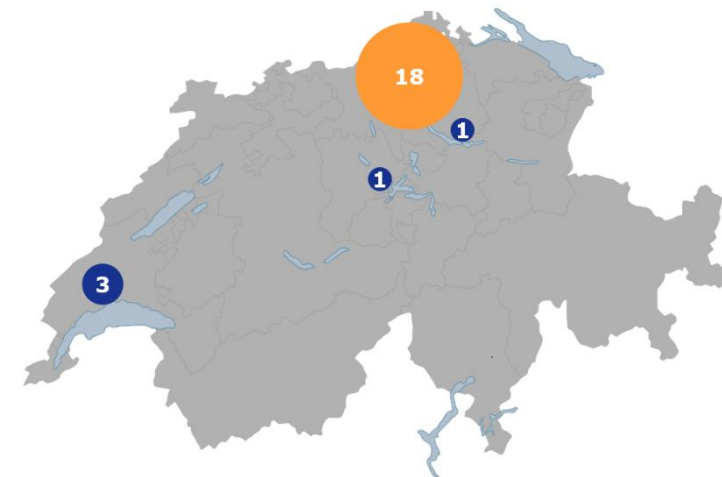
Heads of Research Groups

Prof. **Philippe Block**, Departement Architektur, ETH Zürich
Prof. **Margarita Chli**, Departement Maschinenbau und Verfahrenstechnik, ETH Zürich
Prof. **Stelian Coros**, Departement Informatik, ETH Zürich
Prof. **Benjamin Dillenburger**, Departement Architektur, ETH Zürich
Prof. **Corentin Fivet**, Faculté de l'environnement Naturel, Architectural et Construit, EPFL
Prof. **Robert Flatt**, Departement Bau, Umwelt und Geomatik, ETH Zürich
Prof. **Christophe Girod**, Departement Architektur, ETH Zürich
Prof. **Gudela Grote**, Departement Management, Technologie und Ökonomie, ETH Zürich
Prof. **Guillaume Habert**, Departement Bau, Umwelt und Geomatik, ETH Zürich
Prof. **Daniel Hall**, Departement Bau, Umwelt und Geomatik, ETH Zürich
Prof. **Marco Hutter**, Departement Maschinenbau und Verfahrenstechnik, ETH Zürich
Prof. **Walter Kaufmann**, Departement Bau, Umwelt und Geomatik, ETH Zürich
Prof. **Matthias Kohler**, Departement Architektur, ETH Zürich
Prof. **Agathe Koller-Hodac**, Mechatronik und Automation, HSR Hochschule für Technik Rapperswil
Prof. **Andreas Luible**, Technik und Architektur, HSLU Hochschule Luzern
Prof. **Mark Pauly**, Faculté Informatique et Communications, EPFL
Prof. **Arno Schlueter**, Departement Architektur, ETH Zürich
Prof. **Kristina Shea**, Departement Maschinenbau und Verfahrenstechnik, ETH Zürich
Prof. **Roland Siegwart**, Departement Maschinenbau und Verfahrenstechnik, ETH Zürich

Overview of all Research Projects

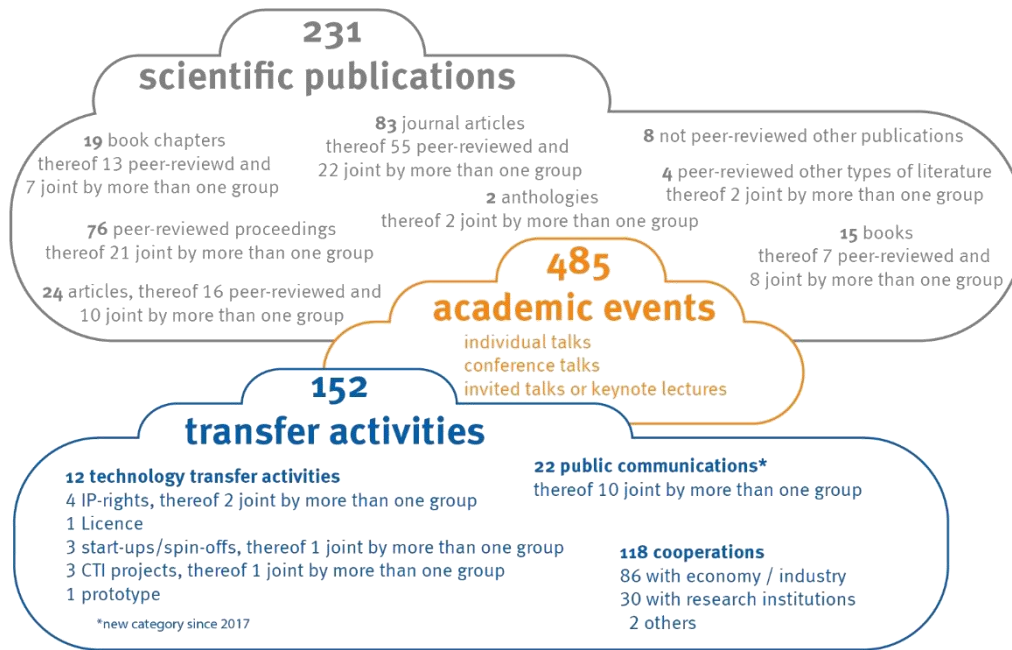
Participating Institutions

ETH Zurich (18 groups)/EPFL (3 groups)/HSLU (1 group)/HSR (1 group)



● Home Institutions
● Partner Institutions

Output Data
Data: since start



Key collaborations with third parties

Private and public sector

- ABB Ltd, CH
- Arup Group, UK
- Autodesk Inc, US
- BASF Schweiz AG, CH
- Basler & Hoffmann AG, CH
- Bürgin Creations, CH
- CEAD B.V., NL
- EBP Schweiz AG, CH
- ERNE Holzbau AG, CH
- Fronius AG, CH
- Hilti Corporation, AT
- Implenia AG, CH
- Knauf AG, CH
- LafargeHolcim Ltd, CH
- Marti AG, CH
- Peri GmbH, CH
- SACAC AG, CH
- Sika AG, CH
- Stahlton AG, CH
- Voxeljet AG, DE
- Zühlke AG, CH
- ZZ Wancor AG, CH

Funding

Funding Source (CHF)	Total Phase 1 2014 – 2017	Total Phase 2 2018 – 2021	2018	2019	2020	2021	Phase 2 %
SNSF-funding ¹	13'441'280	14'523'880	3'382'480	3'771'400	3'685'000	3'685'000	39
Self-funding from Home Institution ²	8'825'936	9'461'064	3'230'960	2'090'104	2'057'041	2'082'959	26
Self-funding from project participants	4'795'110	5'280'850	2'491'350	2'549'500	120'000	120'000	14
3rd party-funding ³	5'756'043	7'618'613	2'419'937	4'448'676	750'000	0	21
Total	32'818'369	36'884'407	11'524'727	12'859'680	6'612'041	5'887'959	100

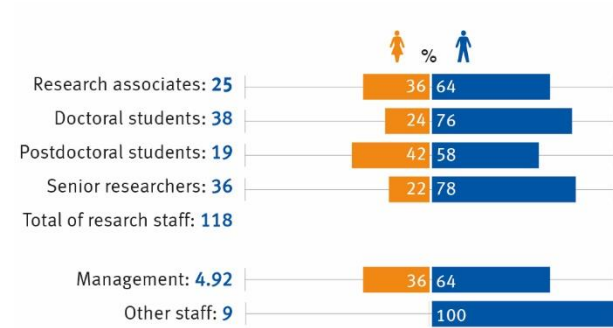
¹ incl. flexibility grant in 2016, 2017, 2018 and 2019 and open research data grant in 2019.

² Personnel costs, equipment and consumables, not included infrastructure and basic equipment

³ Not included is CTI funding

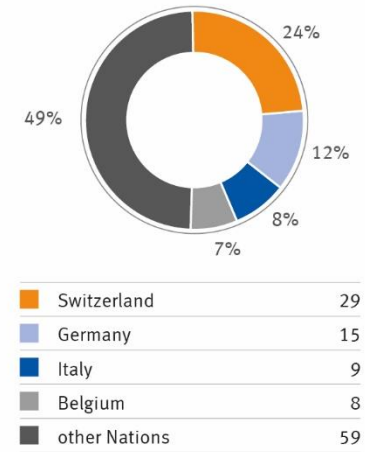
Persons involved

Data: current year



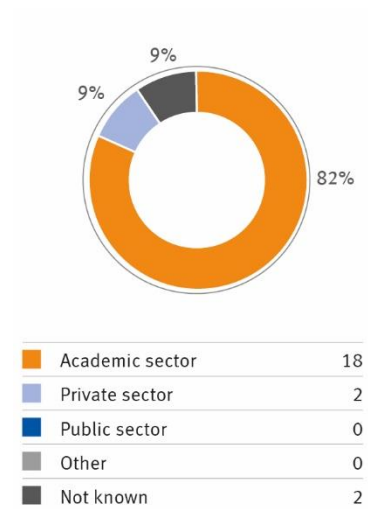
Nationalities of research staff

Data: current year



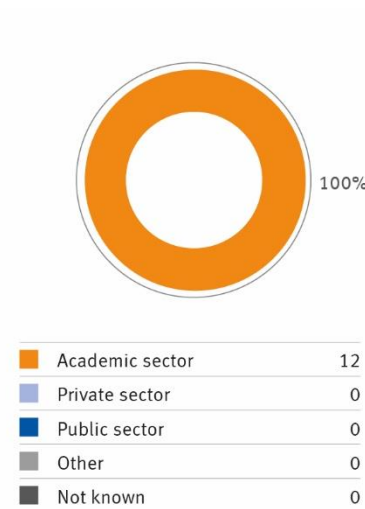
Next employer of doctoral students

Data: since start



Next employer of postdoctoral students

Data: since start



NCCR MARVEL

Materials' Revolution: Computational Design and Discovery of Novel Materials

NCCR Director: Prof. Nicola Marzari
Home Institution: EPFL
Start date: 1st May 2014 (4th NCCR series)

Description

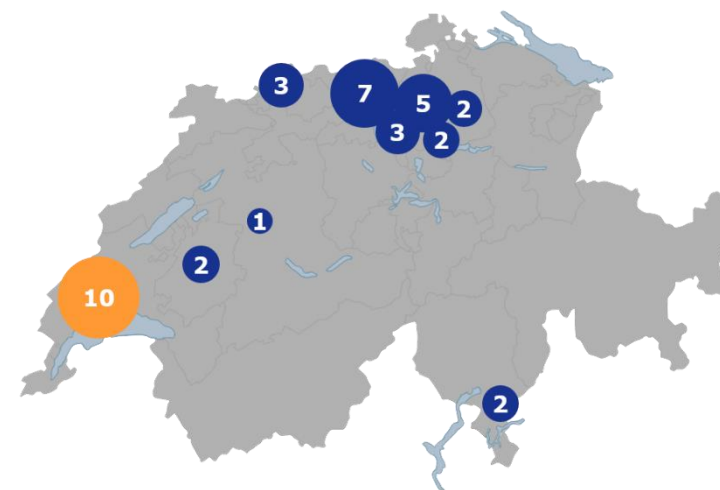
The MARVEL NCCR ("Materials' Revolution: Computational Design and Discovery of Novel Materials") aims to greatly accelerate the design and discovery of novel materials, via a materials' informatics platform of high-throughput quantum simulations. These are powered by advanced electronic-structure capabilities for predictive accuracy; innovative sampling methods to explore configuration/composition space; and the application of machine learning and big data to computational materials science. Searches are targeted to materials for energy harvesting, storage, and conversion; materials for ICT; high value/high tech industries; and organic crystals. For further information visit <https://nccr-marvel.ch>

Heads of Research Groups

Prof. **Ana Akrap**, Département de physique, Université de Fribourg
Prof. **Ulrich Aschauer**, Departement für Chemie und Biochemie, Universität Bern
Prof. **Michele Ceriotti**, Institut des matériaux, EPFL
Prof. **Anne-Clémence Corminboeuf**, Institut des sciences et ingénierie chimiques, EPFL
Prof. **William Curtin**, Institut de génie mécanique, EPFL
Prof. **Claude Ederer**, Departement Materialwissenschaft, ETH Zürich
Prof. **Lyndon Emsley**, Institut des sciences et ingénierie chimiques, EPFL
Dr. **Emiliana Fabbri**, Electrochemistry Laboratory, PSI Villigen
Prof. **Roman Fasel**, Nanotech@surfaces, Empa Dübendorf
Prof. **Marta Gibert**, Physik-Institut, Universität Zürich
Prof. **Stefan Goedecker**, Departement Physik, Universität Basel
Prof. **Jürg Hutter**, Institut für Chemie, Universität Zürich
Prof. **Martin Jaggi**, Institut d'informatique et de communications, EPFL
Prof. **Michel Kenzelmann**, Laboratory for Neutron Scattering and Imaging, PSI Villigen
Dr. **Teodoro Laino**, IBM Research GmbH, Rueschlikon
Prof. **Mathieu Luisier**, Departement Informationstechnologie und Elektrotechnik, ETH Zürich
Prof. **Nicola Marzari**, Institut des matériaux, EPFL
Prof. **Titus Neupert**, Physik-Institut, Universität Zürich
Prof. **Frithjof Nolting**, Laboratory for Condensed Matter Physics, PSI Villigen
Prof. **Alfredo Pasquarello**, Institut de physique, EPFL
Dr. **Daniele Passerone**, Nanotech@surfaces, Empa Dübendorf
Dr. **Daniele Pergolesi**, Laboratory for Multiscale Materials Experiments, PSI Villigen
Dr. **Giovanni Pizzi**, Institut des matériaux, EPFL
Dr. **Marco Ranocchiari**, Laboratory for Catalysis and Sustainable Chemistry, PSI Villigen
Prof. **Sereina Riniker**, Departement Chemie und Angewandte Biowissenschaften, ETH Zürich
Prof. **Volker Roth**, Departement Mathematik & Informatik, Universität Basel
Prof. **Thomas Schulthess**, Centro Svizzero di Calcolo Scientifico (CSCS), Lugano and Institut für Theoretische Physik, ETH Zürich
Prof. **Ming Shi**, Laboratory for Condensed Matter Physics, PSI Villigen
Prof. **Berend Smit**, Institut des sciences et ingénierie chimiques, EPFL

