

<http://www.pubillu/web/index.html>

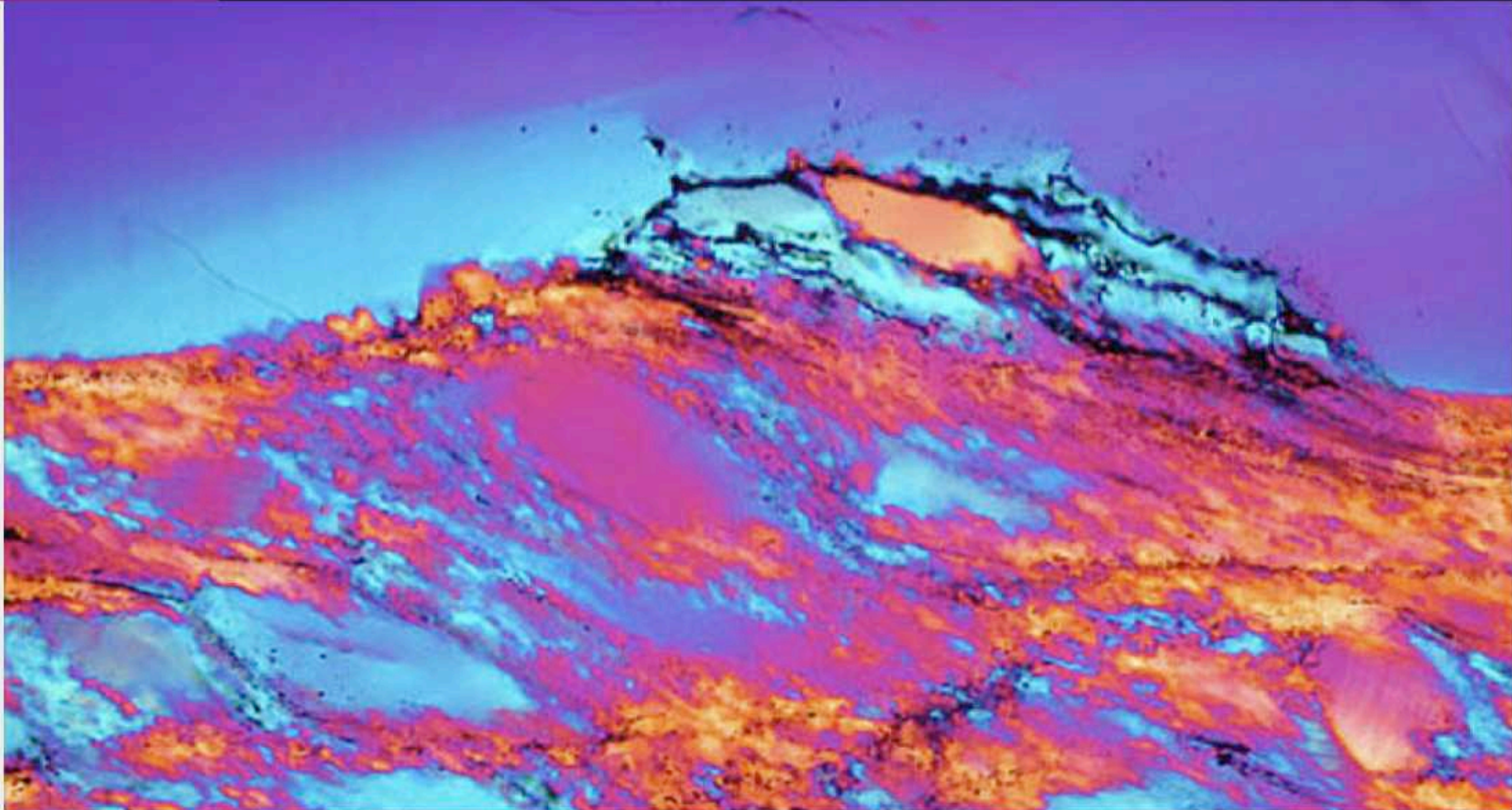
>>> BASEL UNIVERSITY HOMEPAGE  
>>> DEPARTMENT ENVIRONMENTAL SCIENCES  
>>> GEOLOGICAL INSTITUTE

>>> BASEL UNIVERSITY SCIENCE FACULTY (PHIL II)  
>>> BASEL UNIVERSITY LIBRARY  
>>> BASEL UNIVERSITY Vorlesungsverzeichnis  
>>> BASEL UNIVERSITY PERSEARCH



ROCK DEFORMATION HOME

[address](#) [lectures](#) [workshops](#) [software](#) [SXM macros](#) [manuals](#) [people](#) [projects](#) [publications](#)



ROCK DEFORMATION HOME

[address](#) [rock deformation lab](#) [pictures](#) [miscellaneous](#)

-Impressum-

>>> TROMSØ HARD ROCK HOMEPAGE  
>>> TROMSØ GEOLOGY HOMEPAGE  
>>> TROMSØ UNIVERSITY HOMEPAGE (english)

>>> TROMSØ WEBGEOLOGY





from Cicero's writings, British Museum

## SCIENTIFIC ILLUSTRATION AND PUBLISHING

### WISSENSCHAFTLICHES PUBLIZIEREN UND ILLUSTRIEREN

#### Übung (1 KP)

RENEE HEILBRONNER

#### Inhalt

Die Veranstaltung richtet sich an Studierende der höheren Semester, welche mit der einer grösseren Abschlussarbeit bzw. mit der Publikation ihrer Forschung befasst sind.

An vier Nachmittagen werden folgende Themen behandelt.

1. Herstellung einer Webpage (Text Editor, Browser)
2. Digitale Druckvorlagen (Vektor und Rastergrafik, Adobe Photoshop)
3. Herstellung eines Posters (Adobe Illustrator, Powerpoint)
4. Wissenschaftlicher Vortrag (PowerPoint).

#### Beilagen

werden verteilt



# Termine

27.10. Druckvorlagen

3.11. Poster

10.11. home page

17.11. Vortrag

24.11. frei

## PASS / FAIL

Leistungsüberprüfung:

1. Poster in digitaler Form abgeben

2. home page (Folder)

# Aufgabe I - Druckvorlagen

Im Folder GSA befinden sich Originalaufnahmen von Dünnschliffen (verschiedener Mikrostrukturen in Quarz und Feldspat)

Im Folder microstructures befinden sich die aufbereiteten Versionen davon. >>> Publikation Virtual Explorer

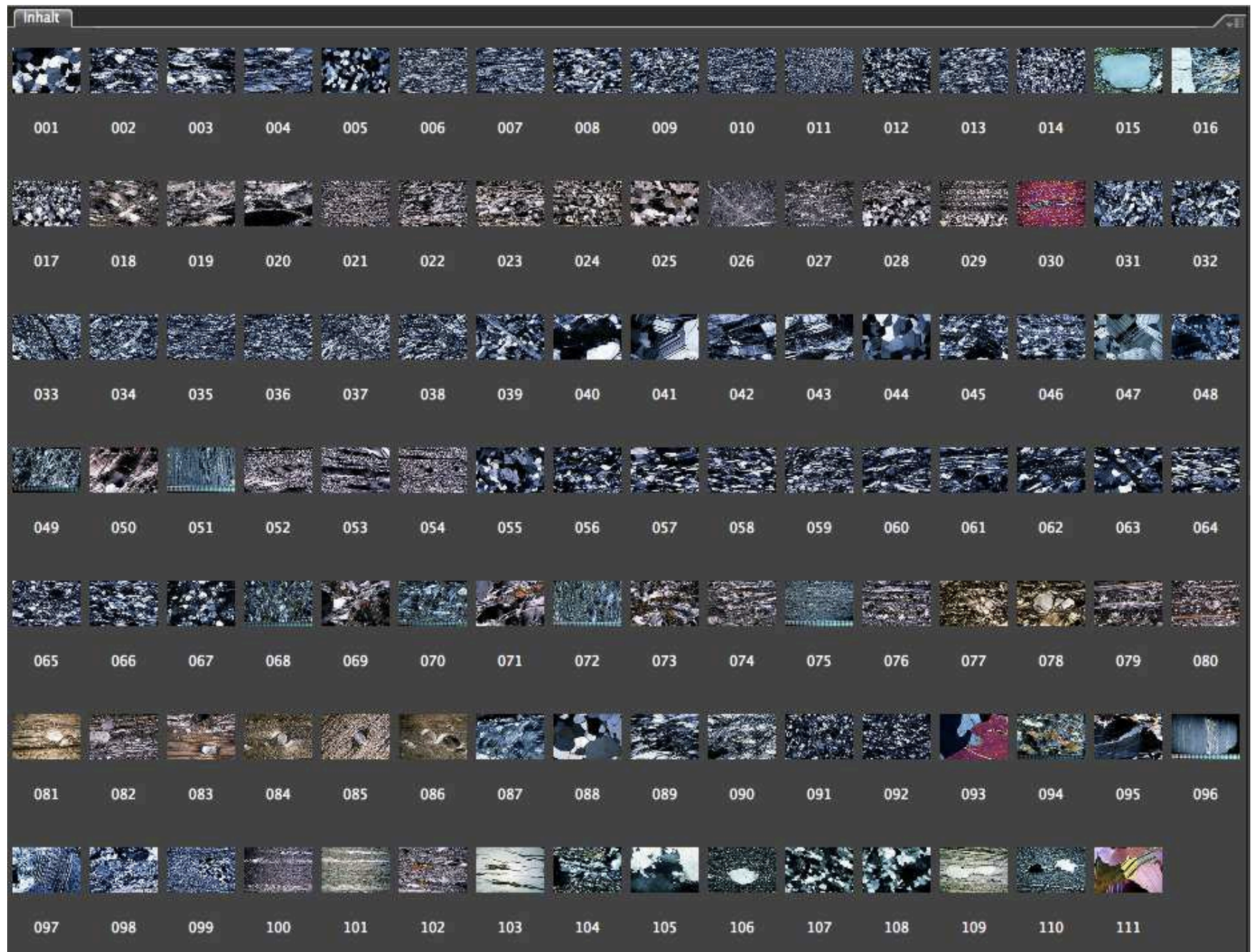
Nachvollziehen:

1. Hintergrundkorrektur select circle saturation brightness corr
2. Farbkorrektur colour corr
3. RGB - YMCK umwandlung monitor - druck
4. RGB - greyscale Kanal wählen
5. Kontrast Transfer kurven
6. Masstab einsetzen make scale
7. Hinweis auf bestimmte Strukturen Layers

Figurentafel herstellen aus 4-6 Mikrostrukturen

- farbig
- greyscale

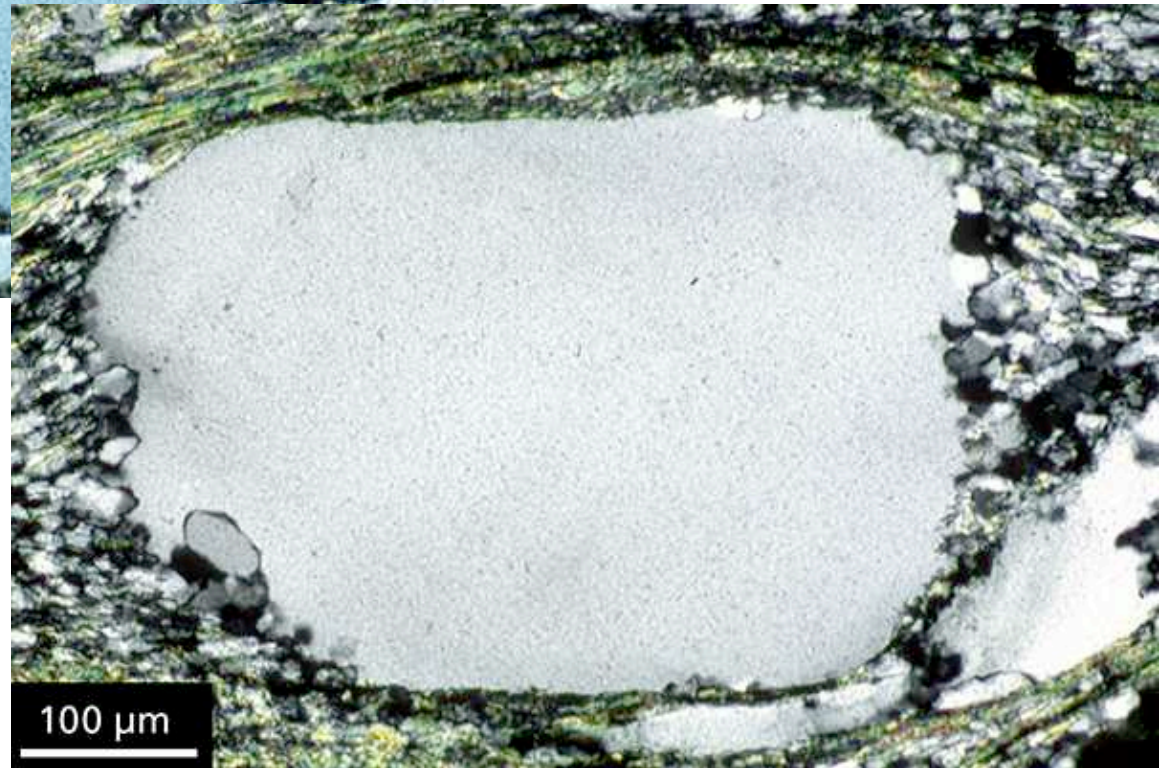
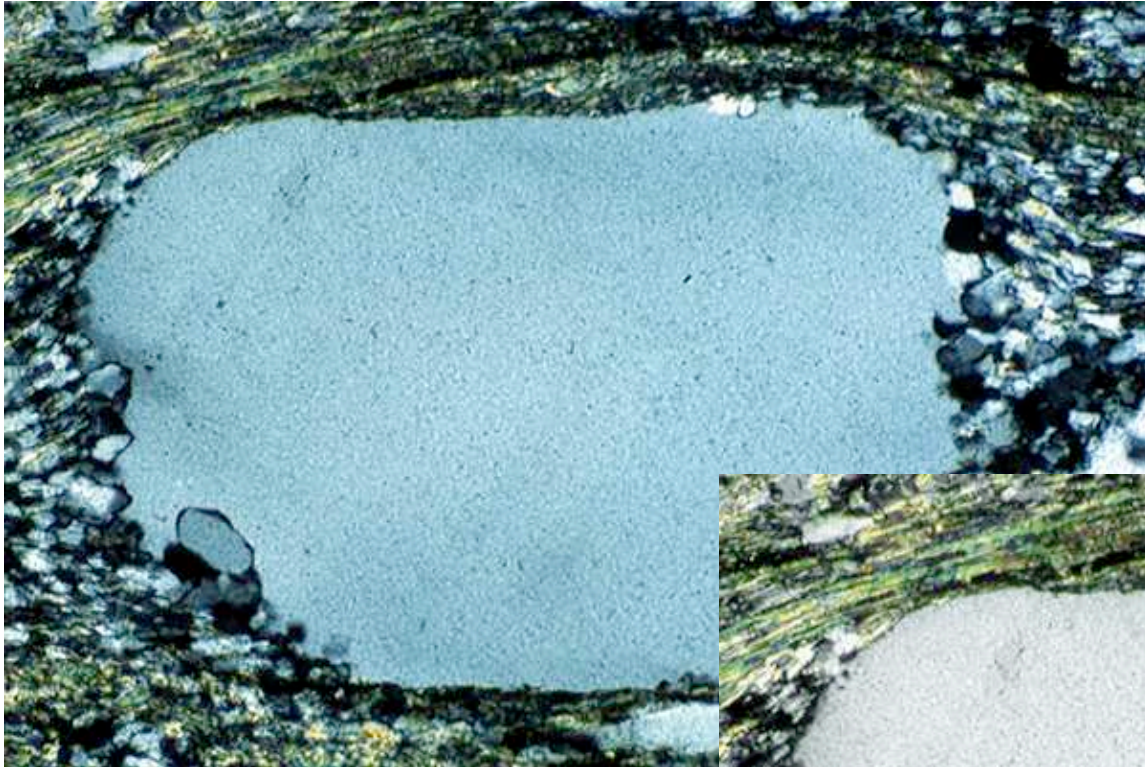
# GSA: Rohversionen



