

Research Integrity at PSI

Information for doctoral students

PSI, Audimax

Monday Nov. 19, **2012**

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PA :: Arbeiten am PSI - Mozilla Firefox

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https://intranet.psi.ch/PA/ArbeitenAmPSICategory

Mitarbeitende / Kontakt
Personalbewegungen / Mutationen
Situations
Arbeiten am PSI
Arbeitszeit / Absenzen
Führung
Honorierung
Versicherungen / Vorsorge
Personalentwicklung
Beratung bei Problemen
Austritt
Praktikum / Externe
Alles auf einen Blick (A-Z)

Informationen über die Anstellungsbedingungen am PSI (allgemein und für Doktorierende)

Aufenthaltsbewilligung / Arbeitsbewilligung
Das Bundesamt für Migration regelt, unter welchen Bedingungen jemand in die Schweiz einreisen, hier leben und arbeiten darf

Chancengleichheit
Informationsstelle für alle Mitarbeitenden bei Fragen betreffend Chancengleichheit

Integrität in der Forschung
Wahrhaftigkeit, Offenheit, Selbstkritik und Fairness sind die Grundlage für die Glaubwürdigkeit und Akzeptanz der Wissenschaft.

Wir Forschende am PSI sind diesen Werten verpflichtet und halten uns an die daraus abgeleiteten Richtlinien.

- Information des Direktors
- Broschüre/Richtlinie
- Verfahrensordnung
- PhD Guideline**
- Homepage Research Integrity

Ombudsstelle/Vertrauensperson: Heinz Gäggeler, heinz.gaeggeler@psi.ch
Er steht den Forschenden bezüglich Fragen zur Integrität in der Forschung und zur guten wissenschaftlichen Praxis beratend, unterstützend und vermittelnd zur Verfügung und ist Ansprechperson für das Melden von vermuteten Interessenkonflikten sowie von eigenmächtigen Verhaltensweisen, welche Forschungsarbeiten behindern (whistle blowing). Weiterhin nimmt er sämtliche Anliegen bezüglich der Richtlinie „Integrität in der Forschung“ entgegen und wahrt dabei auf Wunsch die absolute Anonymität.

Darstellung als einzelne Seite: [IntegritaetInDerForschung](#)

Jugendliche Arbeitnehmende / Jugendschutz
Beim Einsatz von jugendlichen Arbeitnehmenden gibt es einiges zu beachten

Kompetenzen, Unterschriftsberechtigungen, Zuständigkeiten
Informationen zum Thema Datenschutz für Prozesse und Abläufe der Personalgeschäfte

Lehrtaetigkeit
Richtlinie zur Vergütung der Lehrtätigkeit an Hochschulen und Fachhochschulen von PSI-Mitarbeitenden

Lohnkonto Änderung
Hat sich Ihr Bankkonto oder Postkonto für die Lohnüberweisung geändert?

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Guidelines content

- Research plan
- Experimental work
- Reporting
- *Ethical guidelines*
- Publication
- Duration
- Writing the thesis
- Exams
- After the thesis

- Ethical guidelines
Scientific integrity is one of the highest assets in academic research. Corresponding guidelines are available at PSI, based on international and national recommendations. You must consult these guidelines and consider them carefully in your daily work.

On being a scientist

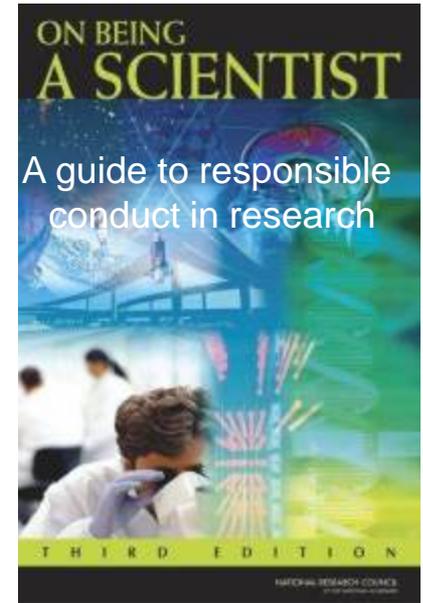
Why you are scientist ?

What you are doing? (answer next slide)

How you do science?