Participating Institutions

Universität Basel (3 groups)/Universität Bern (1 group)/Université de Fribourg (2 groups)/Universität Zürich (3 groups)/EPFL (10 groups)/ETH Zürich (5 groups)/Centro Svizzero di Calcolo Scientifico (2 groups)/Empa (2 groups)/IBM Research GmbH (2 groups)/Paul Scherrer Institut (7 groups)

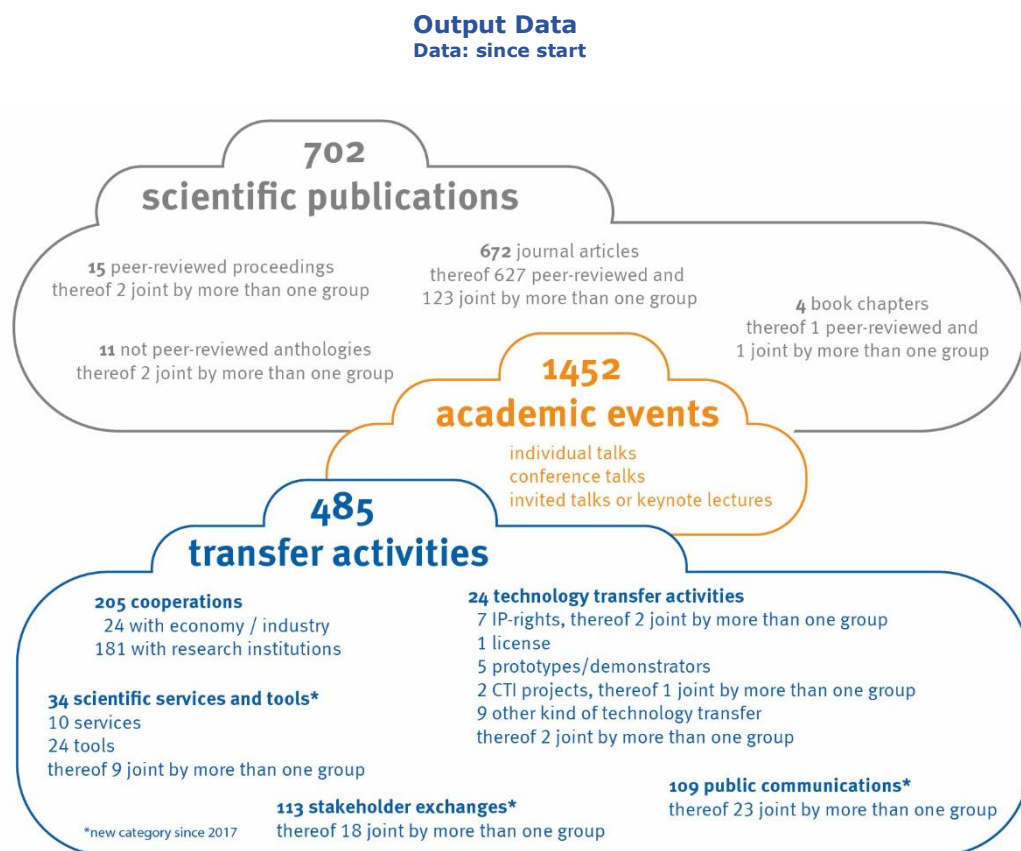


● Home Institutions
● Partner Institutions

Heads of Research Groups (continued)

Prof. **Nicola Spaldin**, Département Materialwissenschaft, ETH Zürich
Dr. **Urs Staub**, Laboratory for Condensed Matter Physics, PSI Villigen
Dr. **Ivano Tavernelli**, IBM Research GmbH, Rueschlikon
Dr. **Joost VandeVondele**, Centro Svizzero di Calcolo Scientifico (CSCS), Lugano
Prof. **Anatole von Lilienfeld**, Département Chemie, Universität Basel
Prof. **Philipp Werner**, Département de physique, Université de Fribourg
Prof. **Oleg Yazeyev**, Institut de physique, EPFL

Overview of all Research Projects



Key collaborations with third parties

Centre Européen de Calcul Atomique et Moléculaire (CECAM), EPFL
Platform for Advanced Scientific Computing (PASC)
Swiss Data Science Center
H2020 Centre of Excellence on Materials Design at the Exascale (MaX)
H2020 European Materials Modelling Council (EMMC)
H2020 Nanoscience Foundries & Fine Analysis (NFFA)
H2020 MarketPlace
H2020 Intersect
H2020 BIG-MAP and Battery 2030+
H2020 Centre of Excellence on Targeting Real chemical accuracy at the EXascale (TRES)
Consorzio Interuniversitario CINECA, Bologna
Psi-k
Thomas Young Centre, London
Max-Planck-EPFL Center for Molecular Nanoscience and Technology
Quantum ESPRESSO Foundation, London
Crystallography Open Database, Vilnius
Simons Collaboration on the Many Electron Problem, Columbia University
African School series on Electronic Structure Methods and Applications (ASESMA), Urbana
Open Quantum Materials Database, Northwestern University
MAPEX Center for Materials and Processes, Bremen

Private and public sector

Material Phases Data System (MPDS), Vitznau
Solvay, Bruxelles
Robert Bosch Foundation, Cambridge MA
Samsung Advanced Institute of Technology, Korea
Materials Design Inc., San Diego, CA

Funding

Funding Source (CHF)	Total Phase 1 2014 – 2017	Total Phase 2 2018 – 2021	2018	2019	2020	2021	Phase 2 %
SNSF-funding ¹	18'000'000	18'183'327	4'529'162	4'654'165	4'500'000	4'500'000	44
Self-funding from Home Institution ²	5'674'162	4'726'196	1'546'719	1'139'477	920'000	1'120'000	11
Self-funding from project participants	21'892'743	18'386'189	6'051'462	5'026'455	3'654'136	3'654'136	44
3rd party-funding ³	587'725	383'862	178'839	205'023	0	0	1
Total	46'154'630	41'679'574	12'306'182	11'025'120	9'074'136	9'274'136	100

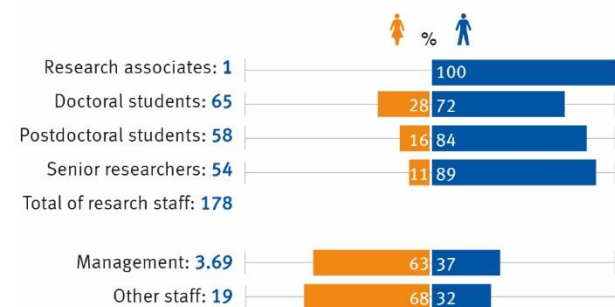
¹ incl. flexibility grant in 2018 and 2019 and open research data grant in 2019.

² Personnel costs, equipment and consumables, not included infrastructure and basic equipment

³ Not included is CTI funding

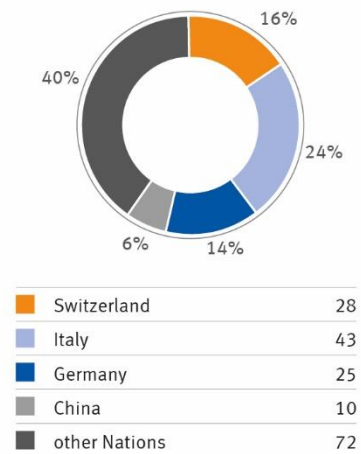
Persons involved

Data: current year



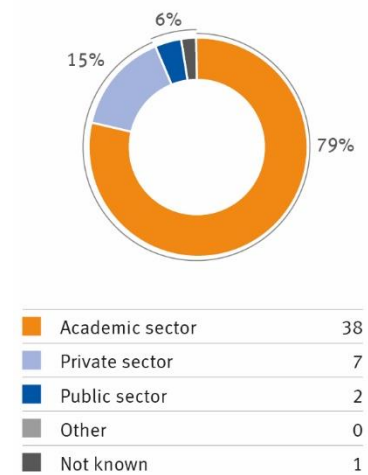
Nationalities of research staff

Data: current year



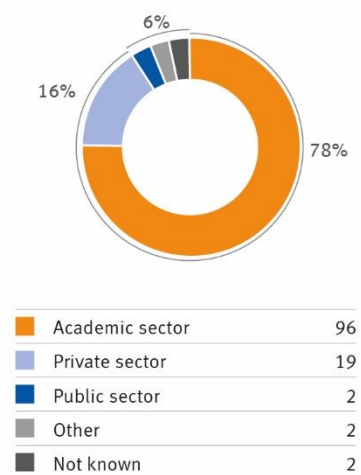
Next employer of doctoral students

Data: since start



Next employer of postdoctoral students

Data: since start



NCCR MSE

Molecular Systems Engineering

NCCR Director: Prof. Thomas R. Ward, NCCR Co-Director: Prof. Daniel Müller
Home Institutions: University of Basel, ETH Zurich
Start date: 1st of July 2014 (4th NCCR series)

Description

The NCCR "MSE – Molecular Systems Engineering" combines the life sciences, chemistry, physics and engineering sciences in order to transfer the synthesis processes of biological cells to synthetic systems. Such molecular systems are the equivalent of tiny factories in which new compounds and substances are made. These can be used in energy supply and the chemical industry as well as in medical diagnosis or treatment.

The NCCR intends to break through the barriers of the traditional focus on individual molecular modules and develop new engineering principles that reveal how individual molecular modules can be combined to form working molecular production lines. The research findings could be used to meet future economic and technical challenges.

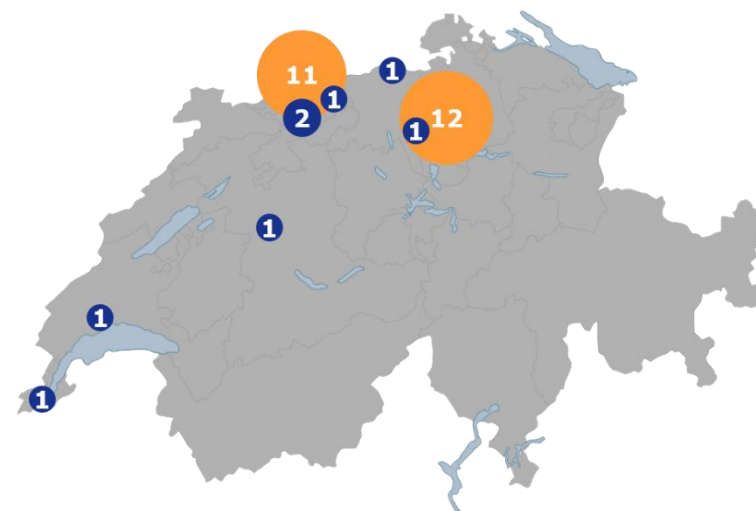
For further information visit: <https://www.nccr-mse.ch/en/home/>

Heads of Research Groups

Prof. **Yaakov Benenson**, Departement Biosysteme, ETH Zürich
Prof. **Bruno Correia**, Institut of Bioengineering, EPFL
Prof. **Jonathan De Roo**, Departement Chemie, Universität Basel
Prof. **Petra Dittrich**, Departement Biosysteme, ETH Zürich
Prof. **Dimitrios Fotiadis**, Institut für Biochemie und Molekulare Medizin, Universität Bern
Prof. **Martin Fussenegger**, Departement Biosysteme, ETH Zürich
Prof. **Catherine Housecroft**, Departement Chemie, Universität Basel
Dr. **Richard Kammerer**, Paul Scherrer Institut, PSI Villigen
Dr. **Emanuel Lörtscher**, IBM Research GmbH, Rüschlikon
Prof. **Ivan Martin**, Departement Biomedizin, Universitätsspital Basel
Prof. **Stefan Matile**, Section Chimie et Biochimie, Université de Genève
Prof. **Marcel Mayor**, Departement Chemie, Universität Basel
Prof. **Wolfgang Meier**, Departement Chemie, Universität Basel
Prof. **Daniel Müller**, Departement Biosysteme, ETH Zürich
Prof. **Michael Nash**, Departement Chemie, Universität Basel
Prof. **Cornelia Palivan**, Departement Chemie, Universität Basel
Prof. **Sven Panke**, Departement Biosysteme, ETH Zürich
Prof. **Randall Platt**, Departement Biosysteme, ETH Zürich
Prof. **Sai Reddy**, Departement Biosysteme, ETH Zürich
Prof. **Botond Roska**, Neurobiologie, Friedrich Miescher Institut, Basel
Prof. **Hendrik Scholl**, Augenklinik, Universitätsspital Basel
Prof. **Florian Seebeck**, Departement Chemie, Universität Basel
Prof. **Christof Sparr**, Departement Chemie, Universität Basel
Prof. **Tanja Stalder**, Departement Biosysteme, ETH Zürich
Prof. **Jörg Stelling**, Departement Biosysteme, ETH Zürich
Prof. **Konrad Tiefenbacher**, Departement Chemie, Universität Basel
Prof. **Barbara Treutlein**, Departement Biosysteme, ETH Zürich
Prof. **Effy Vayena**, Departement Gesundheitswissenschaften und Technologie, ETH Zürich
Prof. **Viola Vogel**, Departement Gesundheitswissenschaften und Technologie, ETH Zürich

Participating Institutions

Universität Basel (11 groups)/Universität Bern (1 group)/Université de Genève (1 group)/EPFL (1 group)/ETH Zürich (12 groups)/Friedrich Miescher Institut (1 group)/IBM Research GmbH (1 groups)/Paul Scherrer Institut (1 group)/Universitätsspital Basel (2 groups)