# Slides: bearbeitete Versionen (cf. Virtual Explorer)



vorher - nachher



vorher - nachher





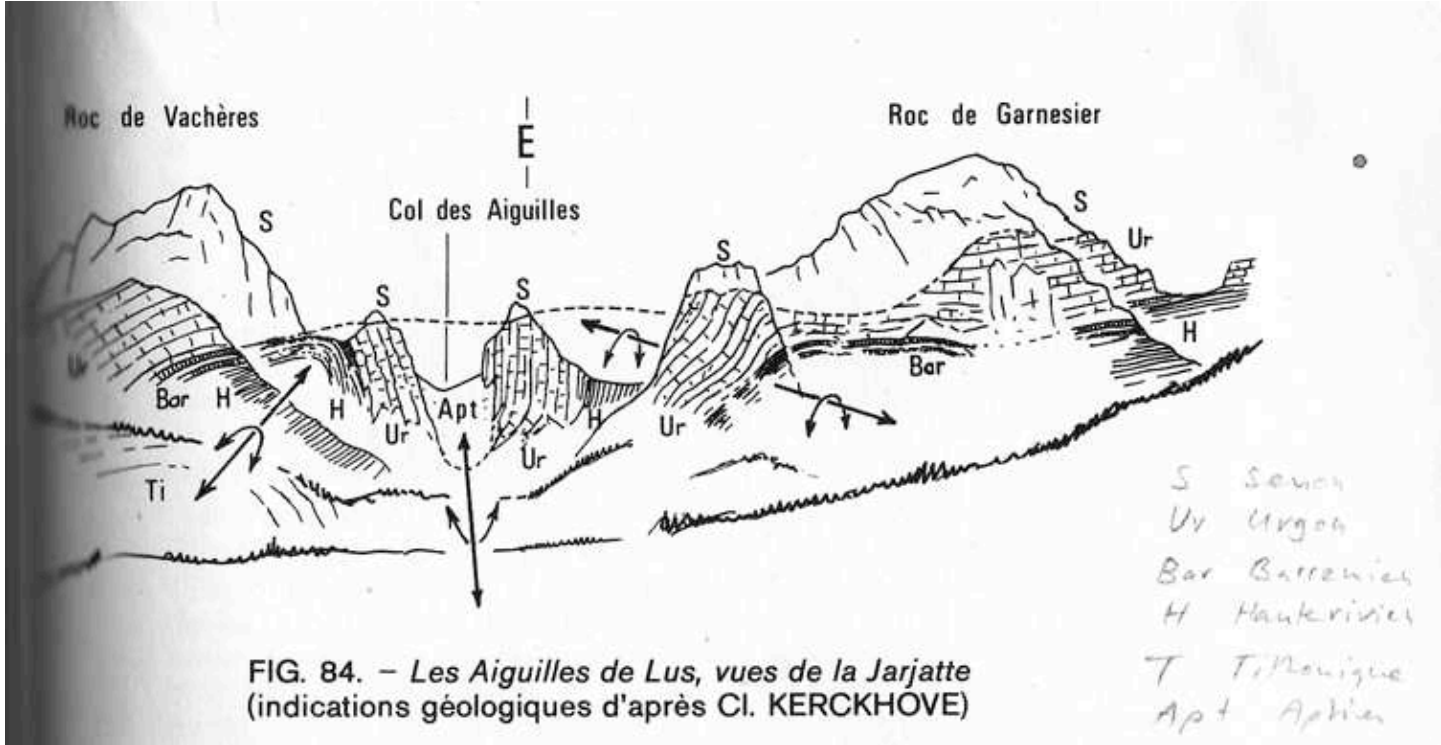
mit Layers arbeiten



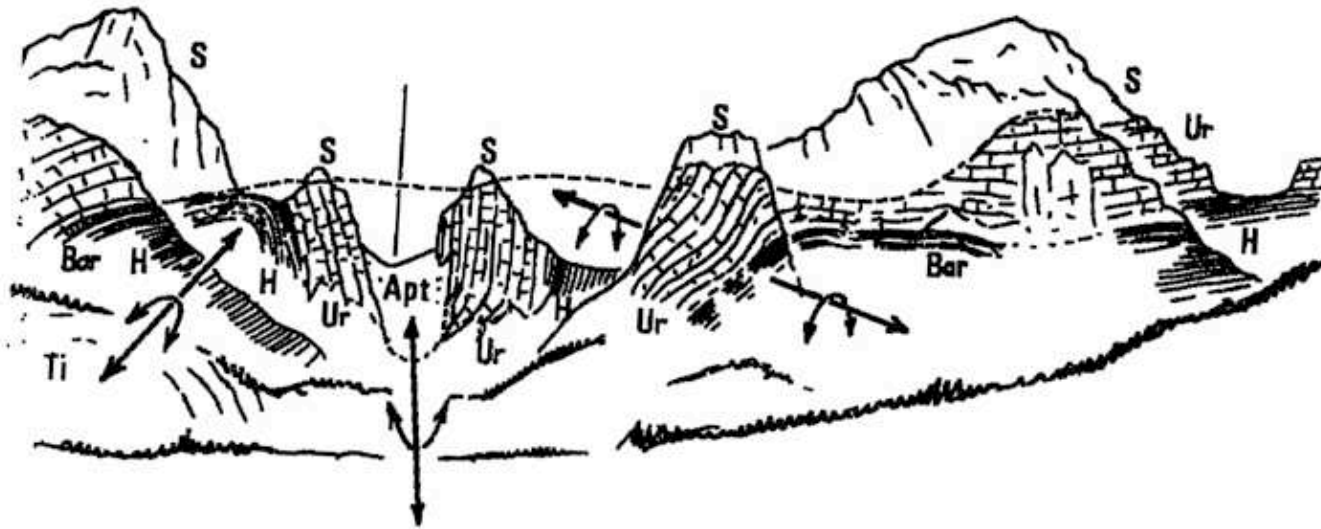
# Grauwert bild



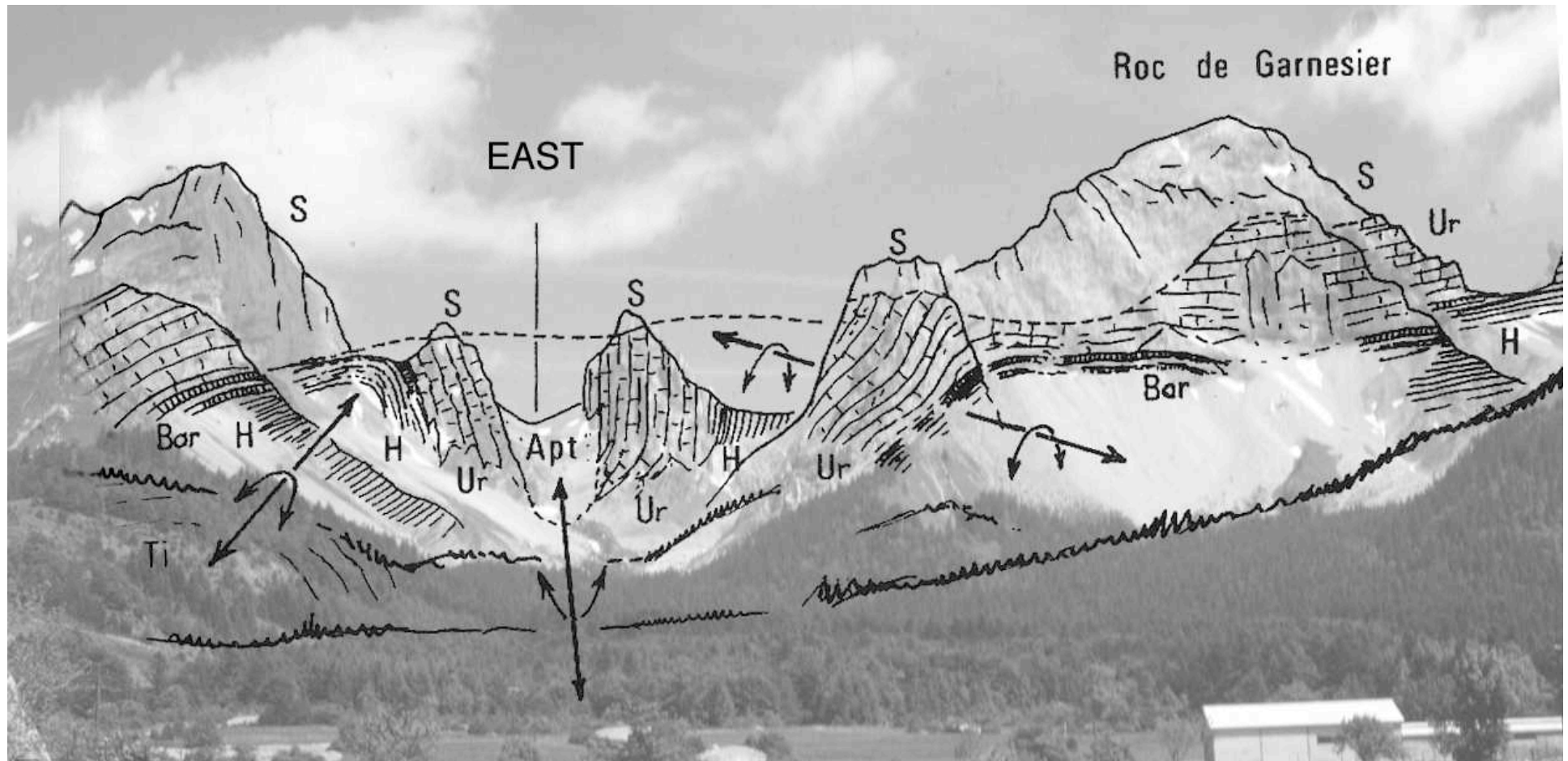
# aus geologischem Führer



# korrigierte Version



# Montage



# Aufgabe 2 - Poster

Figurentafel herstellen aus 4-6 Mikrostrukturen

- farbig
- greyscale

Posterkonzept

Publikum ? Veranstaltung (Konferenz, Dauerausstellung, ...?)

Story, Layout

Titel, Name, Logo, email etc.

Raster, flow chart, (story board)

Figuren - captions, eventuell Platzhalter

# AGU guidelines for posters

<http://sites.agu.org/fallmeeting/scientific-program/presenter-convener-instructions/poster-session-guidelines-for-presenters/>

Each presenter is provided with a 4-foot-high by 6-foot-wide poster board. Poster boards have a 2.5 cm (1-inch) frame. Dimensions of the useable work area are 1.2 meters high by 1.8 meters wide (4 feet high x 6 feet wide).

# AGU guidelines for posters

<http://sites.agu.org/fallmeeting/scientific-program/presenter-convener-instructions/poster-session-guidelines-for-presenters/>

Each presenter is provided with a 4-foot-high by 6-foot-wide poster board. Poster boards have a 2.5 cm (1-inch) frame. Dimensions of the useable work area are 1.2 meters high by 1.8 meters wide (4 feet high x 6 feet wide).