Research Integrity (part of science ethics)

- *What shall we do?* (research topics)
- *Principles: how you should conduct* (normative)
- Theories, responsibility, codices, history (e.g. atomic bomb), meta-science, etc., merit-rating (bibliography, other criteria, scientific career)



Avoid damage (respect rules): to persons, animals & environment

Create benefits: for the society (health, services, food, energy)

Be fair: distribution of merits (authorship, reviewing, plagiarism)

Respect autonomy: human experiments, freedom of research, grants

Research definition (goals and how)

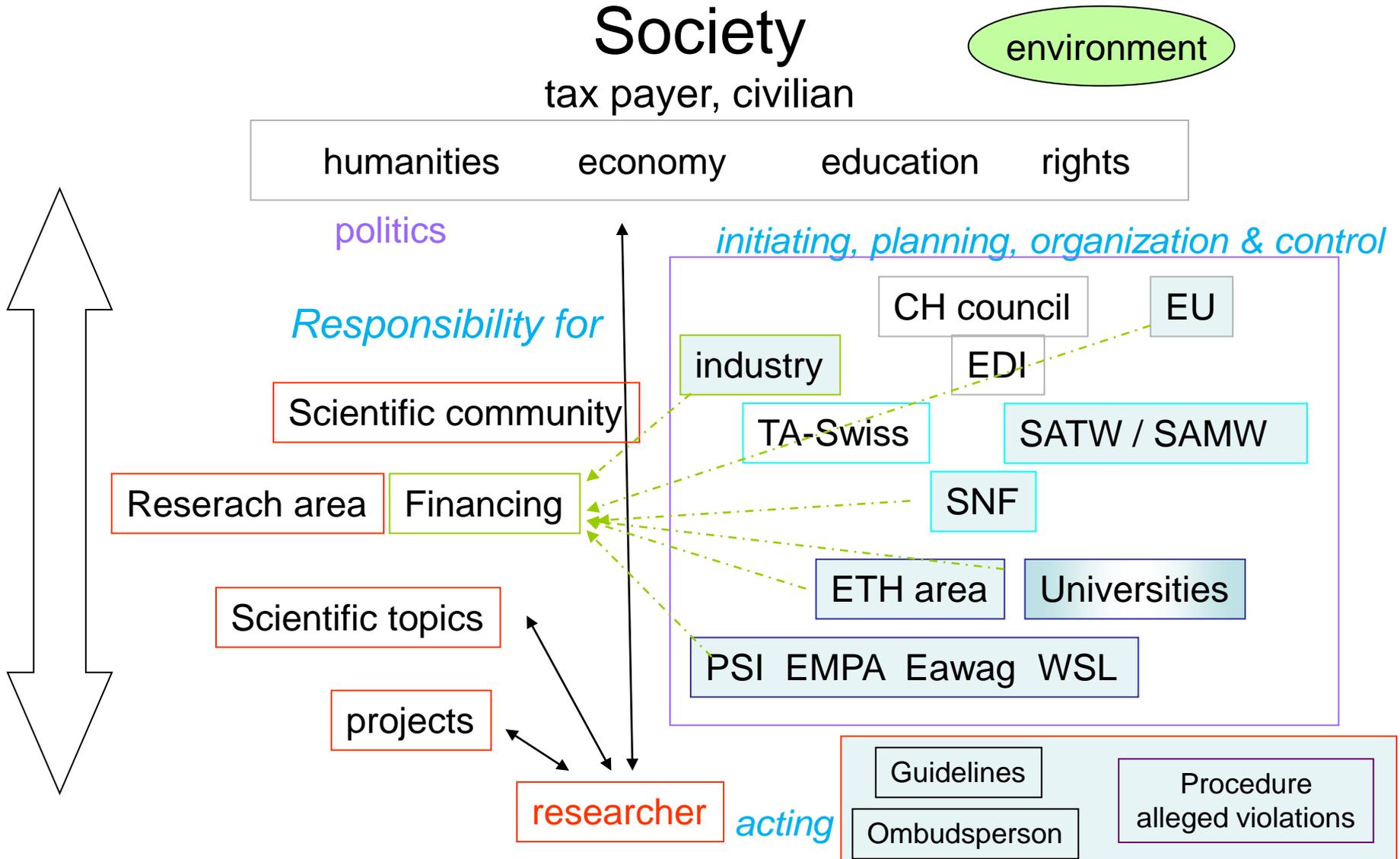
Research can be defined as **search for knowledge**, or as any **systematic investigation**, to establish **novel facts**, **solve** new or existing **problems**, prove **new ideas**, or develop **new theories**, usually using a **scientific method**. The primary purpose for **basic research** (as opposed to **applied research**) is **discovering**, **interpreting**, and the **development of methods** and **systems** for the advancement of **human knowledge** on a wide variety of **scientific* matters** of our world and the universe.