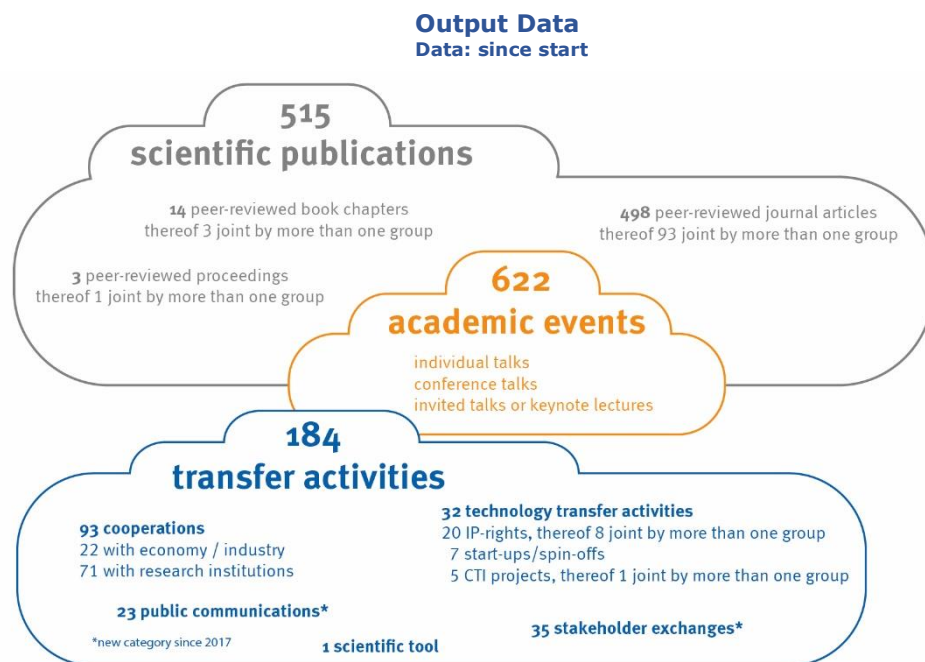


● Home Institutions
● Partner Institutions

Heads of Research Groups (continued)

Prof. **Thomas R. Ward**, Departement Chemie, Universität Basel
 Prof. **Oliver Wenger**, Departement Chemie, Universität Basel

Overview of all Research Projects



Key collaborations with third parties

Academia

Delft University of Technology, Delft, NL
 Ecole Normale Supérieure, Paris, FR
 Harvard Medical School, Boston, US
 Institut de la Vision, Paris, FR
 University Freiburg, Freiburg, DE
 Ludwig Maximilians-Universität, München, DE
 Max Planck Institute of Biophysics, Frankfurt, DE
 Mc Gill University, Montreal, CA
 Salk Institute for Biological Studies, La Jolla, US
 Scripps Research Institute, Jupiter, FL, US
 Stanford University, Stanford, US
 University of Pennsylvania, Pennsylvania, US
 University of Uppsala, Uppsala, SE
 Vienna University of Technology, Vienna, AT
 Weizmann Institute of Science, Rehovot, IL

Private and public sector

Roche, Basel, CH
 BASF, Basel, CH
 Deltamem, Muttenz, CH
 Nanosurf AG, Liestal, CH
 Roche Diagnostics, Penzberg, DE

Funding

Funding Source (CHF)	Total Phase 1 2014 – 2017	Total Phase 2 2018 – 2021	2018	2019	2020	2021	Phase 2 %
SNSF-funding ¹	16'927'600	18'267'500	4'225'000	4'747'500	4'647'500	4'647'500	61
Self-funding from Home Institution ²	7'710'222	9'851'224	2'523'891	2'897'333	2'190'000	2'240'000	33
Self-funding from project participants	8'396'443	1'857'379	1'462'861	394'518	0	0	6
3rd party-funding ³	727'780	101'586	101'586	0	0	0	0
Total	33'762'045	30'077'689	8'313'338	8'039'351	6'837'500	6'887'500	100

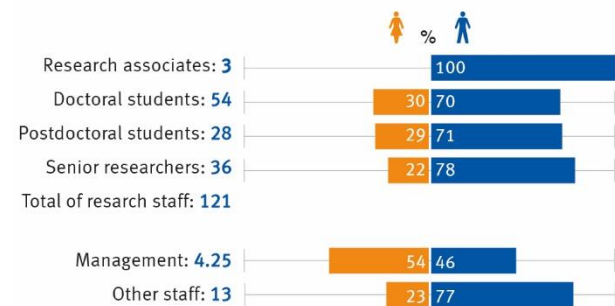
¹ incl. flexibility grant in 2016 and 2017 and open research data grant in 2019.

² Personnel costs, equipment and consumables, not included infrastructure and basic equipment

³ Not included is CTI funding

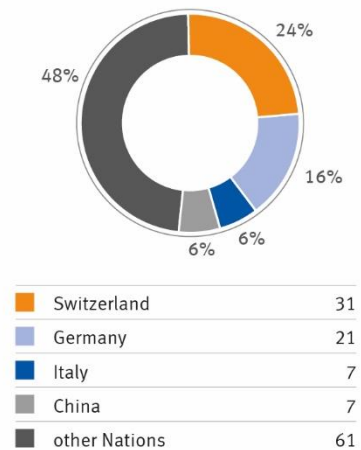
Persons involved

Data: current year



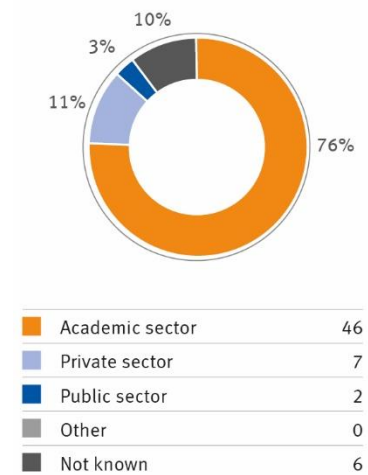
Nationalities of research staff

Data: current year



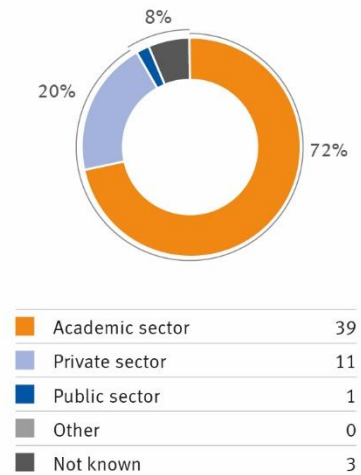
Next employer of doctoral students

Data: since start



Next employer of postdoctoral students

Data: since start



NCCR On the Move

The Migration-Mobility Nexus

NCCR Director: Prof. Gianni D'Amato
Home Institution: University of Neuchâtel
Start date: 1st of June 2014 (4th NCCR series)

Description

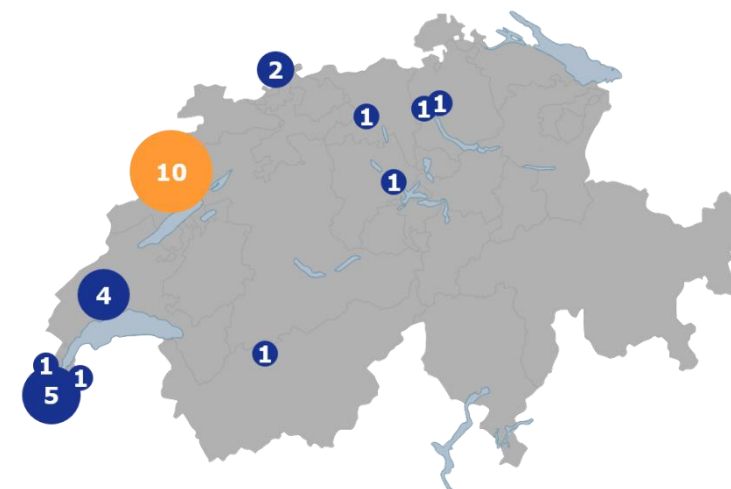
Migration to Switzerland has undergone a fundamental change in the past decade. Earlier patterns consisted mostly of long-term migration. However, the situation has altered due to changing national and European legislation and economic agreements between countries. Closely interlinked national and global markets have been further increasing temporary forms of mobility. Migratory reality today is thus more complex than ever and, so far, barely any systematic research has been conducted. The NCCR "On the Move – The Migration-Mobility Nexus" aims to better understand the changed migration and mobility patterns of today and its consequences for the State, the economy and society at large. This will provide a basis for an informed, forward-looking and sustainable migration policy. For further information visit: <https://nccr-onthemove.ch/>

Heads of Research Groups

Prof. **Christin Achermann**, Centre de droit des migrations, Université de Neuchâtel
Dr. **Jean-Thomas Arrighi**, Forum suisse pour l'étude des migrations et de la population (SFM), Université de Neuchâtel
Prof. **Joachim Blatter**, Politikwissenschaftliches Seminar, Universität Luzern
Prof. **Giuliano Bonoli**, Institut des hautes études en administration publique (IDHEAP), Université de Lausanne
Prof. **Eric Crettaz**, Haute école de travail social, HES-SO Genève
Prof. **Janine Dahinden**, Maison d'analyse des processus sociaux (MAPS), Université de Neuchâtel
Prof. **Gianni D'Amato**, Forum suisse pour l'étude des migrations et de la population (SFM), Université de Neuchâtel
Prof. **Eric Davoine**, Chaire Ressources Humaines et Organisation, Université de Fribourg
Prof. **Juan Manuel Falomir-Pichastor**, Unité de psychologie sociale, Université de Genève
Prof. **Flavia Fossati**, Inégalités et Intégration, Université de Lausanne
Prof. **Matteo Gianni**, Institut d'études de la citoyenneté, Université de Genève
Prof. **Fabrizio Gilardi**, Institut für Politikwissenschaft, Universität Zürich
Prof. **Eva Green**, Institut de psychologie, Université de Lausanne
Prof. **Dominik Hangartner**, Immigration Policy Lab, ETH Zürich
Prof. **Wassilis Kassis**, Pädagogische Hochschule, Fachhochschule Nordwestschweiz (FHNW)
Prof. **Stefanie Kurt**, Institut travail social, HES-SO Valais-Wallis
Prof. **Sandra Lavenex**, Département de science politique et relations internationales, Université de Genève
Prof. **Walter Leimgruber**, Seminar für Kulturwissenschaft und Europäische Ethnologie, Universität Basel
Prof. **Francesco Maiani**, Centre de droit comparé, européen et international, Université de Lausanne
Prof. **Anita Manatschal**, Forum suisse pour l'étude des migrations et de la population (SFM), Université de Neuchâtel
Prof. **Tobias Müller**, Institut d'économie et d'économétrie, Université de Genève

Participating Institutions

Universität Basel (2 groups)/Université de Fribourg (1 group)/Université de Genève (5 groups)/Université de Lausanne (4 groups)/Universität Luzern (1 group)/Université de Neuchâtel (10 groups)/Universität Zürich (1 group)/ETH Zürich (1 group)/HES-SO Valais-Wallis (1 group)/HES-SO Genève (1 group)/Pädagogische Hochschule Fachhochschule Nordwestschweiz (1 group)/The Graduate Institute (1 group)

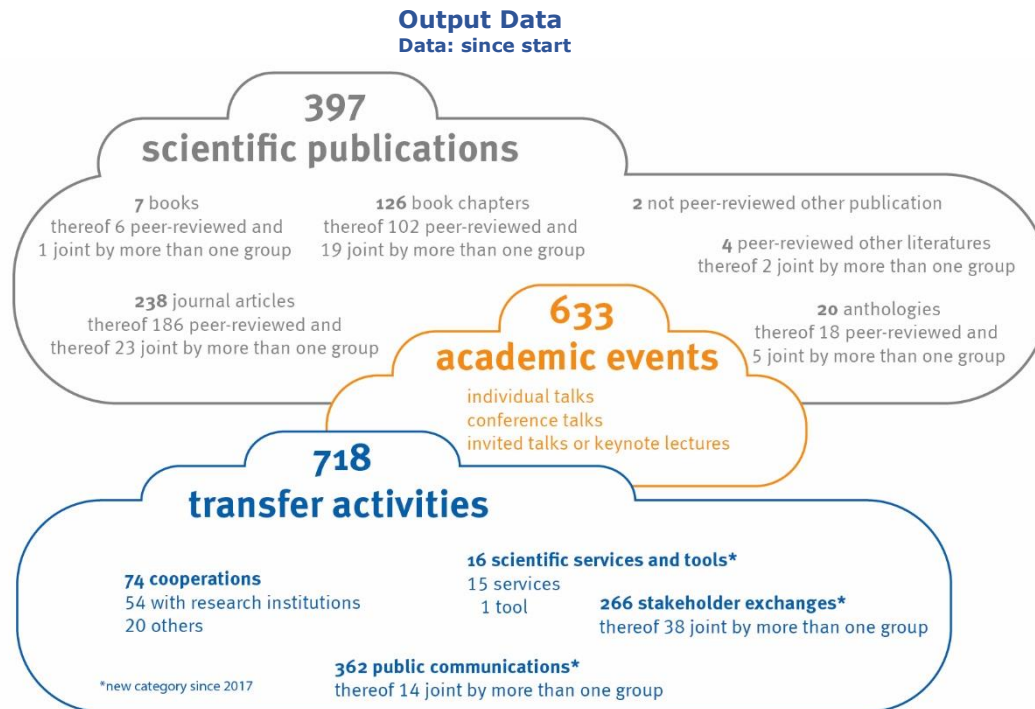


● Home Institutions
● Partner Institutions

Heads of Research Groups (continued)

Prof. **Mihaela Nedelcu**, Institut de sociologie, Université de Neuchâtel
 Prof. **Etienne Piguet**, Institut de géographie, Université de Neuchâtel
 Prof. **Yvonne Riaño**, Institut de géographie, Université de Neuchâtel
 Prof. **Didier Ruedin**, Forum suisse pour l'étude des migrations et de la population (SFM), Université de Neuchâtel
 Prof. **Alois Stutzer**, Wirtschaftswissenschaftliche Fakultät, Universität Basel
 Prof. **Martina Viarengo**, Department of International Economics, Graduate Institute for International and Development Studies
 Prof. **Philippe Wanner**, Institut de démographie et socioéconomie, Université de Genève
 Prof. **Tania Zittoun**, Institut de psychologie et éducation, Université de Neuchâtel

[Overview of all Research Projects](#)



Key collaborations with third parties

Academia

Center for Migration Law, University of Nijmegen, NL
 Department of Political Science, University of Vienna, AT
 History Department, University of Amsterdam, NL
 IMISCOE, Network of Scholars International Migration, Integration and Social Cohesion, Erasmus University Rotterdam, NL
 IMIS Osnabrück, DE
 Malmö Institute for Studies of Migration, Diversity and Welfare, SE
 Migration Policy Centre, European University Institute, IT
 Pädagogische Hochschule Heidelberg, DE
 Universidad Santo Tomas, Bogotá, CO
 Università di Bologna, IT
 Universitat Autònoma de Barcelona, ES
 University of Sheffield, UK
 University of Stockholm, SE
 University of Thessaly, GR
 University of Toronto, CA
 University of Trondheim, NL

Private and public sector

Centre de compétence suisse en sciences sociales – FORS, Université de Lausanne, CH
 Commission fédérale pour les questions de migration (CFM), Wabern, CH
 Stiftung Mercator Schweiz, Zürich, CH
 Office fédéral de la statistique, Neuchâtel, CH
 Secrétariat d'Etat aux migrations, Wabern, CH

Funding

Funding Source (CHF)	Total Phase 1 2014 – 2017	Total Phase 2 2018 – 2021	2018	2019	2020	2021	Phase 2 %
SNSF-funding ¹	17'403'134	16'478'500	4'335'500	4'113'400	4'016'300	4'013'300	73
Self-funding from Home Institution ²	3'054'791	3'398'568	713'198	868'270	925'025	892'075	15
Self-funding from project participants	3'887'100	2'815'717	1'405'567	1'410'150	0	0	12
3rd party-funding ³	0	0	0	0	0		0
Total	24'345'025	22'692'785	6'454'265	6'391'820	4'941'325	4'905'375	100

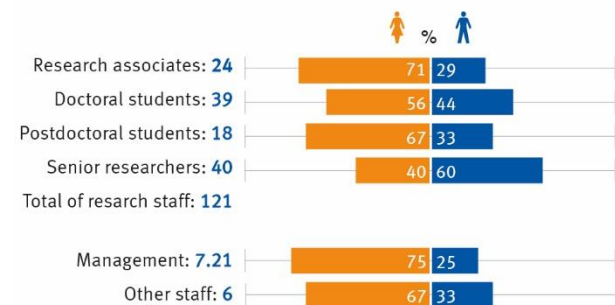
¹ incl. flexibility grant in 2015, 2016, 2017, 2018 and 2020, mobility-grant in 2014, 2016 and 2017 and open research data grant in 2019.