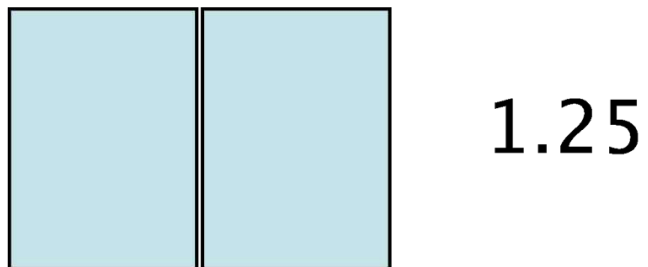


# Poster drucken

Prinzipiell zwei Möglichkeiten  
für 1.20 m x 1.80 m



$$1.25 + 0.55 = 1.80$$



$$0.85 + 0.85 = 1.70$$

A0 Drucker URZ druckt  
Oversize A0: 88 · 125 cm

von A4 auf A0  $\Rightarrow$  400%  
300dpi  $\Rightarrow$  75 dpi

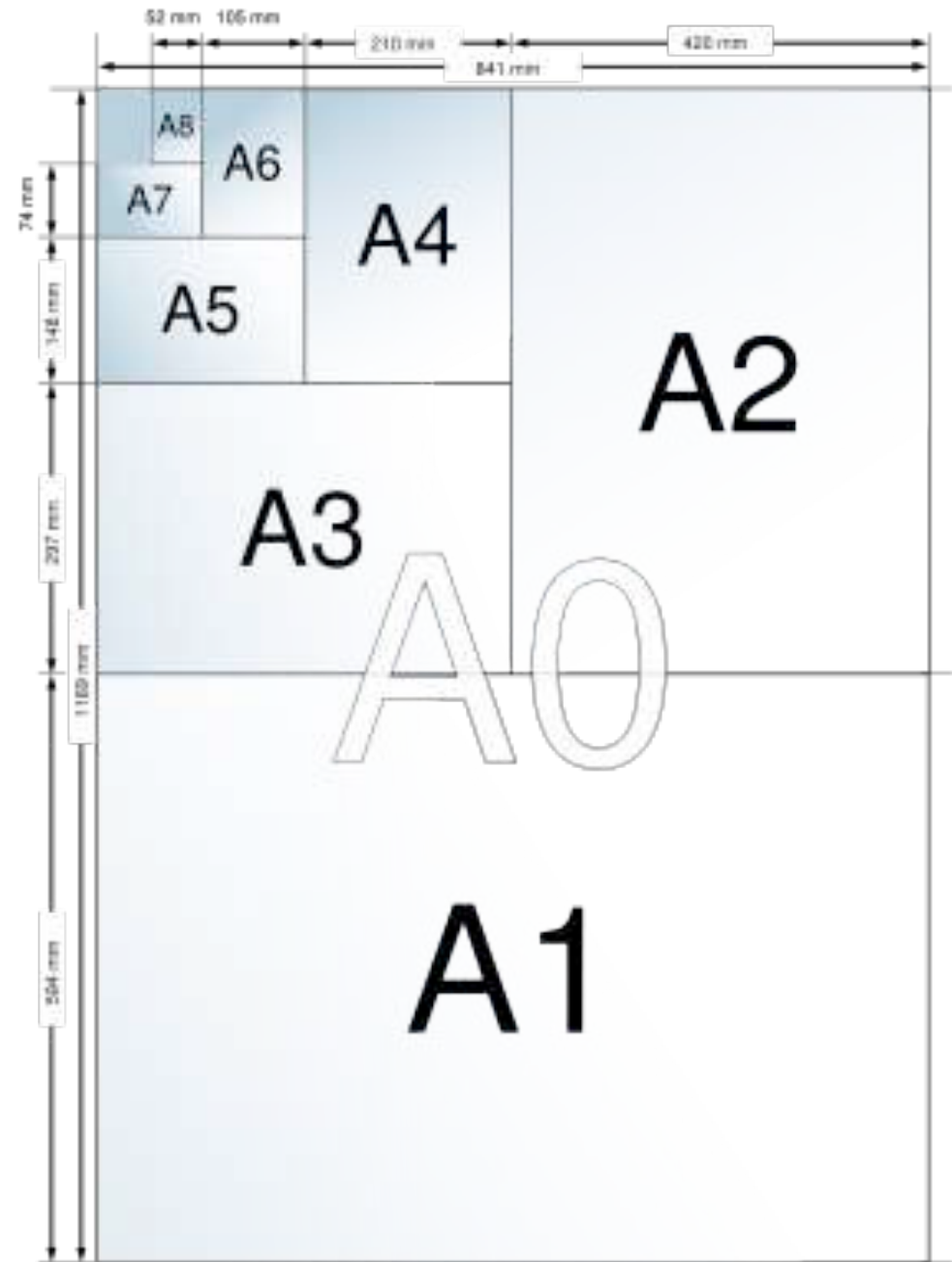
# Papierformat A0

= 1m<sup>2</sup> mit  
 Seitenverhältnis:  
 1:√2 (1:1.4142)

≈ 80 cm · 120 cm

ISO/DIN paper sizes in millimetres and in inches

size	A Series Formats		B Series Formats		C Series Formats	
	in mm	in inches	in mm	in inches	in mm	in inches
0	841 × 1189	33.1 × 46.8	1000 × 1414	39.4 × 55.7	917 × 1297	36.1 × 51.1
1	594 × 841	23.4 × 33.1	707 × 1000	27.8 × 39.4	648 × 917	25.5 × 36.1
2	420 × 594	16.5 × 23.4	500 × 707	19.7 × 27.8	458 × 648	18.0 × 25.5
3	297 × 420	11.7 × 16.5	353 × 500	13.9 × 19.7	324 × 458	12.8 × 18.0
4	<b>210 × 297</b>	<b>8.3 × 11.7</b>	250 × 353	9.8 × 13.9	229 × 324	9.0 × 12.8
5	148 × 210	5.8 × 8.3	176 × 250	6.9 × 9.8	162 × 229	6.4 × 9.0
6	105 × 148	4.1 × 5.8	125 × 176	4.9 × 6.9	114 × 162	4.5 × 6.4
7	74 × 105	2.9 × 4.1	88 × 125	3.5 × 4.9	81 × 114	3.2 × 4.5
8	52 × 74	2.0 × 2.9	62 × 88	2.4 × 3.5	57 × 81	2.2 × 3.2
9	37 × 52	1.5 × 2.0	44 × 62	1.7 × 2.4	40 × 57	1.6 × 2.2
10	26 × 37	1.0 × 1.5	31 × 44	1.2 × 1.7	28 × 40	1.1 × 1.6



[http://en.wikipedia.org/wiki/Paper\\_size](http://en.wikipedia.org/wiki/Paper_size)

# AGU guidelines for posters

The presentation must cover the material as cited in the abstract.

Place the title of your paper and your paper number prominently at the top of the poster board to allow viewers to identify your paper.

Indicate:

- 1) the abstract's presentation number,
- 2) title, and
- 3) authors' names.

# Beispiel

Nummer

Titel

Name(n)

e-mail

Logo

MR23B-1327

The geometry of random mixing: quantifying spatial distributions

Holger Stünitz \*, Renée Heilbronner \* and Helmut Schaeben \*\*

holger.stuenitz@unibas.ch  
renee.heilbronner@unibas.ch  
schaeben@geo.tu-freiberg.de



\* Basel University, Geological Institute, Bernoullistr. 32, CH-4056 Basel, Switzerland \*\* Institut für Geologie, TU Bergakademie Freiberg, Bernhard-von-Cotta-Str. 2, D-09596 Freiberg, Germany

### DEFORMATION MECHANISMS

Different deformation mechanisms may develop different phase distributions which may be used to identify or characterize the operating dominant mechanism. Phase distributions may also potentially be used to quantify deformation processes in cataclases.

There are a number of deformation mechanisms that involve mixing of particles of different phases. For example, in cataclastic flow, particles are fragmented and displaced past each other, in diffusion creep, grains of one phase nucleate and grow between grains of other phases.

**diffusion creep**  
Grains of one phase nucleate and grow between grains of other phases.  
Small grains derive from larger parent grains by nucleation usually from phase moieties during diffusion creep while dynamically recrystallized grains during dislocation creep form clusters.

**cataclastic flow**  
Particles are fragmented and displaced relative to each other during cataclastic flow.  
Phase separation and mixing occurs during cataclastic flow. The degree of mixing may increase with progressively larger displacement but there is no data to quantify this process.

**patterns**  
The resulting mixtures may form "halos", "clusters" or "antoclustered" patterns. To assess the nature of the underlying process and to identify the active deformation mechanisms, it is necessary to find reliable descriptors by which random and non-random spatial distributions can be quantified and distinguished from one another.

### MODELS FOR GEOMETRY

**2-D chess / voronoi**

Pre-existing 2-D chess board or Voronoi polygons. Phases (black or white) are assigned (see text) via random numbering.

The probability for a field of the chess board or the Voronoi tessellation to be A or B can vary from 0 to 1.  
 $p_A + p_B = 1$

**3-D volume / surface**

Pre-existing (space filling) 3-D aggregates of polyhedra. Phases (black or white, A or B) are assigned (see text) via random numbering.

volume model  
Constant grain size is assumed  
=> probability for a neighbour of phase A depends on volume proportion of A.

surface model  
No assumption about grain size  
=> probability for a neighbour of phase A depends on surface proportion of A.

2-D sections are evaluated. The probability for a cross sectional area to be A or B can vary from 0 to 1.  
 $(A = p_B = 1)$

**integer sums (= fragmenting clusters)**

$4 = 1 + 1 + 1 + 1$   
 $4 = 2 + 1 + 1$   
 $4 = 1 + 2 + 1$   
 $4 = 1 + 1 + 2$   
 $4 = 3 + 1$   
 $4 = 1 + 3$   
 $4 = 4$

A pre-existing cluster of N grains is divided into 1 to N (N-1) clusters, consisting of N to 1 grains respectively. The probability for the number of clusters and their size distributions is calculated.

Only one phase (A) in matrix (B) considered.  
A highly diluted situation is envisaged; clusters do not touch each other.

### DERIVED MEASUREMENTS

**Binomial distribution**

For all models, the phase boundaries AB (between A and B) and grain boundaries AA and BB are calculated.

For the random chess boards, the binomial distribution is realized.

**3-D - 2-D voronoi**

surface by trap lecture

area proportion in volume proportion: 10.6%, 20.6%, 30.6%

For the sections of the random 3-D Voronoi, the relative amounts of grain contacts (AA, BB and AB) follow a binomial distribution. Because of constant average grain size, the volume proportions and the surface proportions of both phases are identical.

**allsums**

A more general model for random distribution considers only one phase (A) and two types of grain contacts (AA and AB, where B is the "matrix"). This model is based on fragmenting a cluster of phase A into smaller clusters. It predicts the most probable distribution of cluster sizes and the probability for contact types AA and AB.

numbers of such clusters and size of such clusters for existing cluster size of 10.

general shape

ratio of grain boundary to phase boundary for three types of contact: long, square, round.

### EXAMPLE

As an example of a non-random distribution of grains we studied the eclogites of the Troms Nappe (Caledonides, Norway). Previous studies indicate that the dominant deformation mechanism is diffusion creep, a process known to create antoclustered distributions of mineral grains. In the course of field observations we collected a large dataset of random and non-random 2-D geometries and compared it to results from 3-D numerical modelling.

diffusion creep  
antoclustered distribution of different phase distributions in diffusion and dislocation creep

eclogite  
Diffused fragments occur in a matrix phase aggregate in large displacement cataclases during flow. (Photo example from the Dübener Wald (data not avail.))

Because of the different grain sizes of omphacite and garnet, the eclogites were evaluated using the surface model. It can be shown that their microstructures deviate from spatial random distributions showing various degrees of antoclustering and in many cases, the degree of antoclustering depends on direction, being stronger in the direction of the stretching direction than in direction of the foliation normal. From this we infer that diffusion creep occurred by solution-precipitation processes and heterogeneous nucleation.

Since AA, BB and AB always add up to 100%, the error has to be calculated as in compositional data. This, however, is work in progress.

pdf = 4.2 MB

# AGU guidelines for posters

Highlight the authors' names, e-mails, and address information in case the viewer is interested in contacting you for more information.

Prepare all diagrams or charts neatly and legibly beforehand in a size sufficient to be read at a distance of 2 meters.

Paragraph and figure caption text should be **AT LEAST 24-point font (0.9 cm height)** and headers **AT LEAST 36 point font (1.2 cm height)**.

# AGU guidelines for posters

Use creativity by using different font sizes and styles, perhaps even color.

Use different colors and textures/symbols for each line or bar contained in your graph or chart.

A serif font (e.g., Times) is often easier for reading main text, and a non-serif font (e.g., Arial or Helvetica) for headers and figure labels.

# AGU guidelines for posters

A serif font (e.g., Times) is often easier for reading main text, and

a non-serif font (e.g., Arial) for headers and figure labels.

a non-serif font (e.g., Helvetica) for headers and figure labels.

a non-serif font (e.g., Gills Sans) for headers and figure labels.

# AGU guidelines for posters

Organize the paper on the poster board so it is clear, orderly, and self-explanatory.

⇒ storyboard

You have complete freedom in displaying your information in figures, tables, text, photographs, etc.