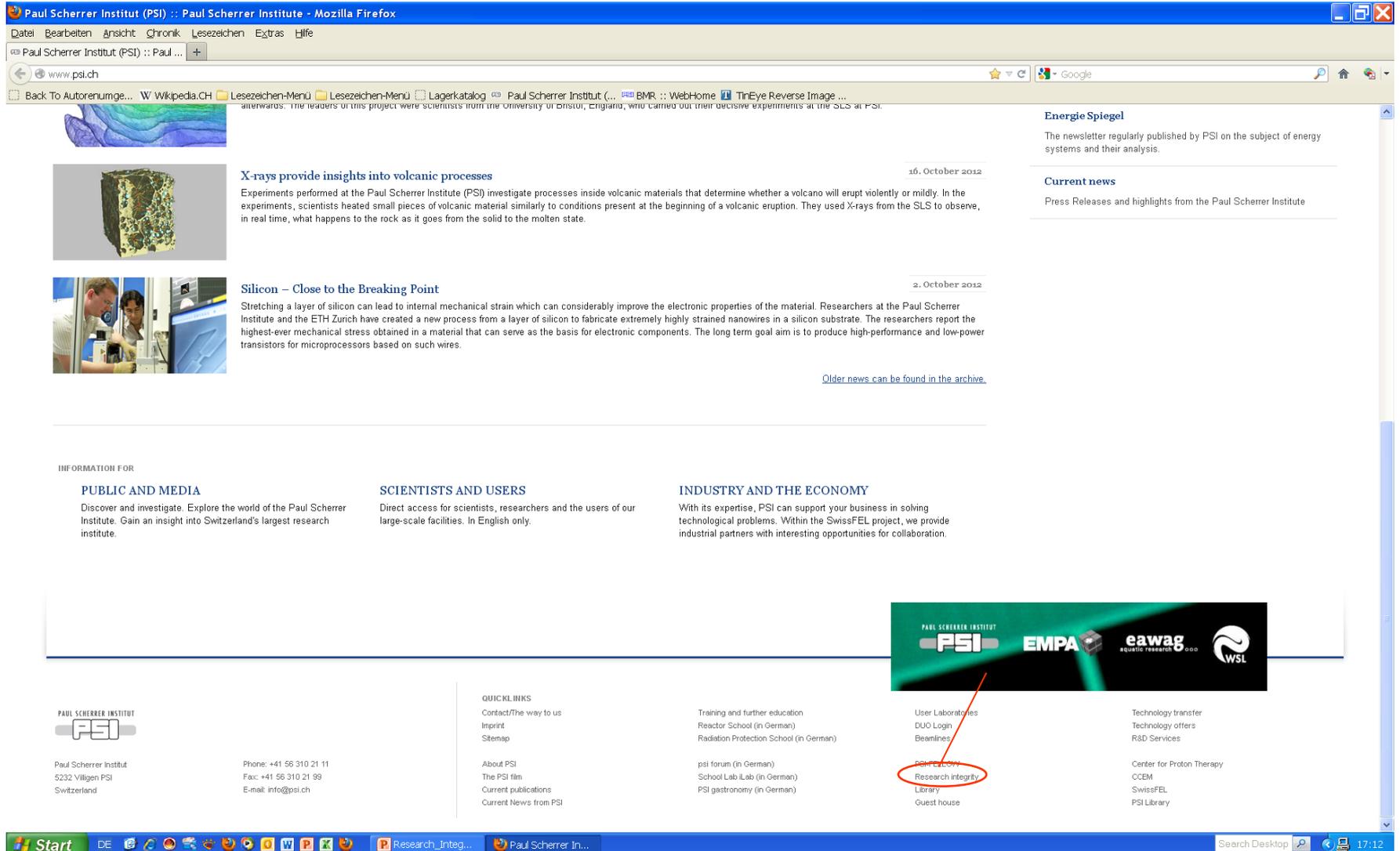
(Wikipedia)

You are creating options for the future !

* Criteria of science: *commonly* accepted and accessible, independent, revisable

Responsible research





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www.psi.ch

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alternatives: the readers of this project were scientists from the University of Bristol, England, who carried out their decisive experiments at the SLS at PSI.