² Personnel costs, equipment and consumables, not included infrastructure and basic equipment

³ Not included is CTI funding

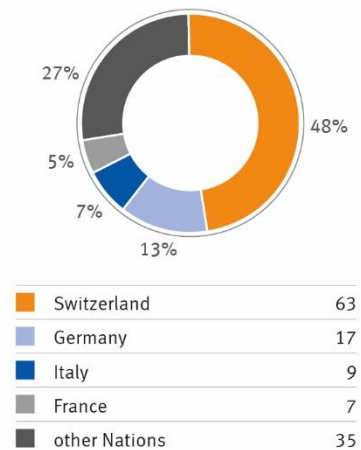
Persons involved

Data: current year



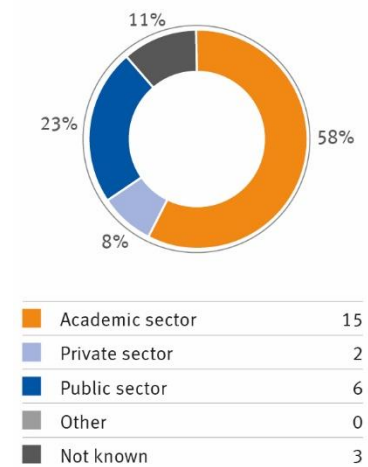
Nationalities of research staff

Data: current year



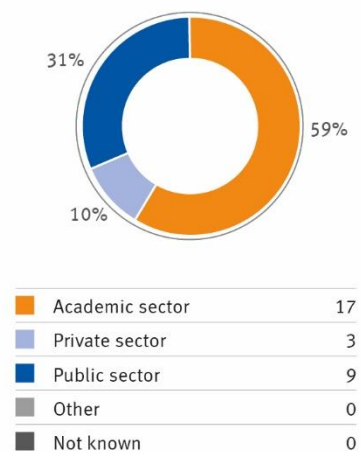
Next employer of doctoral students

Data: since start



Next employer of postdoctoral students

Data: since start



NCCR PlanetS

Origin, Evolution and Characterisation of Planets

NCCR Director: Prof. Willy Benz, NCCR Co-Director: Prof. Stéphane Udry
Home Institutions: University of Bern, University of Geneva
Start date: 1st of June 2014 (4th NCCR series)

Description

The discovery of the first planet outside our solar system by Swiss astronomers in 1995 sparked a revolution in the field of astronomy. Not only did it help us to understand how planets are formed and evolve, but it also contributed to the development of instruments dedicated to the discovery of further exoplanets. By combining astronomical observations, measurements of solar system bodies using spacecraft, laboratory work and theoretical modelling, the NCCR "PlanetS – Origin, Evolution and Characterisation of Planets" aims to contribute to a better understanding of planets. In addition, the NCCR has coordinated the use of the CHEOPS instrument (CHaracterising ExOPlanets Satellite). For further information visit: <http://nccr-planets.ch/>

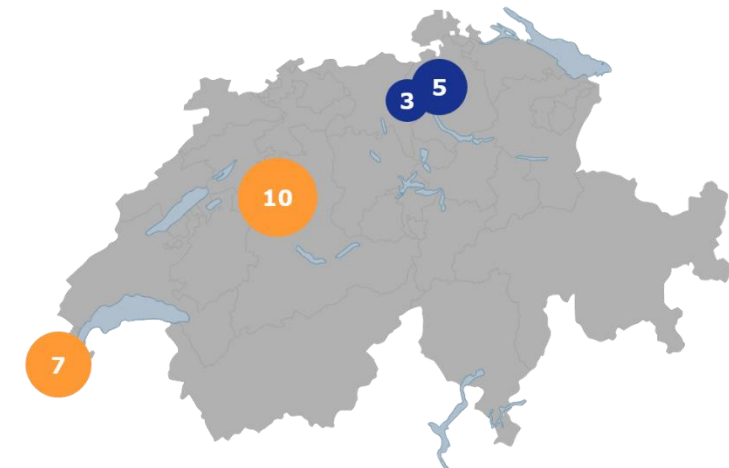
Heads of Research Groups

Prof. **Yann Alibert**, Physikalisches Inst. u. Center for Space and Habitability, Universität Bern
Prof. **Willy Benz**, Physikalisches Inst. u. Center for Space and Habitability, Universität Bern
Prof. **François Bouchy**, Observatoire, Université de Genève
Dr. **Henner Busemann**, Institut für Geochemie und Petrologie, ETH Zürich
Dr. **Brice-Olivier Demory**, Physikalisches Inst. u. Center for Space and Habitability, Universität Bern
Dr. **Xavier Dumusque**, Observatoire, Université de Genève
Dr. **David Ehrenreich**, Observatoire, Université de Genève
Prof. **Ravit Helled**, Institut für Computergestützte Wissenschaften, Universität Zürich
Prof. **Kevin Heng**, Physikalisches Inst. u. Center for Space and Habitability, Universität Bern
Prof. **Ingo Leya**, Physikalisches Inst. u. Center for Space and Habitability, Universität Bern
Dr. **Christophe Lovis**, Observatoire, Université de Genève
Prof. **Lucio Mayer**, Institut für Computergestützte Wissenschaften, Universität Zürich
Prof. **Klaus Mezger**, Institut für Geologie, Universität Bern
Dr. **Christoph Mordasini**, Physikalisches Inst. u. Center for Space and Habitability, Universität Bern
Prof. **Francesco Pepe**, Observatoire, Université de Genève
Dr. **Antoine Pommerol**, Physikalisches Inst. u. Center for Space and Habitability, Universität Bern
Prof. **Sascha P. Quanz**, Institut für Teilchen- und Astrophysik, ETH Zürich
Prof. **Hans Martin Schmid**, Institut für Teilchen- und Astrophysik, ETH Zürich
Prof. **Maria Schönbachler**, Institut für Geochemie und Petrologie, ETH Zürich
Dr. **Damien Ségransan**, Observatoire, Université de Genève
Dr. **Joachim Stadel**, Institut für Computergestützte Wissenschaften, Universität Zürich
Dr. **Veerle Sterken**, Institut für Teilchen- und Astrophysik, ETH Zürich
Prof. **Nicolas Thomas**, Physikalisches Inst. u. Center for Space and Habitability, Universität Bern
Prof. **Stéphane Udry**, Observatoire, Université de Genève
Dr. **Susanne Wampfler**, Physikalisches Inst. U. Center for Space and Habitability, Universität Bern

[Overview of all Research Projects](#)

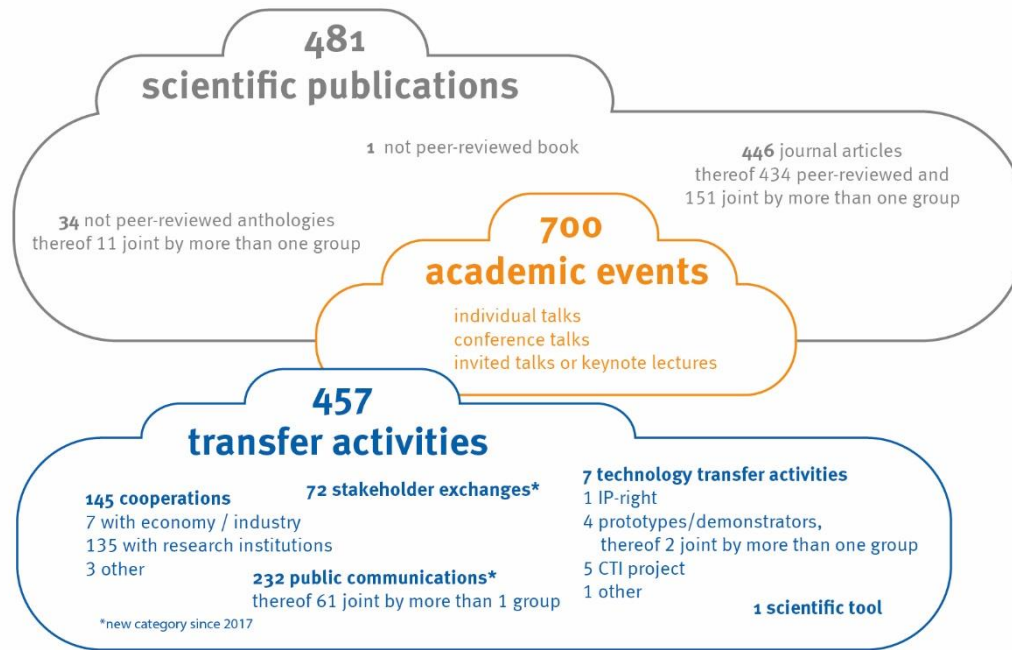
Participating Institutions

Universität Bern (10 groups)/Université de Genève (7 groups)/Universität Zürich (3 groups)/ETH Zürich (5 groups)



- Home Institutions
- Partner Institutions

Output Data
Data: since start



Key collaborations with third parties

International Organisations / Agencies

European Space Agency (ESA)
European Southern Observatory (ESO)
Japan Society for the Promotion of Science (JSPS)

Private and public sector

Burgergemeinde Zermatt
Swiss Museum of Transport
Swiss Space Museum

Funding

Funding Source (CHF)	Total Phase 1	Total Phase 2	2018	2019	2020	2021	Phase 2 %
	2014 – 2017	2018 – 2021					
SNSF-funding ¹	17'654'539	19'128'786	4'474'730	4'874'536	4'939'520	4'840'000	47
Self-funding from Home Institution ²	7'468'707	11'120'471	2'261'909	2'548'229	3'235'830	3'074'503	28
Self-funding from project participants	8'868'814	10'054'230	2'730'951	2'970'812	2'404'384	1'948'083	25
3rd party-funding ³	50'000	47'476	23'476	24'000	0	0	0
Total	34'042'060	40'350'963	9'491'066	10'417'577	10'579'734	9'862'586	100

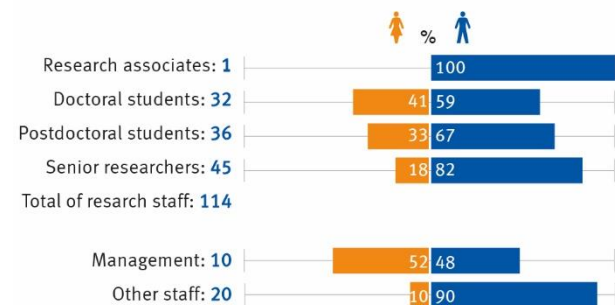
¹ incl. flexibility grant in 2017, 2018 and 2019 and open research data grant in 2020.

² Personnel costs, equipment and consumables, not included infrastructure and basic equipment

³ Not included is CTI funding

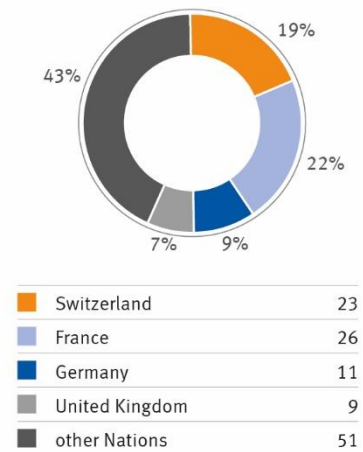
Persons involved

Data: current year



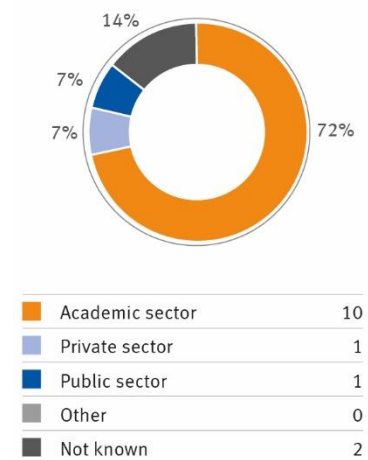
Nationalities of research staff

Data: current year



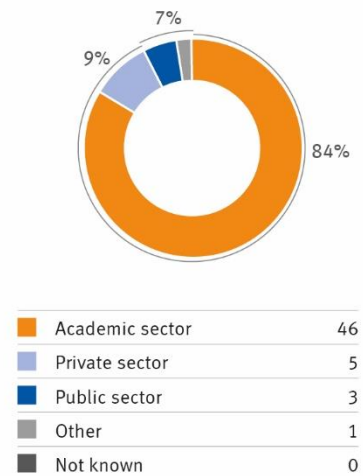
Next employer of doctoral students

Data: since start



Next employer of postdoctoral students

Data: since start



NCCR RNA & Disease

The Role of RNA in Disease Mechanisms

NCCR Director: Prof. Oliver Mühlemann, NCCR Co-Director: Prof. Frédéric Allain
Home Institutions: University of Bern, ETH Zurich
Start date: 1st of May 2014 (4th NCCR series)

Description

The NCCR "RNA & Disease – The Role of RNA Biology in Disease Mechanisms" studies a class of molecules that has long been neglected: RNA (ribonucleic acid) is pivotal for many vital processes and much more complex than initially assumed. For instance, RNA defines the conditions, in a given cell, under which a given gene is or is not activated. If any part of this process of genetic regulation breaks down or does not run smoothly, this can cause heart disease, cancer, brain disease and metabolic disorders.