# Beispiel

storyboard:  
3 major topics

## Healing mechanisms and healing period of granitoid fault gouge at hypocentre depth pT-conditions

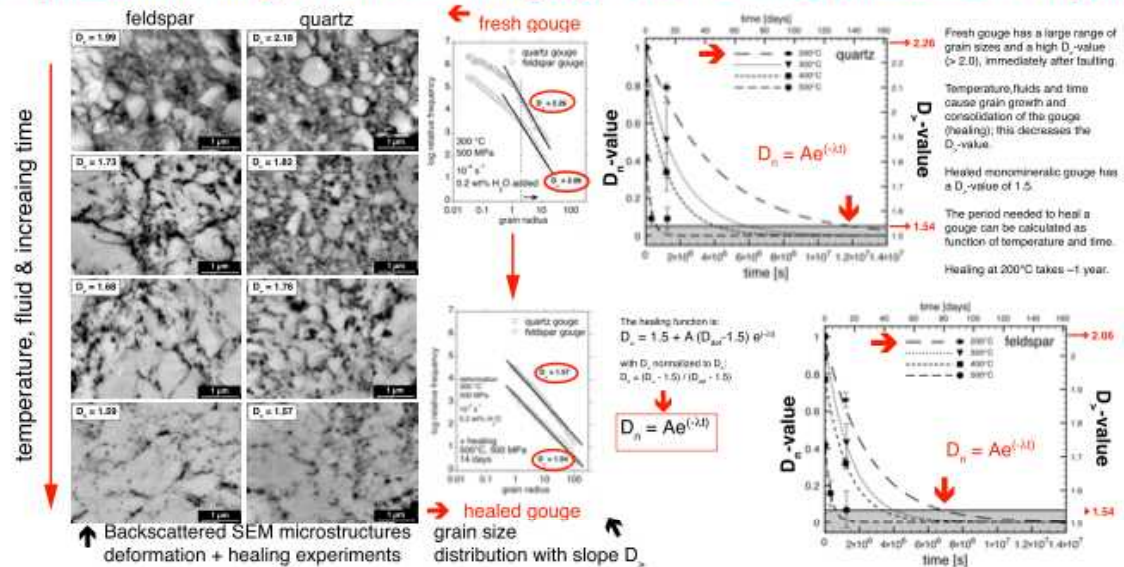


Nynke Keulen\*, Renée Heilbronner\*, Holger Stünitz\*, Karl Ramseyer\*

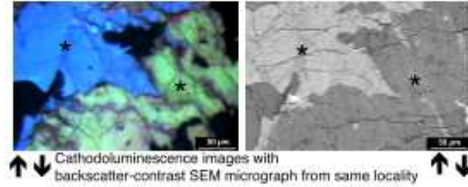
\*Geological Institute, University of Basel, Switzerland \*Institute of Geological Sciences, University of Bern, Switzerland nynke.keulen@unibas.ch

u<sup>b</sup>

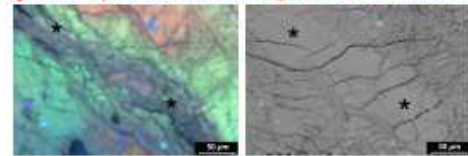
### Hydrostatic healing - from loose fault gouge to consolidated cataclasite in ~1 year



Experimentally deformed + hydrostatically healed sample in light microscope with CL and in SEM

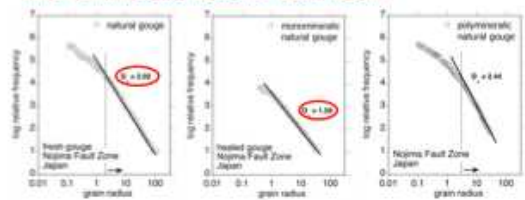


### Non-hydrostatic healing is more efficient:



**Cathodo-luminescence:** The luminescence of the minerals as seen with a light microscope connected to a cathodoluminescence camera (CL) reflects the amount and nature of trace elements and defects in the crystal lattice (e.g. Ramseyer and Mäder, 2001), giving each mineral a distinctive color. CL is most commonly applied to sediment diagenesis, where dark, low-luminescent authigenic mineral marks a clear difference from brightly luminescent detrital material. The luminescence of minerals is known to change as well under influence of differences in fluid composition (Nakamura et al., 2005).

### Same results for healing in experiments and monomineralic natural fault rock:



Fresh natural fault gouge has a  $D_n$ -value of 2.02, healed monomineralic fault gouge has a  $D_n$ -value of 1.59. The  $D_n$ -values for natural and experimental fault gouge are the same. Healing of fault gouge can be studied using the  $D_n$ -value without extrapolation. Monomineralic fault gouge and polyminerallc fault gouge from the same deformation event yield very different  $D_n$ -values. Monomineralic gouge is healed to  $D_n = 1.59$ . Healing in polyminerallc gouge is impeded by the mixing of grains. The  $D_n$ -value remains high.



**Methods:** Coseismic deformation and healing experiments were carried out on spongy Verzeghso gouges using a Gage deformation apparatus at 300 – 600 °C, 520–380 MPa, strain rates of  $10^{-2} s^{-1}$  and  $0.2 s^{-1}$  with H<sub>2</sub>O added. Samples were fractured to create fault gouge. After fracturing the samples were kept at hydrostatic or non-hydrostatic conditions for 4 hours to 14 days at 300 or 500 °C (heating). Then, sections of the samples were prepared and analyzed with a light microscope (LM) connected to a cathodoluminescence camera (CL) and with a scanning electron microscope under back-scattered electron-control (BSE). The experimentally deformed gouges were compared to natural fault rock sample originating from the Alps (deformation in Tertiary) and the Black Forest (Tertiary).

# Beispiel

→ storyboard:  
linear  
top to bottom

## Quartz microstructure and texture development along high strain gradients in metagranites

Rüdiger Kilian (ruediger.kilian@unibas.ch), René Heilbronner, Holger Stönitz  
Geological Institute, Basel University, Switzerland



**Introduction:**

In this slide we provide the microstructural and textural evolution of quartz with increasing strain along the shear zone in metagranites. One of the main features is the development of a high-strain zone (HSZ) in the center of the shear zone (Mangoni 2004). Metagranites in a shear zone are deformed in a mechanically weaker than the surrounding rocks, but they are also deformed by the shear zone. The shear zone is a zone of high-strain deformation, and it is a zone of high-strain deformation.

**Shear zones in the field:**

1) Subvertical sets of ductile shear zones in metagranites of the East Pyrenees region (Heilbronner 2007).  
2) Detail showing the ductile shear zone.

**Quartz:**

3) Quartz microstructure consisting of subgrain rotation recrystallization and grain boundary migration (recrystallization) in quartz aggregates (centered in the center of the shear zone and 4) in the center of a shear zone.

**Soft matrix:**

5) A) Recrystallized microstructure of the matrix (SEM-SEI contrast).  
6) A) Recrystallized microstructure of the matrix (SEM-SEI contrast).  
7) Crystalline quartz aggregates perfectly developed in the shear zone parallel to the foliation.

**Fabric analysis of the Gran Paradiso shear zones:**

In the highly strained domains of the shear zones, quartz exhibits a complex microstructure. It is characterized by a high degree of deformation, and it is a zone of high-strain deformation.

**Local fabric development:**

The local fabric development of quartz in the shear zone is characterized by a high degree of deformation, and it is a zone of high-strain deformation.

**Influence of high strain:**

With increasing strain, the microstructure of quartz evolves from a simple subgrain rotation recrystallization to a more complex microstructure, and it is a zone of high-strain deformation.

**Dynamic quartz recrystallization:**

8) Microstructural evolution of quartz during dynamic recrystallization.

**Influence of aggregate thickness:**

The high-strain domains consist of quartz aggregates of different sizes, and it is a zone of high-strain deformation.

**Comparison with shear zones developed in the Adirondack tonalite:**

The shear zones of the Adirondack tonalite are characterized by a high degree of deformation, and it is a zone of high-strain deformation.

**Comparison with experimentally deformed quartzite:**

The microstructural development of the experimentally deformed quartzite is similar to the natural shear zones, and it is a zone of high-strain deformation.

**Conclusions:**

The local shear zones developed from quartz CPO may be related to a high-strain zone.

**Experimentally deformed quartzite:**

14) Microstructural evolution of experimentally deformed quartzite.

**Strain dependence of texture:**

15) Increasing strain dependence of quartz aggregates.

**Shear zone developed in the Adirondack tonalite:**

16) Shear zone developed in the Adirondack tonalite.

# Beispiel

⇒ storyboard:  
linear  
top to bottom



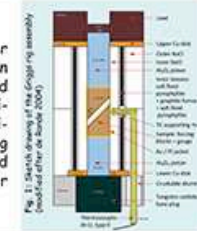
## 1. Introduction

The effect of grain size reduction by neo-/recrystallization on the localization of deformation and strength of rocks has been extensively studied in the past years. However, cataclastic deformation as a potential grain size reduction mechanism has received far less attention. Fracturing of rocks occurs under a wide range of conditions and produces the smallest grain sizes of all known grain size reduction mechanisms.

## 2. Aims & Methods

The aim of this study is to test the potential transition from frictional to viscous deformation in very fine-grained gouge material. We performed a series of simple shear experiments in a Griggs solid medium deformation apparatus (fig.1). Crushed Verzasca Gneiss powder (grain size < 200 μm)

with 0.2 wt% distilled water added was placed between forcing blocks cut at 45° and weld-sealed in gold and platinum jackets. All the experiments were run at a confining pressure of 500 MPa and temperatures of 300°C or 500°C.



## 3. Gouge experiments

The fine grain size is produced during the frictional part (Part 1) of the experiment by fast deformation ( $\dot{\epsilon} = 0.8 \cdot 10^{-4} \text{ sec}^{-1}$ ) to a gamma value up to 2.5. (fig.2A)

The potential switch to creep deformation (Part 2) is tested in two different ways:

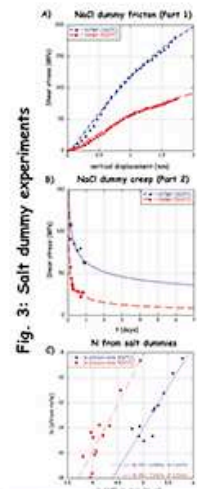
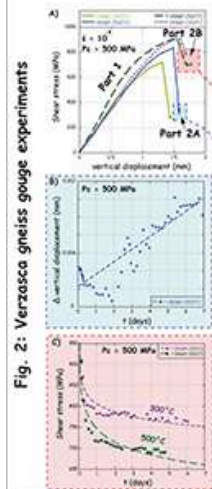
- case A (Constant load): The peak differential stress is lowered to a level close to the confining pressure and kept constant for one week (fig. 2B).
- case B (Stress relaxation): The sample is allowed to relax the peak differential stress over one week (fig.2C)

In case A experiments we observe slow strain rates (as low as  $10^{-8} \text{ sec}^{-1}$ ) and a temperature dependence of the creep rate.

In case B the amount of displacement accommodated by the samples is far smaller (total 0.01 mm at 500°C) at the limit of being measured with our current apparatus.

In order to measure the strength contribution of the confining media (NaCl) and the "rig friction" to the gouge we conducted experiments with a NaCl dummy between alumina forcing blocks.

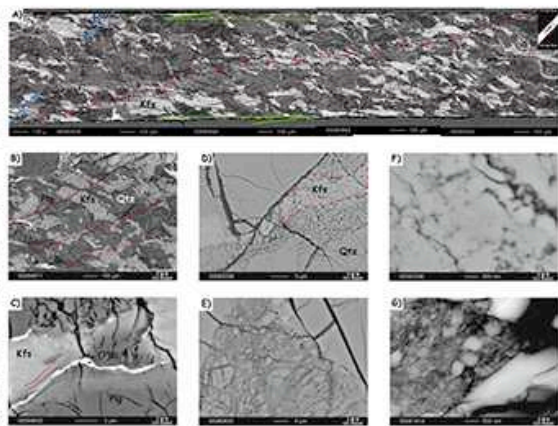
These experiments were run at identical conditions like the Verzasca gneiss gouge experiments. Part 1 (fig. 3A) was used to correct the frictional part of the gouge experiments and part 2 (fig. 3B) was used to correct the stress relaxation part of the gouge experiments. Out of this data a preliminary flow law was calculated:  $\dot{\epsilon} = 5.5 \cdot 10^{-12} \exp(-98,8/R \cdot T) \cdot \sigma^7$



## 5. Microstructures

At low magnifications, samples deformed by creep (case A & B) show the same characteristics like samples deformed by frictional deformation only (fig. 4A)

However at high magnifications the microstructures are strikingly different from each other. In the samples deformed by creep we observe the disappearance of the smallest grains, lobate interconnected grain boundaries and the cementation of multiple grains into bigger ones (compare fig. 4B & 4F with 4E & 4G)



**Acknowledgements:**  
The funding by the Swiss Nationalfonds grant NEW1523 is acknowledged

## 6. Conclusions

- Stress relaxation as well as constant load experiments show a temperature dependence
- The microstructural observations together with the temperature dependence suggest that the fine-grained gouge was deformed by solution-precipitation creep processes
- The observed dependence is not caused by the confining media

**References:**  
de Ronde, A. A., (2004). Mineral reaction and deformation in plagioclase-olivine composites: An experimental study. Diss. phil.-nat., Basel University, Switzerland

# Beispiel

## storyboard: Zeitungsartikel

#### Introduction:

H<sub>2</sub>O is very important for quartz deformation. Experimental studies on synthetic and natural quartz crystals demonstrated that

H<sub>2</sub>O dramatically reduces the strength of the material (e.g. Griggs & Blacic 1965). We have performed deformation experiments in the solid medium Griggs apparatus

on natural milky quartz single crystals in order to study the effect of H<sub>2</sub>O weakening. The compression direction has been normal to the <c>-axis and one of the prism planes.

#### Experiments and H<sub>2</sub>O content:

The experiments are carried out on milky quartz material because this material contain enough H<sub>2</sub>O. They show a flow strength of 150 MPa under 1 GPa confining pressure and 900°C with a strain rate of 7\*10<sup>-6</sup> s<sup>-1</sup> (Fig.1). The water content in the undeformed material is very heterogeneous and not possible to determine in average. Fourier Transform Infrared spectroscopy (FTIR) point measurements (100\*100 μm) on the quartz material (clear regions) give an H<sub>2</sub>O content of about 50-150 H/10<sup>6</sup>Si, in contrast measurements directly on fluid inclusions show in H<sub>2</sub>O content of 250 times more (Fig.2).

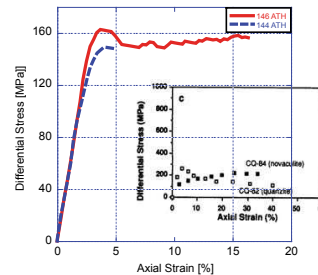


Fig.1: Stress-strain diagram of two experiments (144ATH & 146ATH) at constant displacement showing reproducible data. Next to it the stress-strain diagram of quartzites and novaculite from Hirth and Tullis (1992) which show a comparable strength.