Energie Spiegel
 The newsletter regularly published by PSI on the subject of energy systems and their analysis.

Current news
 Press Releases and highlights from the Paul Scherrer Institute

X-rays provide insights into volcanic processes
 16. October 2012
 Experiments performed at the Paul Scherrer Institute (PSI) investigate processes inside volcanic materials that determine whether a volcano will erupt violently or mildly. In the experiments, scientists heated small pieces of volcanic material similarly to conditions present at the beginning of a volcanic eruption. They used X-rays from the SLS to observe, in real time, what happens to the rock as it goes from the solid to the molten state.

Silicon – Close to the Breaking Point
 2. October 2012
 Stretching a layer of silicon can lead to internal mechanical strain which can considerably improve the electronic properties of the material. Researchers at the Paul Scherrer Institute and the ETH Zurich have created a new process from a layer of silicon to fabricate extremely highly strained nanowires in a silicon substrate. The researchers report the highest-ever mechanical stress obtained in a material that can serve as the basis for electronic components. The long term goal aim is to produce high-performance and low-power transistors for microprocessors based on such wires.

[Older news can be found in the archive.](#)

INFORMATION FOR

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SCIENTISTS AND USERS
 Direct access for scientists, researchers and the users of our large-scale facilities. In English only.

INDUSTRY AND THE ECONOMY
 With its expertise, PSI can support your business in solving technological problems. Within the SwissFEL project, we provide industrial partners with interesting opportunities for collaboration.

PAUL SCHERRER INSTITUT

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Training and further education
 Reactor School (in German)
 Radiation Protection School (in German)

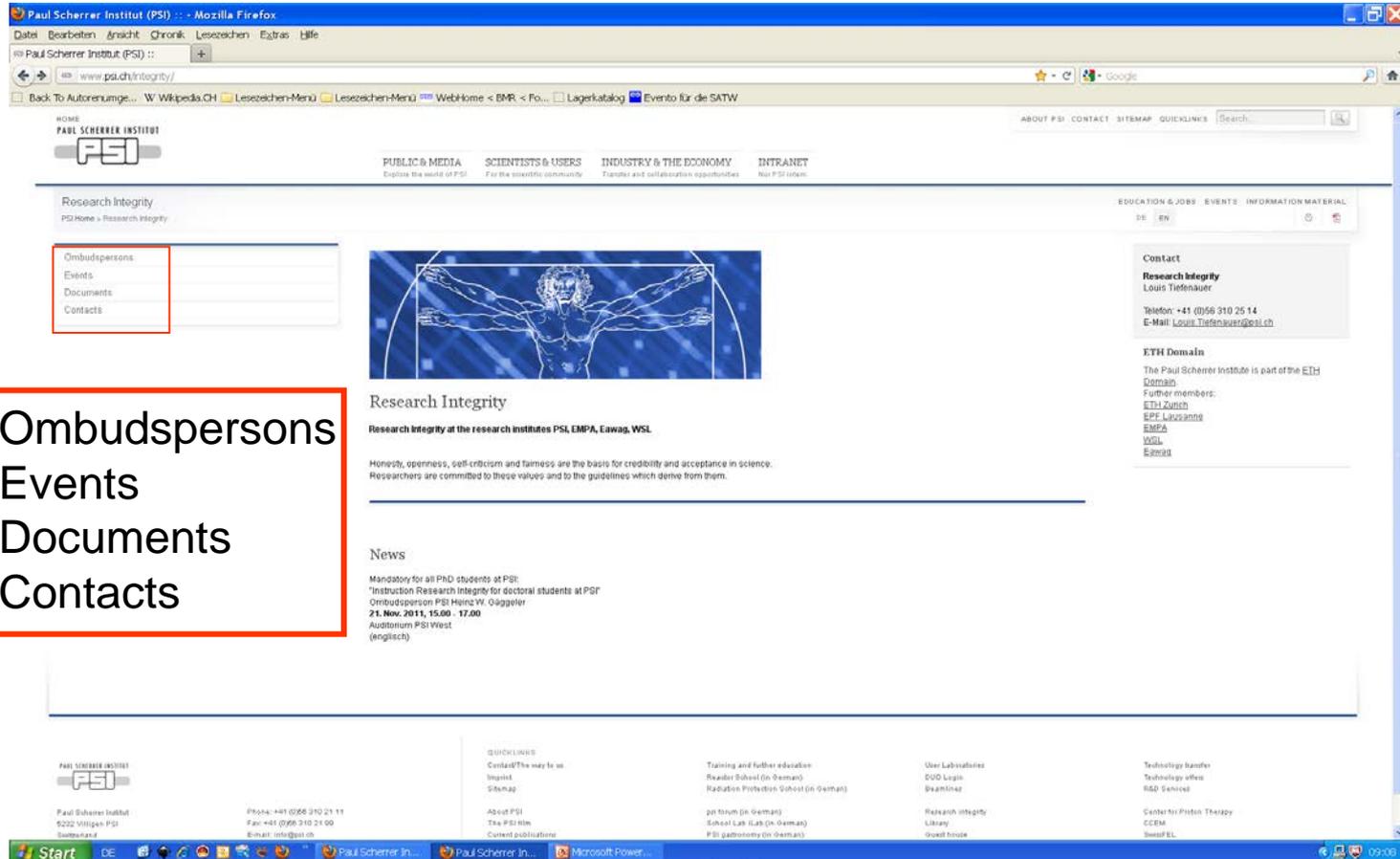
psi forum (in German)
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 PSI gastronomy (in German)