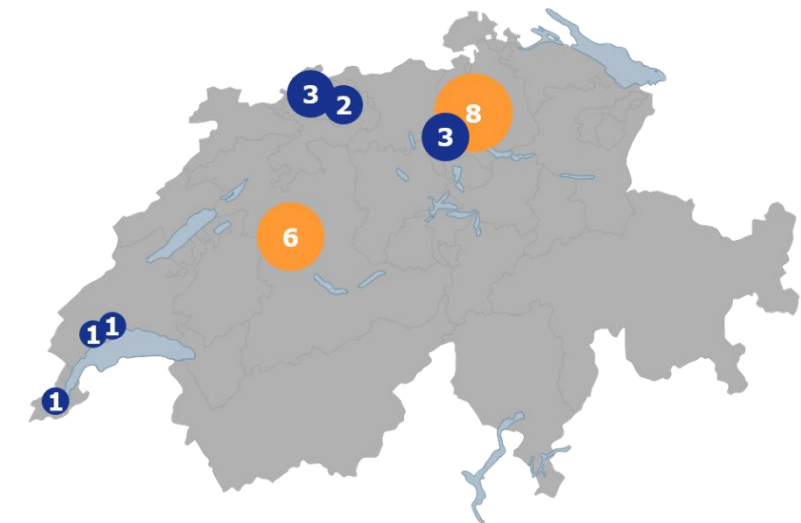
The NCCR brings together Swiss research groups studying different aspects of RNA biology in various organisms such as yeast, plants, roundworms, mice and human cells. By identifying the regulatory mechanisms that go off course during an illness, the NCCR will also be able to point out new therapeutic targets and help counter the biggest causes of death. For further information visit: <https://nccr-rna-and-disease.ch/>

Heads of Research Groups

Prof. **Frédéric Allain**, Département Biologie, ETH Zürich
Prof. **Nenad Ban**, Département Biologie, ETH Zürich
Prof. **Marc Bühler**, Friedrich Miescher Institute for Biomedical Research, Basel
Dr. **Jeffrey A. Chao**, Friedrich Miescher Institute for Biomedical Research, Basel
Prof. **Jacob Corn**, Département Biologie, ETH Zürich
Prof. **Constance Ciaudo**, Département Biologie, ETH Zürich
Prof. **David Gatfield**, Faculté de biologie et de médecine, Université de Lausanne
Dr. **Helge Grosshans**, Friedrich Miescher Institute for Biomedical Research, Basel
Prof. **Jonathan Hall**, Département Chemie und Angewandte Biowissenschaften, ETH Zürich
Prof. **Michael N. Hall**, Biozentrum, Universität Basel
Prof. **Martin Jinek**, Biochemisches Institut, Universität Zürich
Prof. **Rory Johnson**, Department for BioMedical Research, Universität Bern
Prof. **Stefanie Jonas**, Département Biologie, ETH Zürich
Prof. **Ulrike Kutay**, Département Biologie, ETH Zürich
Prof. **Joachim Lingner**, Institut Suisse de Recherche Expérimentale sur le Cancer, EPFL
Prof. **Oliver Mühlemann**, Département für Chemie und Biochemie, Universität Bern
Prof. **Mariusz Nowacki**, Institut für Zellbiologie, Universität Bern
Prof. **Ramesh Pillai**, Département de biologie moléculaire, Université de Genève
Prof. **Norbert Polacek**, Département für Chemie und Biochemie, Universität Bern
Prof. **Magdalini Polymenidou**, Department of Quantitative Biomedicine, Universität Zürich
Prof. **André Schneider**, Département für Chemie und Biochemie, Universität Bern
Prof. **Ataman Sendoel**, Institute for Regenerative medicine, Universität Zürich
Prof. **Markus Stoffel**, Département Biologie, ETH Zürich
Prof. **Volker Thiel**, Institut für Virologie und Immunologie, Universität Bern
Prof. **Mihaela Zavolan**, Biozentrum, Universität Basel

Participating Institutions

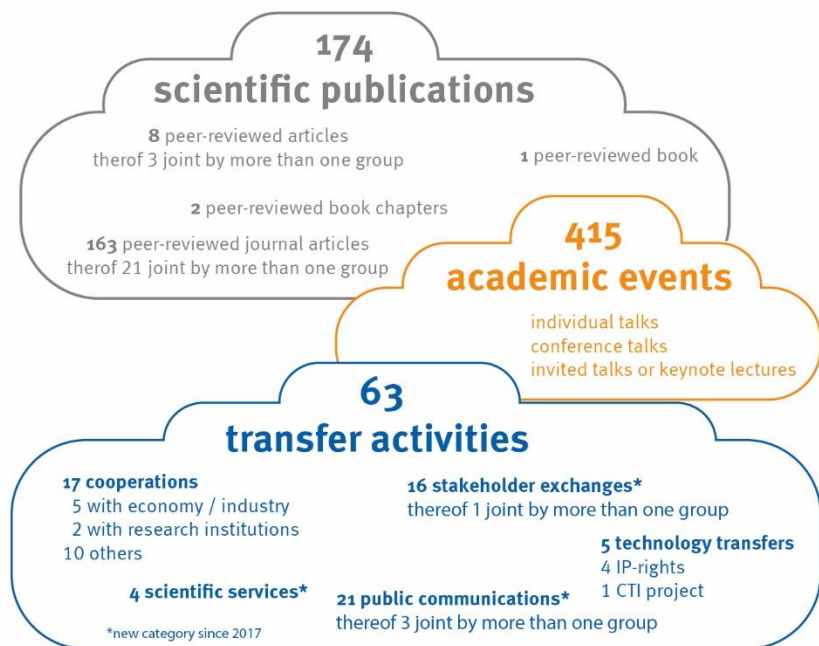
Universität Basel (2 groups)/Universität Bern (6 groups)/Université de Genève (1 group)/Université de Lausanne (1 groups)/Universität Zürich (3 groups)/EPFL (1 group)/ETH Zürich (8 groups)/FMI Basel (3 groups)



[Overview of all Research Projects](#)

● Home Institutions
● Partner Institutions

Output Data
Data: since start



Key collaborations with third parties

Academia

Swiss Reference Center for Porphyrias, Triemli Hospital, Zurich, CH
 Institute for Research in Biomedicine, Università della Svizzera italiana, Bellinzona, CH
 Institute for Oncology Research, Università della Svizzera italiana, Bellinzona, CH
 University Hospital, Bern, CH
 University Hospital, Zurich, CH

Private and public sector

Fondation Dufloateau, Zürich, CH
 Hofmann-La Roche, Basel, CH
 Holcim Stiftung zur Förderung der wissenschaftlichen Forschung, Holderbank, CH
 NOMIS Foundation, Samedan, CH
 Novartis, Basel, CH
 Promedica Stiftung, Chur, CH
 Saverna, Allschwil, CH
 Schweizerische Stiftung für die Erforschung der Muskelkrankheiten, SSEM, Cortaillod, CH
 Skyhawk, Waltham, US
 SMA Foundation, New York, US
 T3 Pharmaceuticals AG, Basel, CH
 Cure Spinal Muscular Atrophy, Illinois, US
 Research and development fund University of Basel, Basel, CH
 Ruth & Arthur Scherbarth Stiftung, Bern, CH

Funding

Funding Source (CHF)	Total Phase 1 2014 – 2017	Total Phase 2 2018 – 2021	2018	2019	2020	2021	Phase 2 %
SNSF-funding ¹	16'751'666	17'917'500	4'150'000	4'625'000	4'577'500	4'565'000	40
Self-funding from Home Institution ²	12'570'545	14'043'414	3'752'072	3'393'342	3'518'000	3'380'000	32
Self-funding from project participants	10'904'797	12'096'465	2'937'787	3'298'678	2'930'000	2'930'000	27
3rd party-funding ³	1'882'104	474'253	181'213	293'040	0	0	1
Total	42'109'112	44'531'632	11'021'072	11'610'060	11'025'500	10'875'000	100

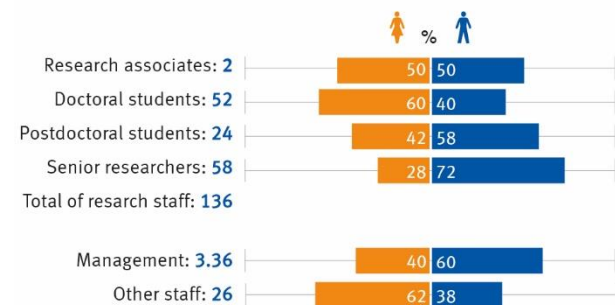
¹ incl. flexibility grant in 2014, 2015, 2016, 2017 and 2020, mobility-grant in 2015, 2016 and 2017 and open research data grant in 2019.

² Personnel costs, equipment and consumables, not included infrastructure and basic equipment

³ Not included is CTI funding

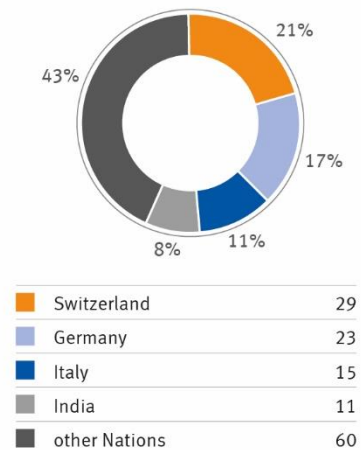
Persons involved

Data: current year



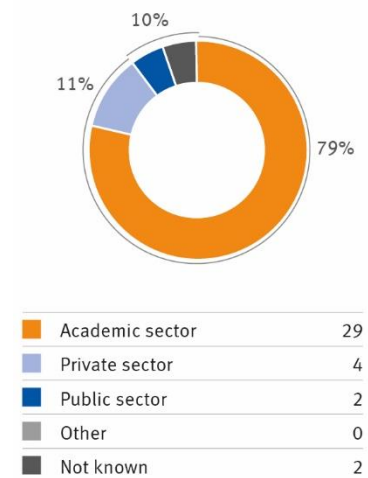
Nationalities of research staff

Data: current year



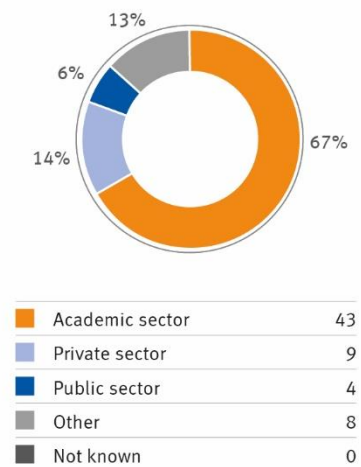
Next employer of doctoral students

Data: since start



Next employer of postdoctoral students

Data: since start



NCCR SwissMAP

The Mathematics of Physics

NCCR Director: Prof. Stanislav Smirnov, NCCR Co-Director: Prof. Giovanni Felder
Home Institutions: University of Geneva, ETH Zurich
Start date: 1st of July 2014 (4th NCCR series)

Description

Physicists use the language of mathematics to describe the processes that they observe. However, mathematics is more than a language. It is also a collection of complex, evolving ideas. At the threshold between theoretical physics and mathematics – where the mathematician's stringency and the physicist's intuition bear the greatest fruit – both sides benefit from closer cooperation. The NCCR "SwissMAP – The Mathematics of Physics" aims to take this melding of minds to the next level and establish an internationally renowned Swiss Institute for Advanced Research in Mathematics and Physics. The objective is to create a place where researchers can focus on fundamental questions, such as whether string theory really is suitable for describing all of the known force fields and interactions in a uniform Theory of Everything. For further information visit: <http://www.nccr-swissmap.ch/>

Heads of Research Groups

Prof. **Anton Alekseev**, Section de Mathématiques, Université de Genève
Prof. **Alberto Cattaneo**, Institut für Mathematik, Universität Zürich
Prof. **Giovanni Felder**, Departement Mathematik, ETH Zürich
Prof. **Matthias Gaberdiel**, Institut für Theoretische Physik, ETH Zürich
Prof. **Gian Michele Graf**, Institut für Theoretische Physik, ETH Zürich
Prof. **Wolfgang Lerche**, Theory Division, CERN
Prof. **Marcos Mariño Beiras**, Section de Mathématiques et Département de Physique Théorique, Université de Genève
Prof. **Rahul Pandharipande**, Departement Mathematik, ETH Zürich
Prof. **Stanislav Smirnov**, Section de mathématiques, Université de Genève

[Overview of all Research Projects](#)

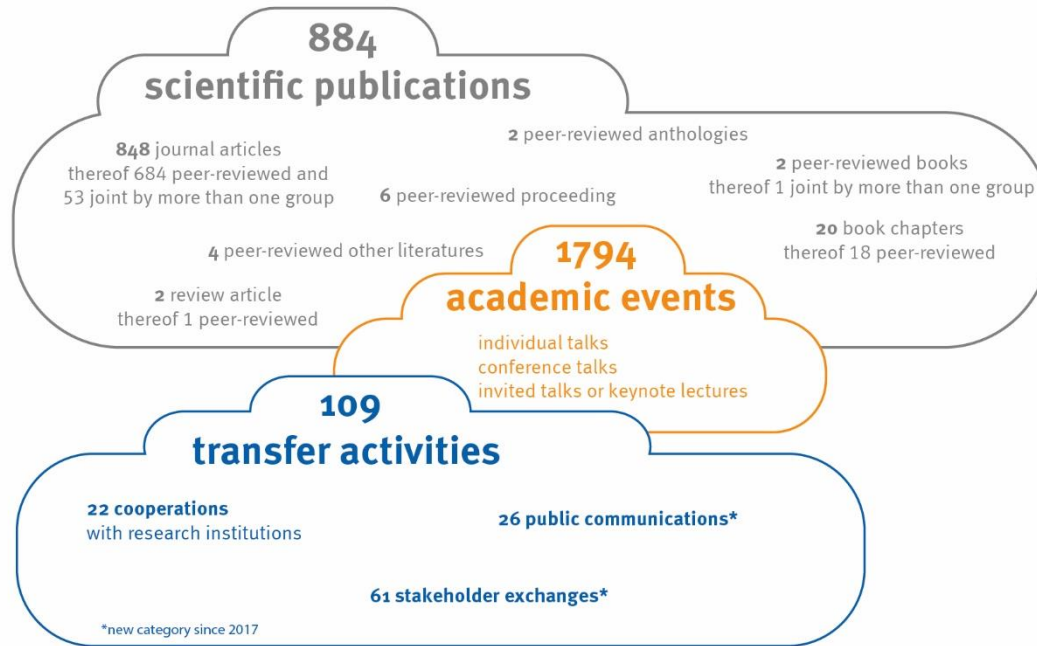
Participating Institutions

Université de Genève (3 groups)/Universität Zürich (1 groups)
ETH Zurich (4 groups)/CERN (1 groups)