After deformation the H<sub>2</sub>O distribution is more homogenous and the majority of the big inclusions have disappeared and small inclusions are formed and often arranged in fluid clusters (Fig.3b). The H<sub>2</sub>O-content of deformed regions with undulatory extinction is approximately 3000 H/10<sup>6</sup>Si. We infer that during deformation the inclusions disrupt and form micro cracks. The cracks heal rapidly, during the healing and plastic deformation H<sub>2</sub>O is distributed in the quartz crystals via defects and contributes to the H<sub>2</sub>O-weakening effect.

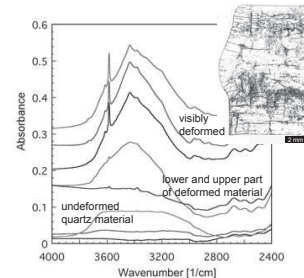


Fig.2: FTIR spectra for undeformed and deformed material. Absorbance is relative. In the right corner a modified thin section photomicrograph of a deformed sample, where the black clouds show the distribution of fluid inclusions as well as some cracks.

#### Fluid inclusions:

- Large number of fluid inclusions with a high variation in size and shape (Fig.3a)
- Presence of antarticite (CaCl<sub>2</sub>·6H<sub>2</sub>O) and hydrohalite (NaCl·2H<sub>2</sub>O)
- Ice melting temperature ranged between -6.9 and -7.4°C corresponding to an average salinity of 10.5 wt% eq. NaCl
- After deformation the salinity of the inclusions is 20% higher
- Total homogenization temperatures are between 184°C and 207°C
- Small amounts of CO<sub>2</sub> and some accidentally trapped solids like calcite, quartz or rutile

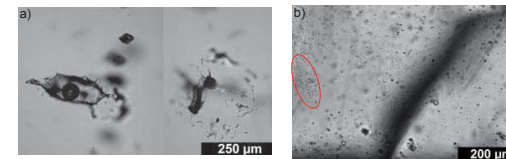


Fig.3: a) Typical fluid inclusions in the undeformed material, with a perfect negative crystal shape (left) or undifnde morphology (right). The surrounding quartz is clear. b) Fluid inclusion distribution in the deformed material much smaller, homoheneous throughout the sample and often arranged in clusters (red ellips).

#### Conclusions:

- 1) Start with a two phase material, pure dry quartz and H<sub>2</sub>O rich fluid inclusions
- 2) This distribution provides enough H<sub>2</sub>O for H<sub>2</sub>O weakening
- 3) The H<sub>2</sub>O dispersion becomes more homogeneous during deformation by micro-cracking, crack-healing and subsequent crystal plastic deformation by dislocation glide

◆ Micro-cracking is the necessary precursor step for plastic deformation and H<sub>2</sub>O weakening

#### References:

- Hirth, G. & Tullis, J. 1992: Dislocation creep regimes in quartz aggregates. Journal of Structural Geology, 14, 145-159.  
Griggs, D.T. & Balci, J.D. 1965: Quartz: Anomalous Weakness of Synthetic Crystals. Science 147, 293-295.

# Beispiel

⇒ storyboard: 2 major topics

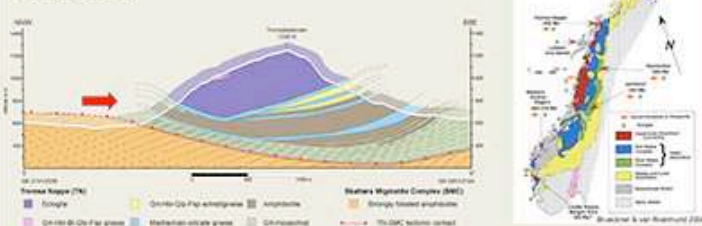
## Exhumation of UHP-rocks by dominant diffusion creep in eclogites and amphibolites of the Tromsø Nappe, Northern Norway

Holger Stunitz (1), James MacKenzie (2), Renée Heilbronner (2), Kåre Kullerud (1), Erling Ravna (1), Steffen Bergh (1)

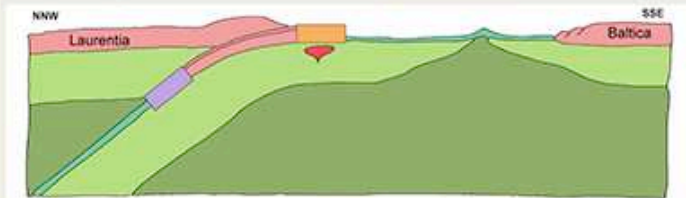
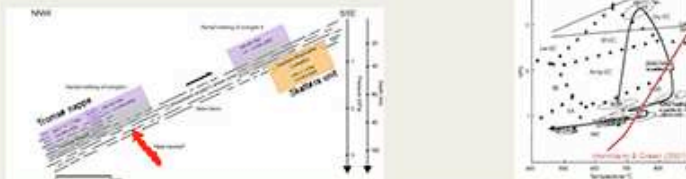
(1) Department of Geology, University of Tromsø, Dramsveien 201, 9037 Tromsø, Norway  
(2) Geologisches Institut, Basel University, 4056 Basel, Switzerland



### Tectonics:

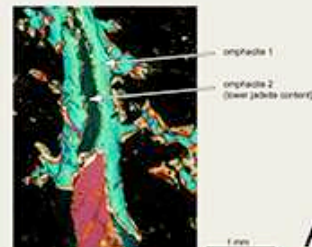


Cross section of Tromsdalstinden, a major eclogite body of the Tromsø nappe, with the underlying Skatterå unit of mafic migmatites. Transport direction of Tromsø nappe during exhumation is indicated by arrow. The P,T-t-loop for the eclogite and adjacent rocks shows the different stages of exhumation.

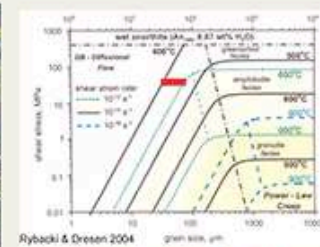
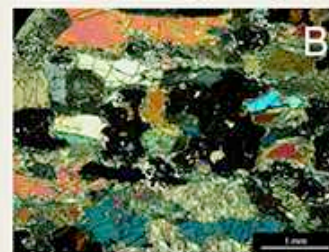


The Tromsø Nappe represents the uppermost unit of the Northern Norwegian Caledonides nappe pile and is regarded as part of the Laurentian continental margin. Its present position is caused by thrusting of continental margin sediments together with mafic rocks onto high temperature mafic migmatites (Skatterå unit) of Laurentian origin. Thrusting took place after subduction, reaching UHP conditions in the Troms Nappe. Together, these Laurentian units were thrust onto Baltica during exhumation.

**Deformation mechanisms:** Crack-seal and solution-precipitation microstructures indicate diffusion creep during the eclogite facies: A. Two-stage omphacite vein forming during decompression in a pull-apart garnet (black). B. Fragmented garnet (black) with extension omphacite fibres growing in between fragments. C. Asymmetric garnet growth (note spherical cores) leads to elongate garnet shapes (parallel to extension direction). Amphibolite Facies: D,E. Fine grained mixtures of plagioclase and other phases (grain size 30 to 80  $\mu\text{m}$ ) also indicate diffusion creep. Deformation temperature 500 to 600°C.

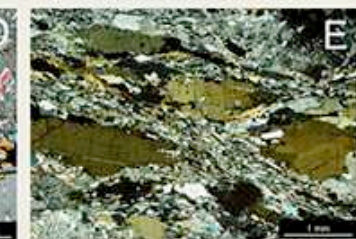
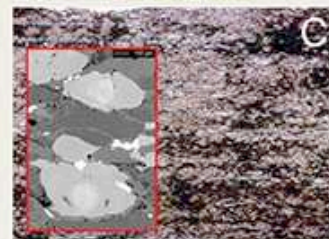


Back-of-the-envelope-calculations for the exhumation show that the strain rates for the deformed rocks should be on the order of  $10^{-12}$  to  $10^{-10} \text{ s}^{-1}$ .



### Conclusions and summary:

The determined grain sizes and deformation temperatures during the amphibolite facies stage of the exhumation (red bar) are consistent with estimated strain rates and inferred deformation mechanism of diffusion creep at stress levels of 20 – 30 MPa when plotted in the deformation mechanism map for wet plagioclase (Rybacki & Dresen 2004). For the eclogite facies stage, deformation temperatures are higher and strain rates may be expected to be even faster.



# Beispiel $\Rightarrow$ storyboard: 4 topics & conclusions

## Texture and microstructure development in experimentally sheared synthetic quartz single crystals

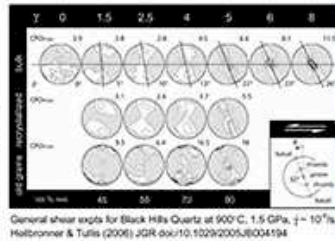
Jun Muto, Jan Tullis (Brown Univ.) & Renée Heilbronner (Univ. Basel)



### 1. Introduction

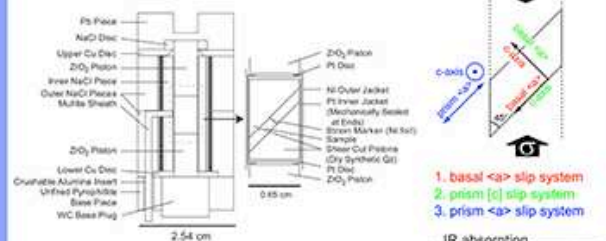
Most naturally deformed quartz aggregates are substantially or completely recrystallized, but it is not clear how dynamic recrystallization affects the LPO development during progressive deformation. The LPO developed at low temperature shows only a slight change in pattern with recrystallization; a broad peripheral maximum rotated with the sense of shear [1]. At high temperature (equivalent to regime 3 dislocation creep involving rapid grain boundary migration recrystallization), the LPO changes from an asymmetric single girdle to a single maximum at Y of the finite strain ellipsoid (i.e., Y maximum fabric) with increasing shear strain and dynamic recrystallization [2]. However, when quartzites are used as the starting material in experiments, the relationship between the orientation of host grain and recrystallized grains, and hence the mechanism by which recrystallization produces a Y maximum fabric, is not clear.

In order to clarify how dynamic recrystallization affects quartz c-axis LPOs, we have undertaken an experimental study using single crystals of relatively 'wet' synthetic quartz, using different crystal orientations in general shear (simple shear and thinning).

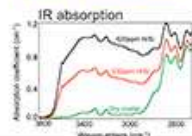


### 2. Experimental Methods

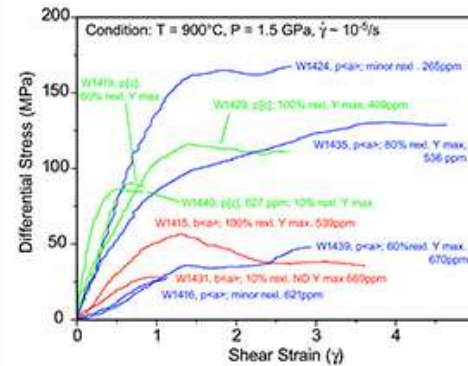
All expts were conducted in a Griggs apparatus at T of 900°C, P = 1.5 GPa,  $\dot{\gamma} = 10^{-5}/s$ .



Samples: synthetic quartz single crystals grown by Nihon Denpa Kogyo (Tokyo, Japan) Water contents: 300 – 650 ppm H<sub>2</sub>O (molecular H<sub>2</sub>O)



### 3. Mechanical Data



Strength of crystals of different orientations with ~ 650 ppm H<sub>2</sub>O:

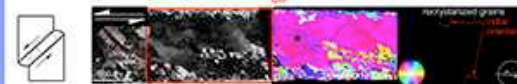
$$\text{prism } \langle a \rangle > \text{basal } \langle a \rangle < \text{prism } [c]$$

For basal  $\langle a \rangle$  and prism  $[c]$  samples, the thinning component of deformation rotates the c-axis from the original orientation and activates other slip systems (see microstructures).

### 4. Microstructures

#### 4.1. Basal $\langle a \rangle$ orientation

Low strain (W1431:  $\gamma = 0.8$ )



High strain (W1415:  $\gamma = 3.6$ )

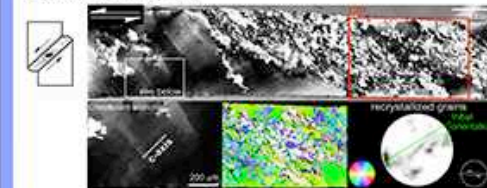


Low strain ( $\gamma \sim 1$ ): rotation of c-axis and chessboard extinction (subgrains involving a combination of basal  $\langle a \rangle$  and prism  $[c]$  slip).

High strain ( $\gamma \sim 3.5$ ): almost complete recrystallization with a strong Y max (prism  $\langle a \rangle$ ) domain. Other recrystallized domains have grains with basal  $\langle a \rangle$ , rhomb  $\langle a \rangle$  and prism  $[c]$  orientations and larger grain sizes, probably due to strain partitioning into weaker Y max grains.

#### 4.2. Prism $[c]$ orientation

Low strain (W1419:  $\gamma = 0.8$ )



Intermediate strain (W1429:  $\gamma = 2.6$ )



Low strain ( $\gamma \sim 1$ ): chessboard extinction and 60% recrystallization with a very small volume fraction of Y max fabric.

Intermediate strain ( $\gamma \sim 2.5$ ): complete recrystallization with irregular Y max domains.

#### 4.3. Prism $\langle a \rangle$ orientation

Intermediate strain (W1439:  $\gamma = 2.9$ )



High strain (W1435:  $\gamma = 4.6$ )



Low to intermediate strain ( $\gamma < 2.5$ ): deformation lamellae and subgrains (prism  $\langle a \rangle$  double slip) and minor recrystallization.

Intermediate to high strain: At  $\gamma \sim 3$ , 60% recrystallization; most recrystallized grains have basal  $\langle a \rangle$ , prism  $[c]$  or rhomb  $\langle a \rangle$  orientation with a small volume fraction of Y maximum. At  $\gamma \sim 4.5$ , 80% recrystallization; the volume fraction of the Y maximum domain makes up 2/3 of recrystallized grains.