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Technology transfer
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PAUL SCHERRER INSTITUT
 EMPA eawag
 AQUATIC TECHNOLOGY WSL

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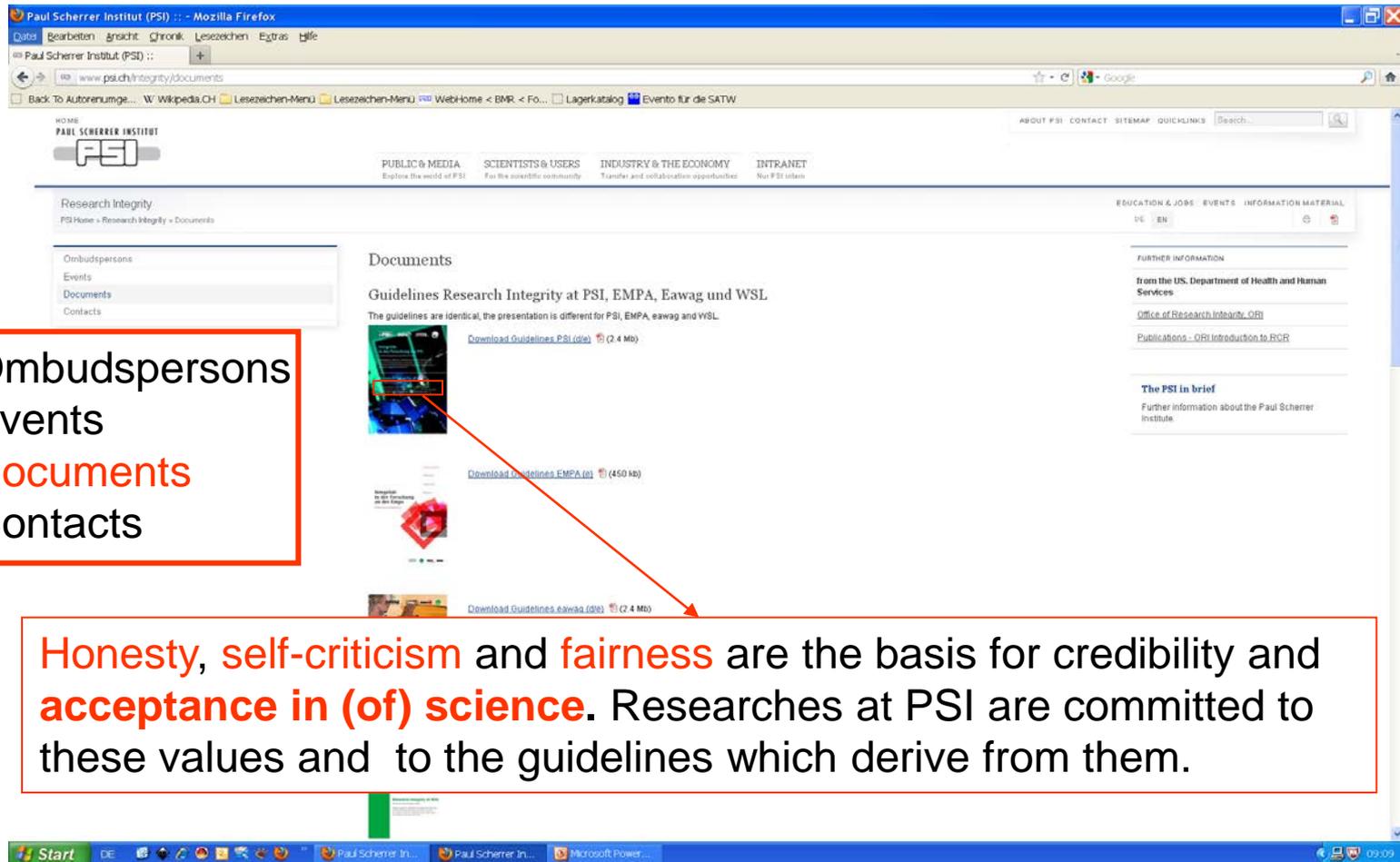