- Home Institutions
- Partner Institutions

Output Data
Data: since start



Key collaborations with third parties

Academia

- Massachusetts Institute of Technology, US
- Columbia University, US
- Cornell University, US
- University of Chicago, US
- University of Michigan, US
- University of British Columbia, CA
- University of Toronto, CA
- Institut de Physique Théorique, CEA-Saclay, FR
- Université Paris-7, FR
- Université Claude Bernard Lyon 1, FR
- University of Cambridge, UK
- University of Oxford, UK
- University of Loughborough, UK
- University of Helsinki, FI
- Lund University, SE
- Technion - Israel Institute of Technology, IL
- Hebrew University of Jerusalem, IL
- HRI Allahabad, IN
- University of Stony Brook, NY, US

Funding

Funding Source (CHF)	Total Phase 1 2014 – 2017	Total Phase 2 2018 – 2021	2018	2019	2020	2021	Phase 2 %
SNSF-funding ¹	11'209'000	10'647'527	2'807'527	3'113'400	2'400'000	2'326'600	34
Self-funding from Home Institution ²	6'601'311	7'875'546	1'936'578	1'677'768	2'140'600	2'120'600	25
Self-funding from project participants	10'614'917	12'675'855	3'047'952	3'500'403	3'092'500	3'035'000	41
3rd party-funding ³	0	0	0	0	0	0	0
Total	28'425'228	31'198'928	7'792'057	8'291'571	7'633'100	7'482'200	100

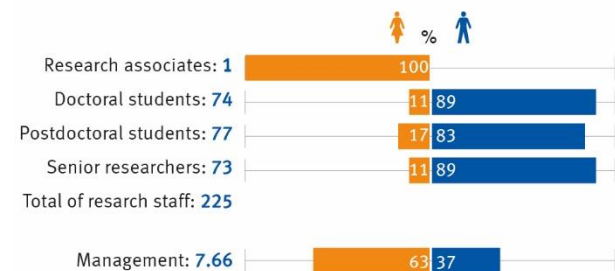
¹ incl. flexibility grant in 2018 and mobility grant in 2017.

² Personnel costs, equipment and consumables, not included infrastructure and basic equipment

³ Not included is CTI funding

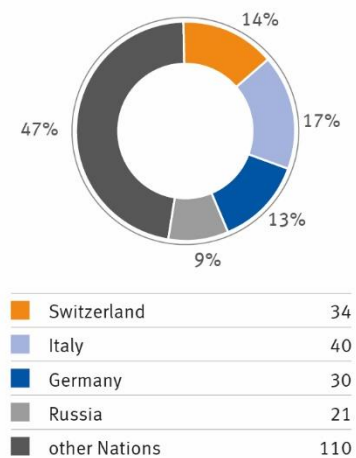
Persons involved

Data: current year



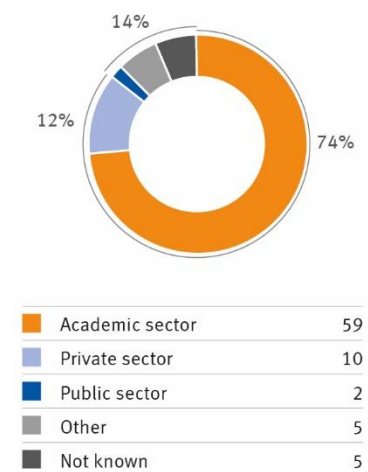
Nationalities of research staff

Data: current year



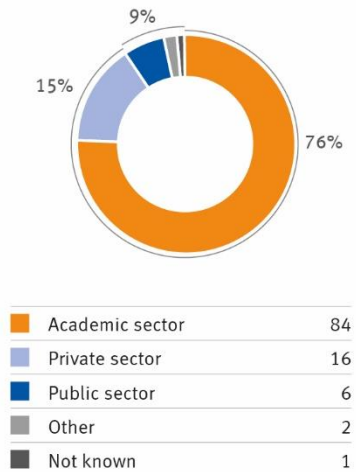
Next employer of doctoral students

Data: since start



Next employer of postdoctoral students

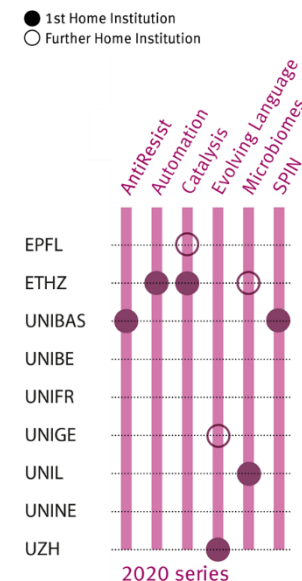
Data: since start



NCCR 5th series at a glance

5th series of NCCRs (Operation 2020-2032)

Short Name	NCCR-Director	Home Institutions	Starting date
AntiResist	Prof. Christoph Dehio	University of Basel	August 1, 2020
Automation	Prof. John Lygeros	ETH Zurich	August 1, 2020
Catalysis	Prof. Javier Pérez-Ramirez	ETH Zurich, EPFL	August 1, 2020
Evolving Language	Prof. Balthasar Bickel	University of Zurich, University of Geneva	June 1, 2020
Microbiomes	Prof. Jan Roelof van der Meer	University of Lausanne, ETH Zurich	July 1, 2020
SPIN	Prof. Richard Warburton	University of Basel	August 1, 2020



5th series of NCCRs: Funding in phase 1: 2020-2023

Funding source (CHF)	2020	2021	2022	2023	Phase 1 total
SNSF funding	20'783'504	23'601'200	27'550'000	27'800'000	99'734'704
Self-funding from Home Institutions ¹	17'494'383	19'471'640	18'294'011	28'137'140	83'397'174
Total	38'277'887	43'072'840	45'844'011	55'937'140	183'131'878

¹ Personnel costs, equipment and consumables, not included infrastructure and basic equipment

NCCR AntiResist

New approaches to combat antibiotic-resistant bacteria

NCCR Director: Prof. Christoph Dehio
Home Institution: University of Basel
Start date: 1st of August 2020 (5th NCCR series)

Description

The NCCR "AntiResist" aims at developing new approaches to better understand the biochemical and biophysical processes caused by bacterial pathogens in infected patients, and to simulate them in tissue modelling. The findings will help researchers to develop new antibiotics more rapidly, and to identify new and innovative antimicrobial effect mechanisms on the basis of which new medicines can be developed.

Antibiotics play a vital role in many areas of modern medicine, especially protecting patients whose immune system has been weakened. But these achievements of modern medicine are now under threat. More and more strains of bacteria are becoming resistant to one or several types of antibiotics.

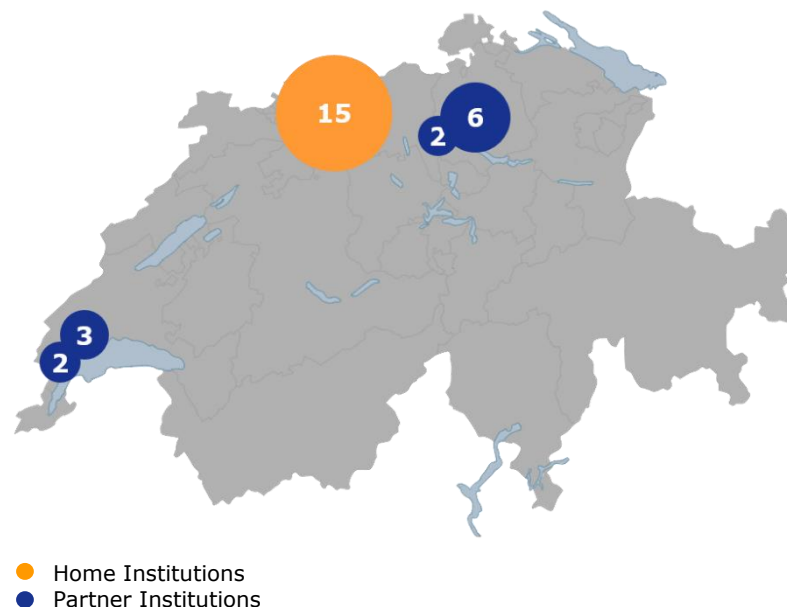
Therefore, the research will focus on four pathogens that cause major problems throughout the world. The NCCR's overriding objective is to initiate a paradigm change in infection research by adopting an interdisciplinary approach that brings together research groups from the fields of clinical research, biology, chemistry, engineering and pharmacology. For further information visit: <https://www.nccr-antiresist.ch/en/>

Heads of Research Groups

Prof. **Marek Basler**, Departement Biozentrum, Universität Basel
Prof. **Karsten Borgwardt**, Department of Biosystems Science and Engineering, ETH Zürich
Prof. **Petr Broz**, Departement Biochemie, Université de Lausanne
Prof. **Dirk Bumann**, Departement Biozentrum, Universität Basel
Prof. **Christoph Dehio**, Departement Biozentrum, Universität Basel
Prof. **Petra Dittrich**, Department of Biosystems Science and Engineering, ETH Zürich
Prof. **Knut Drescher**, Departement Biozentrum, Universität Basel
Prof. **Adrian Egli**, Infektiologie und Spitalhygiene, Universitätsspital Basel
Dr. **Alexander Harms**, Departement Biozentrum, Universität Basel
Prof. **Andreas Hierlemann**, Department of Biosystems Science and Engineering, ETH Zürich
Prof. **Sebastian Hiller**, Departement Biozentrum, Universität Basel
Prof. **Urs Jenal**, Departement Biozentrum, Universität Basel
Prof. **Nina Khanna**, Infektiologie und Spitalhygiene, Universitätsspital Basel
Prof. **John McKinney**, SV GHI UPKIN, EPFL
Prof. **Jacob Moran-Gilad**, Ben-Gurion University of the Negev
Prof. **Anne Müller**, Institute of Molecular Cancer Research, Universität Zürich
Prof. **Richard Neher**, Departement Biozentrum, Universität Basel
Prof. **Alexandre Persat**, SV GHI UPPERSAT, EPFL
Prof. **Paola Picotti**, Institut für Molekulare Systembiologie, ETH Zürich
Prof. **Jean Pieters**, Departement Biozentrum, Universität Basel
Prof. **Katharina Rentsch**, Labormedizin, Universitätsspital Basel
Prof. **Pablo Rivera-Fuentes**, SB ISIC LOCBP, EPFL
Prof. **Uwe Sauer**, Institut für Molekulare Systembiologie, ETH Zürich
Prof. **Daiana Stolz**, Lungenzentrum, Universitätsspital Basel
Prof. **Sarah Tschudin Sutter**, Infektiologie und Spitalhygiene, Universitätsspital Basel
Prof. **Erik Van Nimwegen**, Departement Biozentrum, Universität Basel
Prof. **Jan-Willem Veening**, Department of Fundamental Microbiology, Université de Lausanne
Dr. **Mattia Zampieri**, Institut für Molekulare Systembiologie, ETH Zürich
Prof. **Annelies Zinkernagel**, Infektionskrankheiten u. Spitalhygiene, Universitätsspital Zürich

Participating Institutions

Universität Basel (15 groups)/Université de Lausanne (2 group)/Universität Zürich (2 groups)/EPFL (3 groups)/ETH Zurich (6 groups)/University Ben-Gurion (1 group)



Key collaborations with third parties

Academia

None at the moment

Private and public sector

None at the moment

Funding

Funding Source (CHF)	Total Phase 1 2020 – 2023	2020	2021	2022	2023	Phase 1 %
SNSF-funding	17'000'000	3'300'000	4'150'000	4'750'000	4'800'000	60
Self-funding from Home Institution	11'400'000	1'000'000	1'000'000	1'000'000	8'400'000	40
Total	28'400'000	4'300'000	5'150'000	5'750'000	13'200'000	100

NCCR Automation

Dependable Ubiquitous Automation

NCCR Director: Prof. John Lygeros
Home Institution: ETH Zurich
Start date: 1st of August 2020 (5th NCCR series)

Description

The latest advances in sensor technology, data generation and computing have the potential to profoundly change areas of our economic and daily lives. The complete automation and control of entire systems such as cities (smart cities), power grids (smart grids) or industrial processes (Industry 4.0) is increasingly becoming a reality in the course of digital transformation. The aim of the NCCR "Dependable Ubiquitous Automation" is to advance the methodological and technological bases for the large-scale implementation of such complex systems. By improving decision-making and control procedures and developing new algorithms and computer methods, the reliability and flexibility of intelligent systems can be increased. One of the NCCR's key projects is to develop and implement a fully automated and decentralised energy management system at district or commune level. This will allow the economic potential and social impact of automated applications to be tested in real life.