### 5. Conclusions

Prism  $\langle a \rangle$  slip system has a lower Schmidt factor than other slip systems for basal  $\langle a \rangle$  and prism  $[c]$  starting orientations. Grains with high Schmidt factors (i.e., oriented for basal  $\langle a \rangle$  or prism  $[c]$  slip) are selectively deformed, leading to high dislocation density. Therefore, the development of prism  $\langle a \rangle$  (Y max) domains with increasing shear strain and degree of dynamic recrystallization indicates that the LPO transition needs a certain amount of strain before the difference in dislocation density builds up enough for the 'weaker' prism  $\langle a \rangle$  grains to replace other grains by grain boundary migration.

# Beispiel

→ storyboard: linear - read paper (figure captions)

**Texture dependent grain size in experimentally deformed quartzite**  
renee.heilbronner@unibas.ch & jan\_tullis@brown.edu

**BASEL UNIVERSITY, SWITZERLAND**  
**BROWN UNIVERSITY, U.S.A**

**1. DEFORMATION OF BLACK HILLS QUARTZITE**  
A series of micrographs showing the progressive deformation of quartzite at different stages of shear strain. The grains become increasingly elongated and aligned in the direction of flow.

**2. ORIENTATION IMAGES**  
Orientation images (CPOs) showing the evolution of crystallographic preferred orientation (CPO) with increasing shear strain. The images show a transition from a weak to a strong CPO.

**3. MICROSTRUCTURE**  
Micrographs showing the microstructure of the quartzite at different stages of deformation. The grains become increasingly elongated and aligned in the direction of flow.

**4. ORIENTATION IMAGES**  
Orientation images (CPOs) showing the evolution of crystallographic preferred orientation (CPO) with increasing shear strain. The images show a transition from a weak to a strong CPO.

**5. GRAIN SIZE**  
Graphs showing the evolution of grain size with increasing shear strain. The grain size increases with strain, and the rate of increase is higher at lower shear rates.

**6. GRAIN BOUNDARY DENSITY**  
Graphs showing the evolution of grain boundary density with increasing shear strain. The grain boundary density increases with strain, and the rate of increase is higher at lower shear rates.

**7. GRAIN SIZE vs. GRAIN BOUNDARY DENSITY**  
Graphs showing the relationship between grain size and grain boundary density. The grain size increases with grain boundary density, and the rate of increase is higher at lower shear rates.

**8. GRAIN SIZE vs. GRAIN BOUNDARY DENSITY**  
Graphs showing the relationship between grain size and grain boundary density. The grain size increases with grain boundary density, and the rate of increase is higher at lower shear rates.

**9. GRAIN SIZE vs. GRAIN BOUNDARY DENSITY**  
Graphs showing the relationship between grain size and grain boundary density. The grain size increases with grain boundary density, and the rate of increase is higher at lower shear rates.

**10. GRAIN SIZE vs. GRAIN BOUNDARY DENSITY**  
Graphs showing the relationship between grain size and grain boundary density. The grain size increases with grain boundary density, and the rate of increase is higher at lower shear rates.

**ORIENTATION IMAGES OF BLACK HILLS QUARTZITE**  
A vertical sequence of orientation images (CPOs) showing the evolution of crystallographic preferred orientation (CPO) with increasing shear strain. The images are labeled with shear strain values:  $\gamma = 0$ ,  $\gamma = 1.5$ ,  $\gamma = 2.5$ ,  $\gamma = 4$ ,  $\gamma = 5$ ,  $\gamma = 6$ , and  $\gamma = 8$ . The images show a transition from a weak to a strong CPO.

**Abstract**

Geophysical Research Abstracts, Vol. 8, 599 (2006)  
599-501, 18p (7-1962) (un) (G) (A-100) (2)  
© European Geosciences Union 2006

**Texture dependent grain size in experimentally deformed quartzite**

R. Heilbronner (1), J. Tullis (2)  
(1) Basel University, Switzerland,  
(2) Brown University, USA

Quartzite samples experimentally sheared at conditions where recrystallization occurs progressively by grain boundary migration show a systematic evolution in the c-axis crystallographic preferred orientation (CPO) with increasing shear strain (up to  $\gamma = 8$ ) and degree of recrystallization (up to 100%).

The c-axis pole figure evolves from a broad peak/plateau maximum indicative of basal  $\langle 110 \rangle$  slip, to an inclined single peak with two maxima indicative of rhombic  $\langle 110 \rangle$  slip, and finally an elongate single maximum at the pole center indicative of prism  $\langle 100 \rangle$  slip.

We used computer integrated polarization microscopy (CIPM) to track the strengths of the CPOs in a number of different orientations of domains with increasing shear strain.

The domains correspond to c-axis orientations suitable for different slip systems (basal  $\langle 110 \rangle$ , rhombic  $\langle 110 \rangle$ , prism  $\langle 100 \rangle$ ) and their orientations, such as the direction of the applied shear stress.

From orientation gradient images, we determined the grain boundary density in each of the domains.

Inverting the grain boundary density, we found that the size of prism  $\langle 100 \rangle$  recrystallized grains is 1.5 times that of the average and 2 times that of the basal slip grains, indicating that the domain of prism  $\langle 100 \rangle$  slip patterns at lower flow stresses than the bulk of the sample at our experimental conditions.

Based on the normalized grain size piezometer, this difference in grain size between prism and rhombic domains corresponds to a difference in shear stress of 25 MPa at a bulk flow stress of  $\sim 100$  MPa.

These findings are supported by any correlation function (ACF) analysis of the various orientation domains and how they evolve with strain.

Shear strain is partitioned among the c-axis orientation slip systems. The derived viscosity contrast between domains indicates that polycrystals with c-axes in the basal domain are initially weak but progressively suffer, recrystallized grains in the rhombic domain are relatively weak, and those with c-axes in the prism domain are the weakest.

<http://www.unibas.ch/earth/micro/>

Abstract

# AGU guidelines for posters

Use squares, rectangles, circles, etc., to group similar ideas.

Avoid cluttering your poster with too much text.

Label different elements as I, II, III; or 1, 2, 3; or A, B, C, making it easier for a viewer to follow your display.



# AGU guidelines for posters

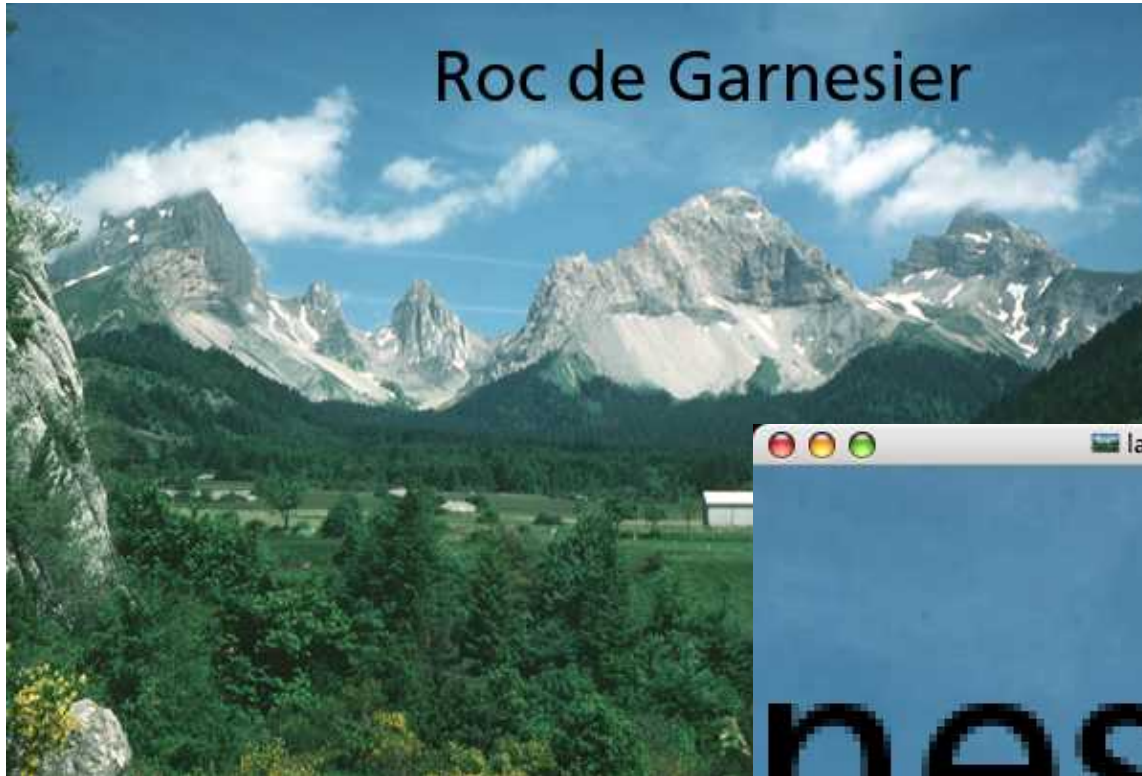
Include the background of your research followed by results and conclusions.

A successful poster presentation depends on how well you convey information to an interested audience.

Please do not laminate your poster if you want the Moscone Center to recycle it.

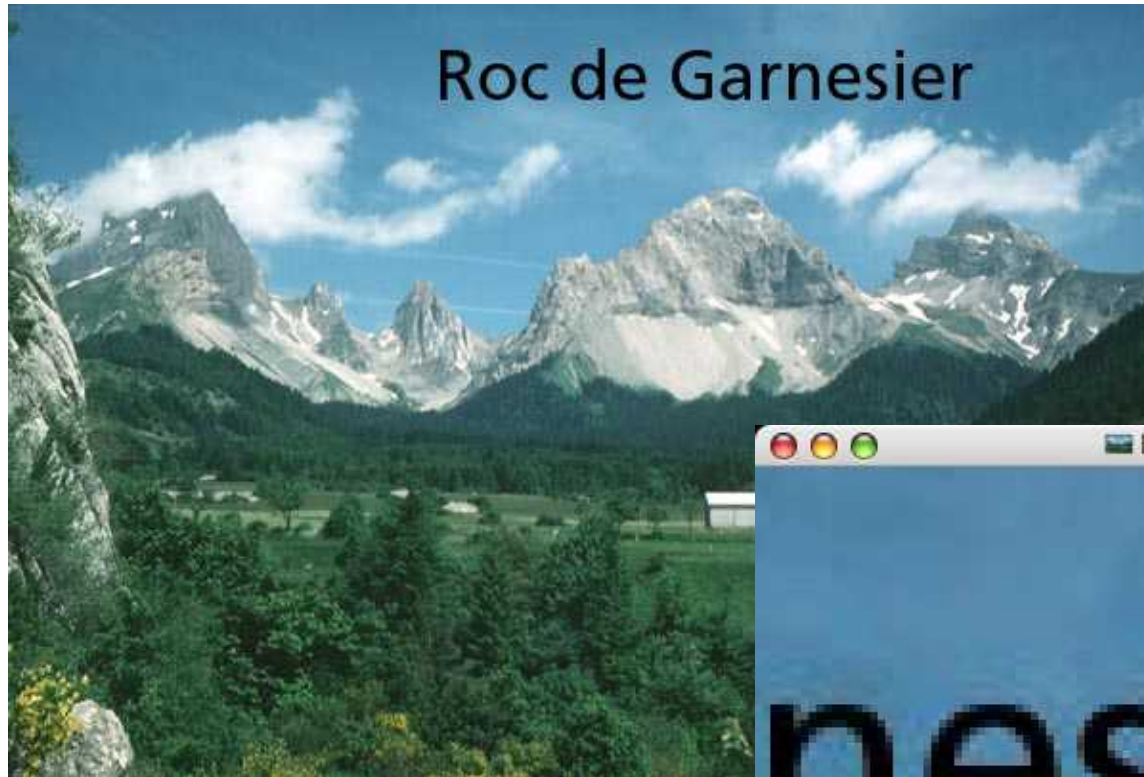
☛ keep file size down

# JPEG high quality (low compression)



384 Kb

# JPEG medium quality (medium compression)



160 Kb

# Compuserve GIF



228 Kb

# PNG



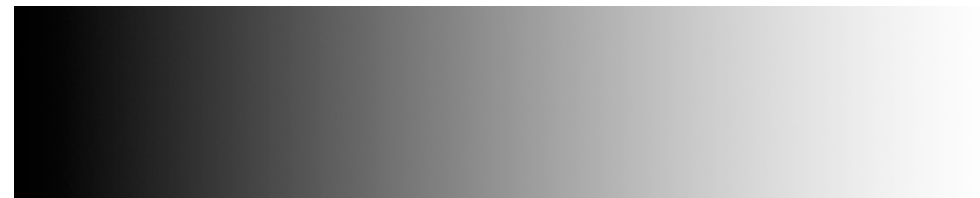
544 Kb



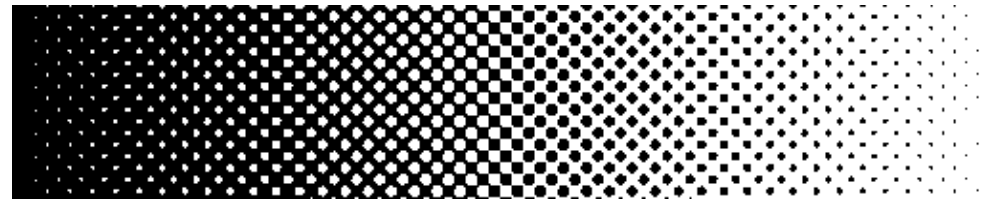
# Wissenwertes zu Raster

Scan Auflösung (dpi)  
= Massstab x Rasterweite  
x Qualitätsfaktor (1.5)