Ombudspersons
Events
Documents
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Research Integrity
 Research Integrity at the research institutes PSI, EMPA, Eawag, WSL

Honesty, openness, self-criticism and fairness are the basis for credibility and acceptance in science. Researchers are committed to these values and to the guidelines which derive from them.

News
 Mandatory for all PhD students at PSI:
 *Instruction Research Integrity for doctoral students at PSI
 Ombudsperson PSI Heinz W. Guggeler
 21. Nov. 2011, 15:00 - 17:00
 Auditorium PSI West
 (englisch)

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www.psi.ch/integrity/documents

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INDUSTRY & THE ECONOMY Transfer and collaboration opportunities

INTRANET For PSI sites

Research Integrity
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FURTHER INFORMATION

from the US, Department of Health and Human Services

Office of Research Integrity (ORI)

Publications - ORI Introduction to RCR

The PSI in brief
Further information about the Paul Scherrer Institute

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Documents

Guidelines Research Integrity at PSI, EMPA, Eawag und WSL

The guidelines are identical, the presentation is different for PSI, EMPA, eawag and WSL.

Download Guidelines PSI (pdf) (2.4 Mb)

Download Guidelines EMPA (pdf) (450 kb)

Download Guidelines eawag (pdf) (2.4 Mb)

Honesty, self-criticism and fairness are the basis for credibility and acceptance in (of) science. Researches at PSI are committed to these values and to the guidelines which derive from them.

Start DE [Taskbar icons] Paul Scherrer In... Paul Scherrer In... Microsoft Power... 09:09

- *Respect* guidelines (are legal part of working contract)
- *Avoid* misconduct (violations are persecuted; especially fabrication, falsification & theft of data, plagiarism, FFTP, etc.)
- *Contribute*
 - to benefits of science (**results!**)
 - to credibility of sciences (self-criticism)
 - to acceptance of sciences (open days, popular sciences)
 - to advancement of sciences (seminars, education, etc.)
- *Ask for help* (Ombudsperson for all topics, avoid whistle blowing)

Research integrity at PSI

- PhD vademecum, PSI 2010
- Workshop Authorship 2011
- Workshop Avoiding plagiarism 2012
- Workshop 2013
- Freedom of research, conflict of interest



WIR MACHEN INTEGRALFORSCHUNG!



Courtesy from ETHZ
„Guidelines Research integrity“

Paul Scherrer Institut

Daniel C. Oderbolz, AIT

Survival in the “Digital Lab”

- How do you
 - manage your documents?
 - store your valuable data?
 - manage your code?
 - collaborate with others?

- My goal: give an overview of a selection of tools to make your life easier

- Many things are easy

- Copy
 - Share
 - Loose
 - Fake
- } data

- Some things are hard

- Keeping track!
- Managing the huge heap of data
- Finding the right data (of your predecessor)

- Source Code Control (subversion, soon: git)



- Know what was changed
- "Time machine"

- Wiki (the Intranet)



- Work documentation
- Lab organisation

- Document Management Service



- Full-Text index all your documents
- Improved Collaboration (Vs. Email Ping-Pong)
- Version Control for your documents and data files

- Contact me (daniel.oderbolz@psi.ch)
- Refer to the https://intranet.psi.ch/Knowledge_Forum
- Soon: Screencasts

- Would a PhD workshop on the **how** in the Digital Lab be interesting for you?
https://intranet.psi.ch/Knowledge_Forum/DigitalLab