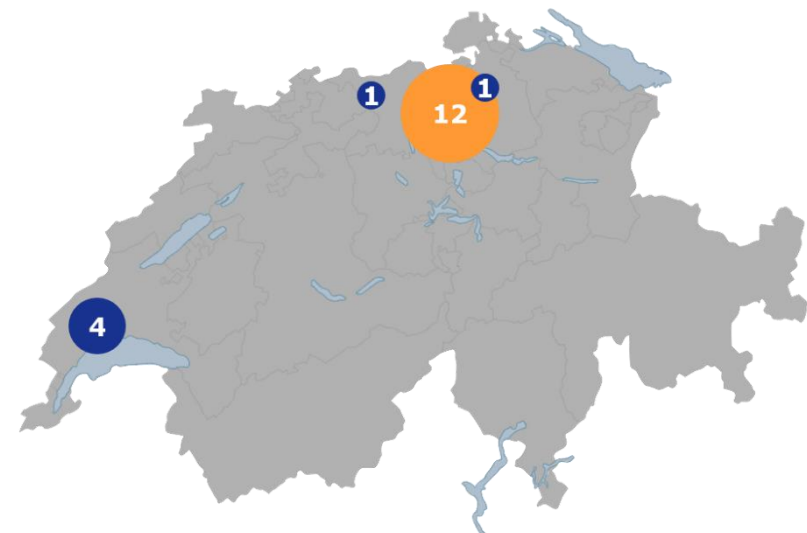
For further information visit: <https://nccr-automation.ch/>

Heads of Research Groups

Prof. **Srdjan Capkun**, Institut für Informationssicherheit, ETH Zürich
Prof. **Francesco Corman**, Departement Bau, Umwelt und Geomatik, ETH Zürich
Prof. **Raffaello D'Andrea**, Departement Maschinenbau und Verfahrenstechnik, ETH Zürich
Prof. **Florian Dörfler**, Departement Informationstechnologie und Elektrotechnik, ETH Zürich
Prof. **Giancarlo Ferrari Trecate**, STI IGM SCI-STI-GFT, EPFL
Prof. **Emilio Frazzoli**, Departement Maschinenbau und Verfahrenstechnik, ETH Zürich
Prof. **Nikolas Geroliminis**, ENAC IIC LUTS, EPFL
Prof. **Gabriela Hug**, Departement Informationstechnologie und Elektrotechnik, ETH Zürich
Prof. **Colin Jones**, STI IGM LA3, EPFL
Prof. **Andreas Krause**, Departement Informatik, ETH Zürich
Prof. **Daniel Kuhn**, CDM MTEI RAO, EPFL
Prof. **John Lygeros**, Departement Informationstechnologie und Elektrotechnik, ETH Zürich
Prof. **Silvia Mastellone**, Hochschule für Technik, Fachhochschule Nordwestschweiz (FHNW)
Dr. **Kristina Orehounig**, Materials Science and Technology, Empa
Prof. **Kaveh Razavi**, Departement Informationstechnologie und Elektrotechnik, ETH Zürich
Dr. **Alisa Rupenyana**, Departement Informationstechnologie und Elektrotechnik, ETH Zürich
Prof. **Roy Smith**, Departement Informationstechnologie und Elektrotechnik, ETH Zürich
Prof. **Lothar Thiele**, Departement Informationstechnologie und Elektrotechnik, ETH Zürich

Participating Institutions

EPFL (4 groups)/ETH Zurich (12 groups)/Empa (1 group)/FHNW (1 group)



● Home Institutions
● Partner Institutions

Key collaborations with third parties

Academia

None at the moment

Private and public sector

None at the moment

Funding

Funding Source (CHF)	Total Phase 1 2020 – 2023	2020	2021	2022	2023	Phase 1 %
SNSF-funding	15'655'300	3'255'300	3'600'000	4'400'000	4'400'000	59
Self-funding from Home Institution	11'082'700	2'758'300	2'892'400	2'716'000	2'716'000	41
Total	26'738'000	6'013'600	6'492'400	7'116'000	7'116'000	100

NCCR Catalysis

Sustainable chemical processes through catalyst design

NCCR Director: Prof. Javier Pérez-Ramírez, NCCR Co-Director: Jérôme Waser

Home Institutions: ETH Zurich, EPFL

Start date: 1st of August 2020 (5th NCCR series)

Description

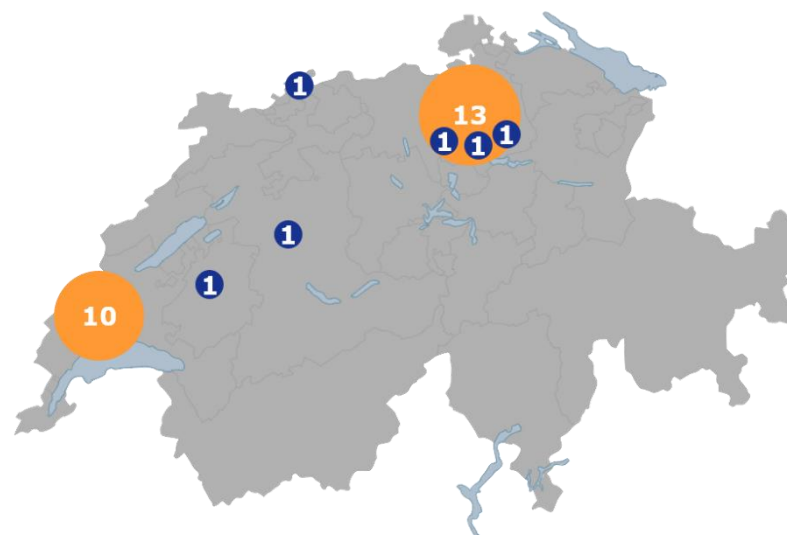
NCCR Catalysis aims to develop new catalytic processes that enable the production of societally-relevant compounds like fine chemicals, pharmaceuticals, and functional materials from abundant and renewable small-molecule feedstocks (e.g., carbon dioxide, methane, water, or nitrogen). To achieve the required fundamental understanding of relevant phenomena at length and time scales spanning ten orders of magnitude – from the atom to the full-scale process – NCCR Catalysis combines multidisciplinary and cross-dimensional modes, connecting research from chemistry, biotechnology, chemical and process engineering, and computer science. The adoption of digital methods sets the foundations for accelerating chemical discovery and the translation into competitive plant-ready technologies with tangible benefits to people and the environment. For further information visit: <https://www.nccr-catalysis.ch/>

Heads of Research Groups

Prof. **Peter Broekmann**, Department of Chemistry and Biochemistry, University of Bern
Prof. **Rebecca M. Buller**, Centre for Biocatalysis and Process Technology, ZHAW
Prof. **Raffaella Buonsanti**, Institute of Chemical Sciences and Engineering, EPFL
Prof. **Erick M. Carreira**, Department of Chemistry and Applied Biosciences, ETH Zürich
Prof. **Peter Chen**, Department of Chemistry and Applied Biosciences, ETH Zürich
Prof. **Christophe Coperet**, Department of Chemistry and Applied Biosciences, ETH Zürich
Prof. **Clemence Corminboeuf**, Institute of Chemical Sciences and Engineering, EPFL
Prof. **Nicolai Cramer**, Institute of Chemical Sciences and Engineering, EPFL
Prof. **Andrew J. deMello**, Department of Chemistry and Applied Biosciences, ETH Zürich
Prof. **Paul J. Dyson**, Institute of Chemical Sciences and Engineering, EPFL
Prof. **Gonzalo Guillén-Gosálbez**, Department of Chemistry and Applied Biosciences, ETH Zürich
Prof. **Sophia Haussener**, Institute of Chemical Sciences and Engineering, EPFL
Prof. **Stefanie Hellweg**, Department of Civil, Environmental and Geomatic Engineering, ETH Zürich
Prof. **Xile Hu**, Institute of Chemical Sciences and Engineering, EPFL
Prof. **Gunnar Jeschke**, Department of Chemistry and Applied Biosciences, ETH Zürich
Prof. **Maksym V. Kovalenko**, Department of Chemistry and Applied Biosciences, ETH Zürich
Prof. **Andreas Krause**, Department of Computer Science, ETH Zürich
Dr. **Teodoro Laino**, IBM Research GmbH
Prof. **Jeremy S. Luterbacher**, Institute of Chemical Sciences and Engineering, EPFL
Prof. **Roger Marti**, School of Engineering and Architecture of Fribourg, HEFR
Prof. **Christoph R. Müller**, Department of Mechanical and Process Engineering, ETH Zürich
Prof. **Cristina Nevado**, Department of Chemistry, University of Zurich
Prof. **Javier Pérez-Ramírez**, Department of Chemistry and Applied Biosciences, ETH Zürich
Prof. **Markus Reiher**, Department of Chemistry and Applied Biosciences, ETH Zürich
Prof. **Kevin Sivula**, Institute of Chemical Sciences and Engineering, EPFL
Prof. **Wendelin J. Stark**, Department of Chemistry and Applied Biosciences, ETH Zürich
Prof. **Thomas R. Ward**, Department of Chemistry, University of Basel
Prof. **Jérôme Waser**, Institute of Chemical Sciences and Engineering, EPFL
Prof. **Jieping Zhu**, Institute of Chemical Sciences and Engineering, EPFL

Participating Institutions

University of Basel (1 group)/University of Bern (1 group)/University of Zurich (1 group)/EPFL (10 groups)/ETH Zürich (13 groups)/HEFR (1 group)/IBM Research (1 group)/ZHAW (1 group)



● Home Institutions
● Partner Institutions

Key collaborations with third parties

CAT+, CH
NCCR MARVEL, CH
Scienceindustries Switzerland, CH
SusChem Switzerland, CH
Swiss Chemical Society (SCG), CH
Swiss Data Science Centre (SDSC), CH
Swiss Industrial Biocatalysis Consortium (SIBC), CH
Swiss National Supercomputing Centre (CSCS), CH
Swiss Process and Chemical Engineers (SGVC), CH
Advanced Research Center Chemical Building Blocks Consortium (ARCCBBC)
Catalysis Theory Center (CatTheory), DK
Max Planck Institute for Chemical Energy Conversion (MPI CEC), DE
Multiscale Catalytic Energy Conversion Research Center (MCEC), NL
European Chemical Society (EuChemS), Europe
European Federation of Catalysis Societies (EFCATS), Europe
SUNERGY, Europe
NUS Flagship Green Energy Programme, SG
SUNCAT Center for Interface Science and Catalysis, USA

Funding

Funding Source (CHF)	Total Phase 1 2020 – 2023	2020	2021	2022	2023	Phase 1 %
SNSF-funding	17'000'000	3'600'000	3'900'000	4'700'000	4'800'000	53
Self-funding from Home Institutions	14'890'203	3'279'369	3'870'278	3'870'278	3'870'277	47
Total	31'890'203	6'879'369	7'770'278	8'570'278	8'670'277	100

NCCR Evolving Language

The Origins and Future of Language

NCCR Director: Prof. Balthasar Bickel, NCCR Co-Director: Anne-Lise Giraud

Home Institution: University of Zurich, University of Geneva

Start date: 1st of June 2020 (5th NCCR series)

Description

The NCCR "Evolving Language" is researching the evolution of language more broadly than any other research centre to date. The NCCR is using an interdisciplinary approach bringing together research groups from the humanities (linguistics, philosophy), biology, neurosciences, psychology and computer sciences.

Researchers are focusing on three issues: firstly, the dynamics of language structures and their evolution; then the biological prerequisites for language, including the related question of whether and how neurotechnologies could or should be used to influence language capabilities; and lastly, the social meaning of language and how it is likely to change with new means of communication.

The NCCR promises innovations and transfer services in medical fields (e.g. diagnosis and treatment of speech disorders) and in the application of digital instruments (human-machine communication, artificial intelligence, complex voice recognition).

For further information visit: <https://www.evolvinglanguage.ch/>

Heads of Research Groups

Prof. **Adrian Bangert**, Institut de Psychologie du Travail et des Organisations, Université de Neuchâtel

Prof. **Daphné Bavelier**, Faculté des Sciences et de l'Éducation, Université de Genève

Prof. **Raphael Berthele**, Institute of Multilingualism, Université de Fribourg

Prof. **Balthasar Bickel**, Institut für Vergleichende Sprachwissenschaft, Universität Zürich

Prof. **Hervé Bourlard**, Institut de Recherche, IDIAP

Prof. **Silvia Brem**, Klinik für Kinder- und Jugendpsychiatrie und Psychotherapie, Universität Zürich

Prof. **Judith Burkart**, Anthropologisches Institut und Museum, Universität Zürich

Prof. **Fabrice Clément**, Centre de Sciences Cognitives, Université de Neuchâtel

Prof. **Moritz Daum**, Psychologisches Institut, Universität Zürich

Prof. **Volker Dellwo**, Institut für Computerlinguistik, Universität Zürich

Prof. **Reinhard Furrer**, Institut für Mathematik, Universität Zürich

Prof. **Anne-Lise Giraud**, Département des neurosciences fondamentales, Université de Genève

Prof. **Hans-Johann Glock**, Philosophisches Seminar, Universität Zürich

Prof. **Narly Golestani**, Département des neurosciences fondamentales, Université de Genève

Prof. **Didier Grandjean**, Département de Psychologie, Université de Genève

Prof. **Adrian Guggisberg**, Département des Neurosciences Cliniques, Université de Genève

Prof. **Richard Hahnloser**, Département Informationstechnologie und Elektrotechnik, ETH Zürich

Dr. **James Henderson** Institut de Recherche, IDIAP

Prof. **Samia Hurst**, Institut Ethique Histoire Humanités, Université de Genève

Prof. **Marina Laganaro**, Département de Psycholinguistique, Université de Genève

Prof. **Christian Lovis**, Sciences de l'information, Université de Genève

Prof. **Marta Manser**, Institut für Evolutionsbiologie und Umweltwissenschaften, Universität Zürich

Prof. **Paola Merlo**, Département de Linguistique, Université de Genève

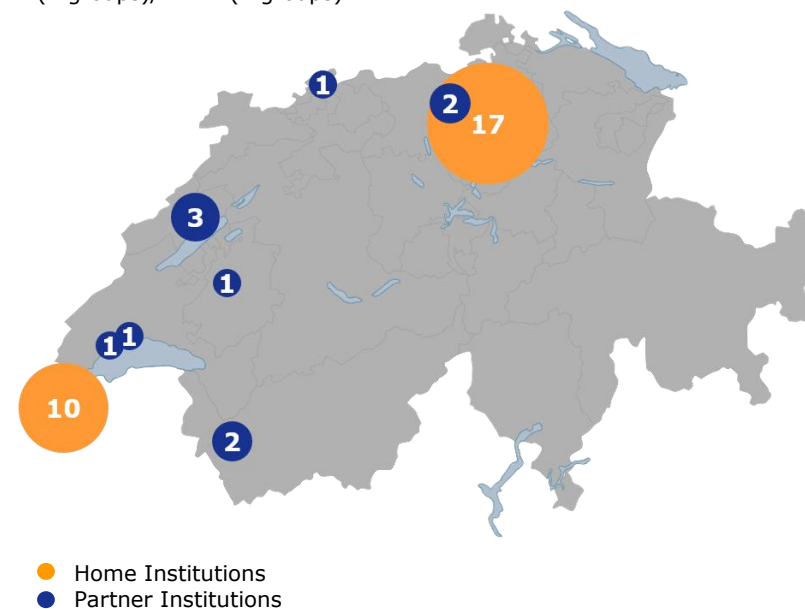
Prof. **Martin Meyer**, Psychologisches Institut, Universität Zürich