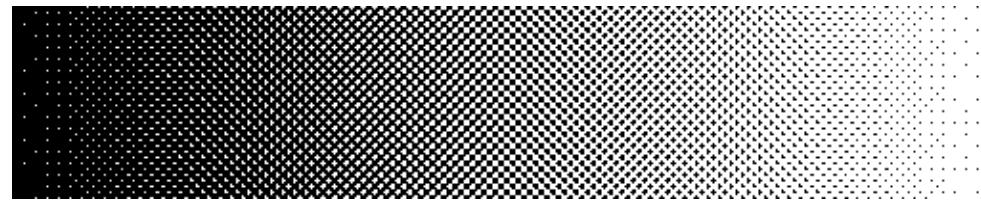
Rasterweite (lpi)  
= Druckerauflösung in dpi  
 $/ \sqrt{\text{Anzahl Graustufen}}$



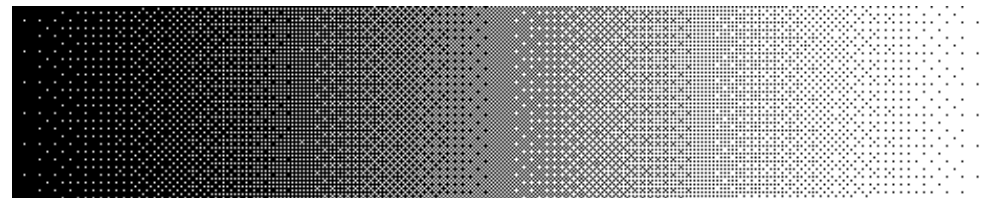
grey levels 72 dpi



raster 9 lpi 72 dpi (8x8 px/dot)



raster 18 lpi 72 dpi (4x4 px/dot)



raster 36 lpi 72 dpi (2x2 px/dot)

# Aufgabe 3 - web page

1. page entwerfen (html)

in text editor schreiben - anschauen in browser

2. photo einsetzen

3. cascading style sheet verwenden

Alternativen:

auch MSWord, Powerpoint, key note, etc. - als html speichern  
statt HTML, PDF herstellen

web site = content + structure

Gesamtstruktur /-werk

device - independent

program (browser) - independent

➡ web page (home page)

einzelne Seite / einzelnes Fenster



The image shows a screenshot of the Brown University website in a web browser. The browser's address bar shows the URL <http://www.brown.edu/>. The website has a dark red background with white text. At the top, the "Brown University" logo is on the left, and a small crest is on the right. Below the logo is a horizontal navigation menu with links for "Academic Life", "Research", "Admission", and "Life on Campus". Each link has a list of sub-links. For example, "Academic Life" includes "DEPARTMENTS", "UNDERGRADUATE", "GRADUATE", "BIO-MED", and "COURSES".

The main content area features a white banner with the heading "Today is Earth Day" and the text "On the 40th anniversary of Earth Day, Brown is Green promotes multiple campus-wide events." To the right of the text is a green logo that says "BROWN IS GREEN" with a stylized plant graphic. Below the banner is a secondary navigation menu with links for "News", "Alumni", "Giving to Brown", "About Brown", "Athletics", and "Administration". Each link has a list of sub-links. For example, "News" includes "MORE NEWS", "TODAY AT BROWN", and "FEATURED EVENTS".

At the bottom of the page, there is a search bar with "Pages" and "People" radio buttons, and a "SEARCH" button. The footer contains the text "Brown University | Providence, RI 02912 | (401) 863-1000 | Web Feedback" and a link for "About this site".

# Beispiel

MIT  
Massachusetts Institute of Technology | Friday, April 23, 2010

MIT Google People Offices

Search

about  
visiting | maps | offices+services

admissions  
undergrad | graduate | financial aid

education  
schools+courses | OpenCourseWare

research  
labs+centers | lincoln lab | libraries

community  
students | faculty | staff | alumni

life@MIT  
arts | athletics | video

initiatives  
energy | cancer | diversity | global

impact  
industry | public service

today's spotlight  
**Big ideas, big fun**  
Annual festival is four years old and bigger than ever

BE CURIOUS

news  
3 Questions: David Jones on heart problems  
Bill Gates visits MIT  
In the search for Earthlike exoplanets, GJ 436b has much to tell us  
Faculty approve flexible engineering degree for undergraduates  
research | campus | press

events  
Earth Week events at MIT  
Comparative Media Studies' 10th anniversary (today)  
IFair (today)  
Crosstalk: Instructional Mathlets and Cross-Departmental Collaboration

jobs | facts | services | contact | about the spotlight  
MIT | 77 Massachusetts Avenue | Cambridge, MA 02139-4307 | 617.253.1000 | TTY 617.258.9344

GIVE TO MIT

Startsida - Universitetet i Tromsø

UIT http://www2.uit.no/lkbViewer/page/startside

tromsweather dolueg ImageProcessingPlace track ILIAS TeLL Drishti EGUconvenor eva Google Maps Wikipedia News (679)

Logg inn

**UNIVERSITETET I TROMSØ** **UIT**  
 Romssa universitehta  
 University of Tromsø

Alt innhold

UNIVERSITETET I TROMSØ

Startsida For studiesøkere For publikum For samfunn/næringsliv For studenter For ansatte Søk English

Forskning Nyheter Tavlå Om Universitetet Akutthjelp Fakulteter/enheter

### Studér i Tromsø!

Universitetet i Tromsø tilbyr mer enn 100 studieprogram og 2000 enkeltemner

Humanistiske fag, kunst- og musikkfag  
 Samfunnsfag, juridiske fag og psykologi  
 Medisin, helse- og sosialfag  
 Fiskerifag

Lærerutdanninger og utd. i pedagogikk  
 Økonomiske og administrative fag  
 Naturvitenskapelige og teknologiske fag

Bolig, Barnehager, Friluftsliv, Kulturliv  
 Informasjon om semesterstart

Informasjon om opptak

Spørsmål om studier?  
**Chat med oss nå!**

Generell informasjon?  
**Chat med oss nå!**

### Aktuelt:

#### Vil du vite mer om vulkaner?

Lær mer om vulkaner på UITs WebGeology og sjekk forskerens svar på nettmate iTromsø.

#### Åpent nordområdeforedrag

ved Utenriksminister Jonas Gahr Støre. 29. april kl. 14.30. Alle er velkommen! Les mer her.

### Siste nytt:

Aarbakke møter Medvedev  
 Fusjonsdiskusjon i styret  
 100 år siden første samiske bok

Alle nyheter

### Kommende arrangementer:

23.04.10: Åpent møte om fusjonsprosessen med HIF og HIH  
 23.04.10: AkvaSem Eise Nøst Hegseth  
 25.04.10: Insekter i færesonen  
 26.04.10: Prøveforelesning - Cand. med. Einar Kristian Borud  
 26.04.10: Disputas - Cand. med. Einar Kristian Borud  
 27.04.10: Presentasjon av hovedprosjekt  
 27.04.10: To kulturer? Om mentalitetsforskjeller i vestnorsk og nordnorsk fiskeri- og kystkultur

Tavlå

### Forskning/utvikling

UIT er et tyngdepunkt for nordområdeforskning, med kompetanse på marin, polar og medisinsk forskning, forskning på kultur, språk og samfunnsliv. Forskning ved UIT

### Publikum

Gå til vår publikumskanal. Her finner du arrangementer, utstillinger, konserter og andre arrangementer som er rettet mot publikum og gjester på Universitetet. Gå til publikumsportalen

### Tromsø Museum

Tromsø Museum - Universitetsmuseet er Nord-Norges eldste vitenskapelige institusjon, etablert i 1872. Se utstillinger, åpningstider, museumsbutikken, Botanisk Hage eller Foto@kivet.

### Universitetsbiblioteket

Biblioteket har som oppgave å betjene forskere og studenter, men er åpent bibliotek som kan benyttes av alle over 18 år. Se også BIBSYS, Ofelå and Munin.

Top Story — Universität Freiburg

http://www.uni-freiburg.de/

English Deutsch


UNI FREIBURG

University of Freiburg


You are here: Home

Top Story


**Prof. Dr. Jörn Leonhard of the University of Freiburg Awarded 2010 State Research Prize**

 Prof. Dr. Jörn Leonhard of the University of Freiburg has been awarded this year's 100,000 euro State Research Prize for his fundamental research. Jörn Leonhard has served as professor at the Department of History of the University of Freiburg since 2006 and as Director of the School of History at the Freiburg Institute for Advanced Studies since 2007. [» more \[de\]](#)


News Events

 **Call for University Teaching Awards**

The University of Freiburg will confer the University Teaching Award for outstanding achievements in teaching for the third time this year. The award is worth a total of 25,000 euros and will be conferred parallel to the State Teaching Award and the Special Award for Commitment to Students. Nominations must be submitted by 9 May 2010. [» more \[de\]](#)

 **Call to Vote in the 2010 Staff Council Elections**

On 27 and 28 April 2010 the University of Freiburg will hold elections for the university-wide Staff Council, the State Employee Council in Stuttgart, and the Youth and Apprentice Representative. Rector Prof. Dr. Hans-Jochen Schiewer has appealed to all employees to make use of their right to vote. [» more \[de\]](#)

 **Student Newsletter 4/2010 is Out**

The newsletter, now in the university's new corporate design and with a new format, provides information on all that is important, interesting, and new at the university. The topics of the current issue include: "What's Coming Up?", "heads & hands 2010," "Student Involvement." [» more \[de\]](#)

[» More News](#)

[» Newsletters & RSS-Feeds](#)

[» Press](#)

[» Course catalog](#)

[» Research database \[de\]](#)

[» Index A-Z](#)

[» All Departments, Resources and Services](#)

EXZELLENZINITIATIVE UNIVERSITÄT FREIBURG

Ausgezeichnet!

Site Map | Index A-Z | Feedback | Contact | Imprint

© Copyright 2009 University of Freiburg

ETH Zürich – Eidgenössische Technische Hochschule Zürich

http://www.ethz.ch/

tromsweather dolueg ImageProcessingPlace track ILIAS TeLL Drishti EGUconvenor eva Google Maps Wikipedia News (679)

**ETH**  
Eidgenössische Technische Hochschule Zürich  
Swiss Federal Institute of Technology Zurich

**ETH ZÜRICH**

Aktuell | Über uns | Personen  
Forschung | Studium | Weiterbildung  
Bibliotheken & Sammlungen | ETH Index | Campus Info

Kontakt | Übersicht | Hilfe  
Suche

ETH Zürich Deutsch English

**Informationen für**

- Studieninteressierte
- Studierende
- Doktorierende
- Dozierende
- Alumni
- Industrie & Wirtschaft
- Sponsoren & Donatoren
- Medien

**Informationen von**

- Departementen
- Kompetenzzentren
- Dienstleistern (Ausw.)

**Strategische Themen**

- Energie & Klimawandel
- Leben & Gesundheit
- Sicherheit & Risiko
- Zukunftsstädte
- Informationsgesellschaft
- Neue Materialien
- Universum

**ETH Life - das Online-Magazin**

**20 Mio. Franken für Fellowship-Programm**

Der Unternehmer und Mäzen Branco Weiss überträgt sein weltweit einmaliges Förderprogramm «Society in Science» zum 1. Januar 2011 der ETH Zürich. Damit verbunden ist eine Schenkung von 20 Millionen Franken, die dem wissenschaftlichen Nachwuchs zu Gute kommt und die Zukunft des Programms sichert. [23.04.10] [Mehr](#)

**Ein Archiv der Steine**

Der Erdwissenschaftler Francis de Quervain kannte die Gesteinsvielfalt der Schweiz wie kaum ein anderer. Neben seiner wissenschaftlichen Tätigkeit beschrieb er tausende von historischen Bauobjekten aus Stein auf Karteikarten. Diese sind nun online einsehbar. [23.04.10] [Mehr](#)

**Im Elektroauto nach Silverstone**

Der Name «furka» steht für Höchstleistungen: Schneller, leichter, dynamischer soll das neue Rennfahrzeug des Akademischen Motorsportvereins Zürich sein. Erstmals tritt der AMZ in der Elektroklasse der «Formula Student» an. Im Juli fährt «furka» in Silverstone. [23.04.10] [Mehr](#)

[ETH Life - weitere Artikel](#)

**Veranstaltungen**

**Veranstungskalender**

[Tagungen, öffentliche Vorlesungen, Ausstellungen, Konzerte und sonstige Veranstaltungen an der ETH Zürich oder im ETH-Bereich](#)

**Hinweise auf ausgewählte Veranstaltungen**

**Treffpunkt Science City: Das kluge Haus**

Die Treffpunkt-Veranstaltung am Sonntag, dem 25. April, dreht sich um klimafreundliche Gebäude der Zukunft. [Mehr](#)

**Kunst am Montagmittag**

Die Graphische Sammlung widmet die Führung am 26. April der Druckgraphik der Impressionisten Degas und Pissarro. [Mehr](#)

**Die Stadt Zürich auf dem Weg zur 2000-Watt-Gesellschaft**

Aktuelle Probleme der Energietechnik am Beispiel der 2000-Watt-Gesellschaft stehen am Dienstag, dem 27. April, im Mittelpunkt des Kolloquiums am Departement für Informationstechnologie und Elektrotechnik. [Mehr](#)

**Favoriten**

Bitte wählen

Telefonbuch: Name Vornam

**Jahresbericht 2009**

Der Jahresbericht 2009 der ETH Zürich zum [Download](#)

**Einführungs-, Antritts- und Abschiedsvorlesungen**

**MICHELE ARNABOLDI** 31.3. – 29.4. 2010

EPFL | Ecole Polytechnique Fédérale de Lausanne

http://www.epfl.ch/index.fr.html

tromsweather dolueg ImageProcessingPlace track ILIAS TeLL Drishti EGÜconvenor eva Google Maps Wikipedia News (683)


**EPFL** Ecole Polytechnique Fédérale de Lausanne

ÉCOLE POLYTECHNIQUE FÉDÉRALE DE LAUSANNE  
français | english

FUTURS ÉTUDIANTS ÉTUDIANTS CHERCHEURS COLLABORATEURS ENTREPRISES MEDIAS

Taille du texte: A A A

<b>Faculté ENAC</b> architecture génie civil environnement	<b>Faculté SB</b> chimie mathématiques physique	<b>Faculté STI</b> électricité & électronique mécanique microtechnique matériaux	<b>Faculté I&amp;C</b> informatique systèmes de communication	<b>Faculté SV</b> sciences de la vie	<b>CDM</b> management de la technologie ingénierie financière	<b>CDH</b> sciences humaines et sociales
---	--	---	--	---	--	--



**Pôles de recherches nationaux**

**OUTILS DE RECHERCHE**

une personne
  un lieu
  sur le web EPFL

**ACTUALITÉS**

Le conseiller fédéral Didier Burkhalter a présenté huit nouveaux pôles de recherche nationaux. Quatre d'entre eux seront pilotés depuis Lausanne et Genève.