Prof. **Marcelo Sánchez-Villagra**, Paläontologisches Institut und Museum, Universität Zürich

Prof. **Kentaro Shimizu**, Institut für Evolutionsbiologie und Umweltwissenschaften, Universität Zürich

Participating Institutions

Universität Basel (1 group)/Université de Fribourg (1 group)/Université de Genève (10 groups)/Université de Lausanne (1 group)/Université de Neuchâtel (3 groups)/Universität Zürich (17 groups)/EPFL (1 group)/ETHZ (2 groups)/IDIAP (2 groups)



Heads of Research Groups (continued)

Prof. **Sabine Stoll**, Institut für Vergleichende Sprachwissenschaft, Universität Zürich
Prof. **Simon Townsend**, Institut für Vergleichende Sprachwissenschaft, Universität Zürich
Prof. **Dimitri Van De Ville**, Laboratoire de traitement d'images médicales, EPLF
Prof. **Carel van Schaik**, Institut für Vergleichende Sprachwissenschaft, Universität Zürich
Prof. **Martin Volk**, Institut für Computerlinguistik, Universität Zürich
Prof. **Robert Weibel**, Geographisches Institut, Universität Zürich
Prof. **Paul Widmer**, Institut für Vergleichende Sprachwissenschaft, Universität Zürich
Prof. **Markus Wild**, Philosophisches Seminar, Universität Basel
Dr. **Aris Xanthos**, Section des sciences du langage et de l'information, Université de Lausanne
Prof. **Pascal Zesiger**, Faculté des Sciences et de l'Éducation, Université de Genève
Prof. **Ce Zhang**, Department of Computer Science, ETH Zürich
Prof. **Klaus Zuberbühler**, Institut de Biologie, Cognition Comparée, Université de Neuchâtel

Key collaborations with third parties

Academia

Campus Biotech
Citizen Science Center Zürich
LiRI (Linguistic Research Infrastructure)
Swiss Data Science Center
ZNZ (Zentrum für Neurowissenschaften Zürich)

Private and public sector

Google Research
Sonova
Wyss Center
Zoo Basel

Funding

Funding Source (CHF)	Total Phase 1 2020 – 2023	2020	2021	2022	2023	Phase 1 %
SNSF-funding	16'993'200	3'342'000	4'251'200	4'700'000	4'700'000	49
Self-funding from Home Institution	17'583'000	3'717'000	4'463'000	4'217'000	5'186'000	51
Total	34'576'200	7'059'000	8'714'200	8'917'000	9'886'000	100

NCCR Microbiomes

Microbial communities in health and environment

NCCR Director: Prof. Jan Roelof van der Meer, NCCR Co-Director: Prof. Julia Vorholt
Home Institution: University of Lausanne, ETH Zurich
Start date: 1st of July 2020 (5th NCCR series)

Description

The NCCR Microbiomes brings together an interdisciplinary research program with experimental and clinical microbiome studies. Combining computational, modeling, engineering and synthetic approaches, the Centre aims to understand the unifying principles of microbiome functioning, to develop tools to diagnose microbiome status, and to devise strategies to intervene and restore imbalanced microbiomes. Its scope encompasses microbial communities in human, animals, plants, as well as in natural and industrial environments.

Microorganisms are generally considered as dangerous pathogens. This rather simplistic view does not tell the whole story. Human, animal and plant life is closely linked to the unseen world of microorganisms. Complex and diverse communities of microorganisms populate each human being, animal and plant. These communities, known as microbiomes, play a major role in our lives and our environment, influencing important processes such as protection against disease, nutrient absorption and maintaining a healthy environment.

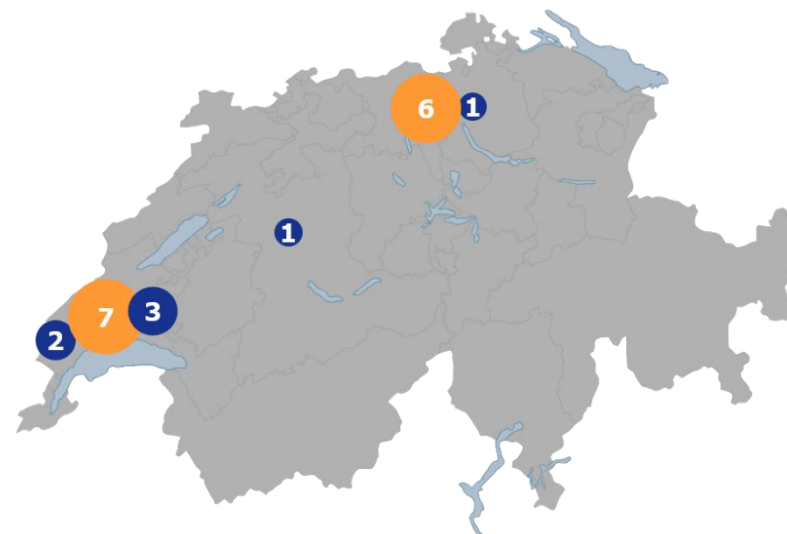
In the medium term, this research has the potential to create new bases for ground-breaking innovation in major sections of the economy and society, such as nutrition, personalised medicine, medical diagnostics, agriculture and the environment. For further information visit: www.nccr-microbiomes.ch

Heads of Research Groups

Prof. **Martin Ackermann**, Department of Environmental Systems Science, ETH Zürich
Prof. **Rizlan Bernier-Latmani**, Laboratoire de microbiologie environnementale, EPFL
Prof. **Philipp Engel**, Department of Fundamental Microbiology, Université de Lausanne
Prof. **Benoit Guery**, Service des maladies infectieuses, CHUV
Prof. **Gilbert Greub**, Institut de Microbiologie, CHUV
Prof. **Siegfried Hapfelmeier**, Institut für Infektionskrankheiten, Universität Bern
Prof. **Wolf-Dietrich Hardt**, Institut für Mikrobiologie, ETH Zürich
Prof. **Vassily Hatzimanikatis**, Institut des sciences et ingénierie chimiques, EPFL
Prof. **Christof Holliger**, Laboratoire de biotechnologie environnementale, EPFL
Prof. **Tadeusz Kawecki**, Department of Ecology and Evolution, Université de Lausanne
Dr. **Christoph Keel**, Department of Fundamental Microbiology, Université de Lausanne
Prof. **Sara Mitri**, Department of Fundamental Microbiology, Université de Lausanne
Prof. **Ian Sanders**, Department of Ecology and Evolution, Université de Lausanne
Prof. **Yolanda Schaerli**, Department of Fundamental Microbiology, Université de Lausanne
Prof. **Emma Slack**, Dept. Gesundheitswissenschaften und Technologie, ETH Zürich
Prof. **Roman Stocker**, Institut für Umweltingenieurwissenschaften, ETH Zürich
Prof. **Shinichi Sunagawa**, Institut für Mikrobiologie, ETH Zürich
Prof. **Jan R. van der Meer**, Department of Fundamental Microbiology, Université de Lausanne
Prof. **Christian von Mering**, Institute of Molecular Life Sciences, Universität Zürich
Prof. **Julia Vorholt**, Institut für Mikrobiologie, ETH Zürich

Participating Institutions

Universität Bern (1 group)/Universität Zürich (1 group)/Université de Lausanne (7 groups)/EPFL (3 groups)/ETH Zurich (6 groups)/CHUV (2 groups)



● Home Institutions
● Partner Institutions

Key collaborations with third parties

Academia

Max Planck Society, DE
 EMBL Heidelberg, DE
 National University of Colombia, CO
 Wageningen University and Research, NL
 University of Fribourg, CH
 University Hospital Zurich, CH
 Inselspital University Hospital Bern, CH
 University of Basel, CH
 Agroscope, CH
 Eawag, CH

Private and public sector

NFDI4Microbiota Initiative, DE
 MiCRop Research Programme, NL
 The TARA Ocean Foundation, FR
 Simons Foundation, US
 European Academy of Microbiology
 Swiss Society for Microbiology, CH
 European Society for Clinical Microbiology and Infectious Diseases
 Musée de la Main, Lausanne, CH
 Zoologisches Museum der Universität Zürich, CH
 Promega, CH

Funding

Funding Source (CHF)	Total Phase 1 2020 – 2023	2020	2021	2022	2023	Phase 1 %
SNSF-funding	16'086'204	3'386'204	3'700'000	4'500'000	4'500'000	52
Self-funding from Home Institution	15'131'271	3'779'100	3'779'500	3'774'271	3'798'400	48
Total	31'217'475	7'165'304	7'479'500	8'274'271	8'298'400	100

NCCR SPIN

Spin Qubits in Silicon

NCCR Director: Prof. Richard Warburton, NCCR Co-Director: Daniel Loss

Home Institution: University of Basel

Start date: 1st of August 2020 (5th NCCR series)

Description

The NCCR SPIN aims to make a major contribution to research into and the development of quantum computers and create the basis for a new information-processing technology. The NCCR's objective is to develop small, fast, scalable silicon-based qubits. It will also generate important findings on software and algorithm development, error correction and the architecture of future quantum computers.

The NCCR comprises an interdisciplinary team with research groups working in experimental and theoretical physics, material science, engineering and computer science. There will also be close cooperation with the industry-based research partner IBM Research, creating exceptional opportunities to develop prototypes and practically applicable technology. This could lay the foundations for accelerating the pace of digitalisation.

For further information visit: <http://www.nccr-spin.ch>

Heads of Research Groups

Prof. **Klaus Ensslin**, Department of Physics, ETH Zürich

Prof. **Anna Fontcuberta i Morral**, STI IMX LMSC, EPFL

Dr. **Andreas Fuhrer**, IBM Research Rüschlikon

Prof. **Thomas Ihn**, Department of Physics, ETH Zürich

Prof. **Adrian Ionescu**, STI IEL NANOLAB ELB, EPFL

Prof. **Jelena Klinovaja**, Department of Physics, Universität Basel

Prof. **Daniel Loss**, Department of Physics, Universität Basel

Prof. **Mathieu Luisier**, Dept. of Information Technology and Electrical Engineering, ETH Zürich

Dr. **Kirsten Moselund**, IBM Research Rüschlikon

Prof. **Martino Poggio**, Department of Physics, Universität Basel

Dr. **Heike Riel**, IBM Research Rüschlikon

Dr. **Gian Salis**, IBM Research Rüschlikon

Prof. **Pasquale Scarlino**, SB IPHYS HQC, EPFL

Prof. **Christian Schönenberger**, Department of Physics, Universität Basel

Prof. **Andreas Wallraff**, Department of Physics, ETH Zürich

Prof. **Richard Warburton**, Department of Physics, Universität Basel

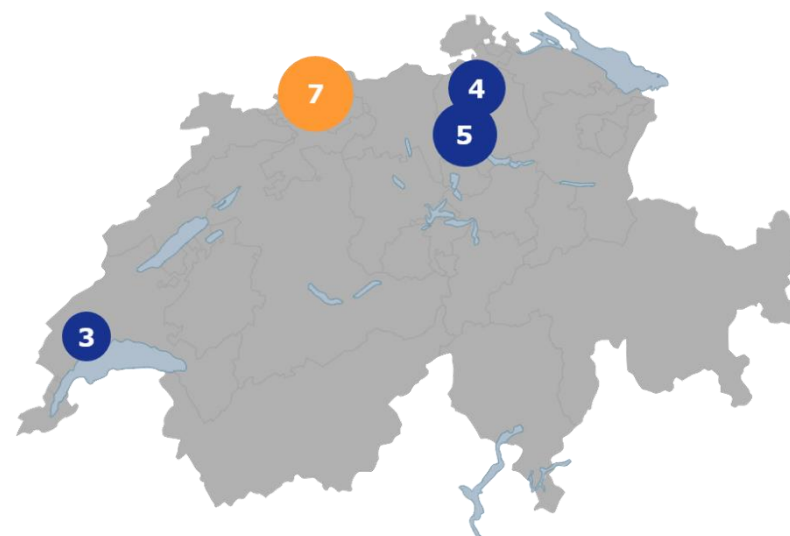
Dr. **James Wootton**, IBM Research Rüschlikon

Prof. **Ilaria Zardo**, Department of Physics, Universität Basel

Prof. **Dominik Zumbühl**, Department of Physics, Universität Basel

Participating Institutions

Universität Basel (7 groups)/EPFL (3 groups)/ETH Zurich (4 groups)/
IBM (5 groups)



- Home Institutions
- Partner Institutions

Key collaborations with third parties

Academia

Forschungszentrum Jülich, DE
Harvard University, US
IST Austria, AT
Lancaster University, UK
Lund University, SE
Oxford University, UK
Princeton University, US
RIKEN, JP
RWTH Aachen, DE
TU Delft, NL
Université Grenoble Alpes and CEA Grenoble, FR
University College London, UK
University of Copenhagen, DK
University of Konstanz, DE
University of New South Wales, AU
University of Twente, NL

Private and public sector

CEA, FR
CNRS, FR
IBM, Yorktown Heights, US
IHP, DE
IKZ, DE
IMEC, BE
Infineon, Dresden, DE
Soitec, FR

Funding

Funding Source (CHF)	Total Phase 1 2020 - 2023	2020	2021	2022	2023	Phase 1 %
SNSF-funding	17'000'000	3'900'000	4'000'000	4'500'000	4'600'000	56
Self-funding from Home Institution	13'310'000	2'965'000	2'965'000	2'965'000	4'415'000	44
Total	30'310'000	6'865'000	6'965'000	7'465'000	9'015'000	100

Impressum

The brochure "Guide" presents an overview on the currently running NCCRs. The statistical data is based on the latest progress reports of the NCCRs submitted during 2020. It is updated every year and can be downloaded as a pdf on our website: www.snsf.ch/Publications

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