Scala, le langage de programmation utilisé par Twitter, LinkedIn, Foursquare, pourrait remettre en cause la position de Java dans le monde du web et des applications commerciales.

Dépression et troubles anxieux - une molécule protectrice, dont la fonction dans le cerveau a été mise à jour par une équipe de l'EPFL, pourrait déboucher sur de nouveaux traitements.

**ÉVÈNEMENTS** > les actualités

**26 février-30 mai**  
Timber Project - Nouvelles formes d'architectures en bois (organisé par Archizoom et IBOIS).

**29-30 mai**  
Objectif Sciences - Journées portes ouvertes gratuites de l'EPFL, 14 pôles à découvrir et plus de 300 animations!

> le mémento

**L'ÉCOLE**

L'EPFL en bref  
Structure EPFL  
Direction  
Affaires académiques  
Affaires institutionnelles  
Innovation & valorisation  
Planification & logistique  
Alumni EPFL

**FORMATIONS**

Inscriptions  
Cours préparatoire CMS  
Bachelor  
Master  
Ecole doctorale  
Formation continue

**RECHERCHE**

Recherche en bref  
Publications EPFL  
Grants office  
Commission de recherche

**EPFL PRATIQUE**

Accueil et information  
Associations  
Bibliothèques  
Développement durable  
Guide de l'étudiant  
Offres d'emploi  
Tous les services

© EPFL 2006 | contacts  
Image: © EPFL

EPFL, 1015 Lausanne, tél. ++ 41 21 693 11 11  
Mise à jour: 21 avril 2010

Version mobile

UZH - Universität Zürich - Public Portal

http://www.uzh.ch/index.html

tromsweather dolueg ImageProcessingPlace track ILIAS TeLL Drishti EGUconvenor eva Google Maps Wikipedia News (679)

Kontakte Suche

Universität Zürich

Universität Forschung Studium Dienstleistungen News

English |

**Direkteinstieg**

- für Studieninteressierte
- für Internationals
- für UZH-Studierende
- für UZH-Forschende
- für UZH-Lehrende
- für UZH-Mitarbeitende
- für UZH-Alumni
- für Medien


**Fakultäten und Institute**

Bitte wählen...

**Quicklinks**

Telefon-/E-Mail

**Die Universität Zürich**




→ Universität  
Fakten, Geschichte und Organisation

→ Forschung  
Die Forschungsprojekte und -schwerpunkte der UZH im nationalen und internationalen Umfeld.

→ Studium  
Für Studieninteressierte: Das breiteste Angebot an Bachelor- und Masterstudiengängen in der Schweiz.

→ Dienstleistungen  
Einrichtungen und Dienstleistungen für die Öffentlichkeit.




**News**

→ Universität Zürich – Neuste Medienmitteilungen

→ 23.04.2010 Die UZH – das Zentrum der universitären Medizin

→ UZH News – Alle Artikel


**Tag des Buches: E-Books – die Zukunft des Lesens?**



Der 23. April 2010 ist der «Welttag des Buches». Gerade in der Wissenschaft ist das elektronische Buch auf dem Vormarsch. Für das vertiefte Lernen und ästhetische Lesen wird uns aber das gedruckte Buch erhalten bleiben, sind unsere Gastautoren der Zentralbibliothek Zürich überzeugt.

→ Mehr...

**Stiftung für Studentisches Wohnen: Zimmer für 550 Franken**




In Zürich-Affoltern ist heute Baubeginn für zwei neue Wohnhäuser der Stiftung für Studentisches Wohnen. Rund 180 Studierende werden dort ab September 2011 in Wohngemeinschaften leben.

→ Mehr...


**Hinweise**

→ Universität Zürich - Agenda

- 23.4.2010, 13:00: Ausstellungsführung «Spur im Trebsand»
- 24.4.2010, 09:00: akti-Wallfahrt in den Ranft
- 24.4.2010, 09:30: Vergessen - Leerzeichen des Denkens?
- 25.4.2010, 11:30: Öffentliche Führung durch die Sonderausstellung «Massenaussterben und Evolution - Katastrophen als Verhängnis und Chance für Lebewesen seit Milliarden von Jahren»: Einblick in die Präparationstechnik (nur für Erwachsene geeignet)



**Dies academicus**  
Samstag, 24. April 2010



**Öffentliche Ringvorlesungen**

Universität Bern - Volluniversität | Bachelor | Master | PhD | Forschung


http://www.unibe.ch/

tromsweather dolueg ImageProcessingPlace track ILIAS TeLL Drishti EGUconvenor eva Google Maps Wikipedia News (679)

home universität

Studium | Campus | Bibliotheken | Forschung | Organisation | Arbeiten an der Uni | Öffentlichkeit


Suchen | Kontakt | Legenden | EN | FR



**u<sup>b</sup>**  
UNIVERSITÄT  
BERN


**Öffentlichkeit**

**Neue Lese-Erlebnisse dank neuer Medien**  
Die Medienbranche durchläuft eine rasante Entwicklung. Was dies für das Buch bedeutet, und wie sich Lese-Erlebnisse verändern, thematisiert Medienspezialist Matthias Zehnder zum Welttag des Buches. Die öffentliche Veranstaltung der Universitätsbibliothek findet am 23. April um 12.30 Uhr im Vortragssaal der Zentralbibliothek an der Münsterergasse 63 statt. >>




**Intern**

**(Uni-)Sport, Spiel und Spass**  
Das Gehirn mittrainieren, Selbstvertrauen entwickeln oder sich entspannen: Alle Universitätsangehörigen sind am 29. April ab 16.45 Uhr eingeladen, die vielfältigen positiven Effekte des Sporttreibens am eigenen Leib zu erfahren. «Unisport special» bietet kostenlos und ohne Voranmeldung ein etwas anderes Programm an. >>



**Webzeitung «uniaktuell»**

**In wenigen Schritten rund um die Erde**  
Der Botanische Garten (BOGA) feiert seinen 150. Geburtstag und eröffnet die Jubiläums-Feierlichkeiten mit einer Sonderausstellung zum Thema «Lebensräume - Vielfalt lokal bis global»: Berns Hausgarten präsentiert Gross und Klein die unterschiedlichsten Lebensräume unserer Erde im Kleinformat. >>



**Neue Spinne erhält Namen aus Comic**  
Der Fund passt ins internationale Jahr der Biodiversität: Holger Frick vom Zoologischen Institut der Uni Bern und des Naturhistorischen Museums Bern entdeckte eine seltene neue Spinnenart in den Schweizer Alpen. Speziell ist auch der Name. >>

Universität Bern | Hochschulstrasse 4 | CH-3012 Bern | +41 (0)31 631 81 11

© Universität Bern 23.04.2010 | Impressum  
swissuniversity.ch

**Direktmarketing für**

- >> UniBE-Studierende
- >> Studieninteressierte
- >> Internationale Studierende
- >> Doktorierende / PhD
- >> Weiterbildungsinteressierte
- >> Dozierende
- >> Forschende
- >> Mitarbeitende
- >> Alumni

**Quick Links**

- >> Semesterdaten
- >> Fakultäten & Institute
- >> Medienmitteilungen
- >> Veranstaltungen «Agenda»
- >> Stellenangebot
- >> E-Mail via Web

**Telefonbuch**

Suchen



UNIGE - Accueil

http://www.unige.ch/index.html

tromsweather dolueg ImageProcessingPlace track ILIAS TeLL Drishti EGUconvenor eva Google Maps Wikipedia News (679)

UNIVERSITÉ DE GENÈVE

Chercher | Accueil | Contacts | Portail UNIGE | Annuaire

Université de Genève

English

L'Université se présente

- Futura étudiants
- Etudiants
- Alumni
- Enseignants et collaborateurs
- Médias
- Entreprises
- Université et Cité
- International

Accès aux facultés

- Sciences
- Médecine
- Lettres
- Sciences économiques et sociales
- Droit
- Théologie
- Psychologie et sciences de l'éducation
- Traduction et interprétation
- Centres, instituts et programmes plurifacultaires

Sarcophage de la frise du Parthénon, British Museum, Londres.

**Quelle déontologie pour les musées?**

Dans le cadre de la maîtrise en conservation du patrimoine et muséologie des beaux-arts, les Universités de Genève, Lausanne et Fribourg organisent, le 27 avril, une journée d'étude consacrée à la question de la déontologie des musées, en partenariat avec les Musées d'art et d'histoire de Genève et le Centre universitaire du droit de l'art. Quelles règles les musées doivent-ils respecter dans les cas de trafics illicites, de spoliations ou de fouilles clandestines?

[Lire la suite >>](#)

**À la Une**

- Trois Pôles de recherche nationaux pour l'UNIGE
- 1500 billets offerts aux étudiants pour le Salon du livre
- L'œil ému: regarder, penser, vivre les œuvres d'art
- Remise en cause des modèles de formation planétaire
- Colloque international "Témoignage et survivance"
- Le Palais des Nations accueille des étudiants en droit international humanitaire

**Événements**

- L'Orient dans les cultes gréco-romains: lieu géographique ou image de l'ailleurs?
- Journées de la recherche en génétique
- Les archives d'entreprises en Suisse: trésors pour les historiens ou déchets?

[Agenda complet >>](#)

LE RU swissuniversity.ch International Forum of Public Universities

© Université de Genève 20 avril 2010.

# Beispiel

The image shows a screenshot of a web browser displaying the homepage of the University of Lausanne (UNIL). The browser's address bar shows the URL <http://www.unil.ch/index.html>. The page features the UNIL logo and the text "UNIL | Université de Lausanne". A decorative graphic with the words "EDUCATION" and "RECHERCHE" is visible. Below the header, there are three main sections: a landscape image with a wooden boardwalk, a photo of a woman holding books, and a blue box titled "Le journal en ligne de l'UNIL:" containing text about online journals, conferences, and events. At the bottom, there are navigation links for "Accueil | Welcome | Willkommen", "Interne", and "Actualités". The footer includes the "swissuniversity.ch" logo.

Unil  
UNIL | Université de Lausanne

EDUCATION RECHERCHE | le savoir vivant |



**Le journal en ligne de l'UNIL:**  
le memento, l'agenda des événements.  
Conférences, colloques et rencontres...

Accueil | Welcome | Willkommen    Interne    Actualités

swissuniversity.ch

Universit  de Neuch tel (Suisse) Bachelor | Master | PhD | Recherche

http://www2.unine.ch

tromsweather dolueg ImageProcessingPlace track ILIAS TeLL Drishti EGUconvenor eva Google Maps Wikipedia News (679) v

rechercher go

5 facult s

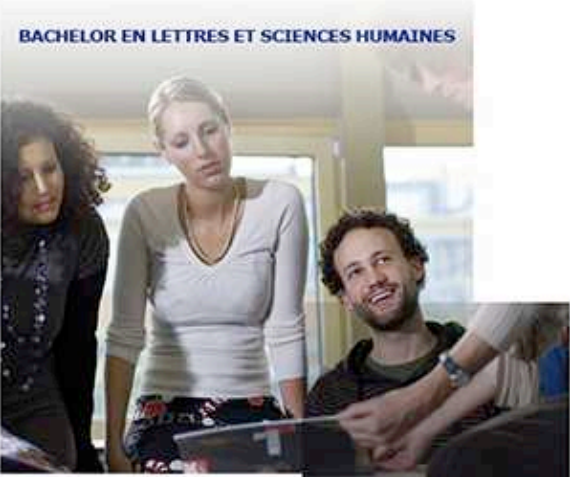
annuaire plan du site acc s contact

unine  
Universit  de Neuch tel  
[ Home ]

futurs  tudiants  
 tudiants de l'UNINE  
public et alumni  
collaborateurs  
m dias

formation  
recherche  
prospective students  
inscription et conditions

**BACHELOR EN LETTRES ET SCIENCES HUMAINES**



> Pr sentation

unine  
Universit  de Neuch tel

actualit s

Laurent Fr sard laur at du prestigieux Prix AFFI - NYSE Euronext 2009 pour sa th se de doctorat en finance

Le march  des footballeurs sous la loupe

Visas, Frontaliers, R fugi s, Islam, Infirmi res, Footballeurs... les chercheurs neuch telois se penchent sur les migrations contemporaines

tra  d'UNION, la newsletter de l'UNINE

 v nements

agenda des manifestations  
caf s scientifiques  
le ons inaugurales  
r trospectives des manifestations

publications

plan d'intentions 2009-2012 (pdf)  
mandat d'objectifs 2009-2012 (pdf)  
rapport de gestion 2007-2008 (pdf)  
UnINEws No 15 : Paysages

UNINE : le film  
d couvrez l'Universit 

Universit  de Neuch tel, Avenue du 1er-Mars 26, 2000 Neuch tel, t l. +41 32 718 1000, contact@unine.ch  
webmaster@unine.ch

impression  
authentification

swissuniversity.ch

The screenshot shows the homepage of the University of Basel. At the top, there is a browser window with the URL <http://www.unibas.ch/> and a search bar with the Google logo. Below the browser window, the text "UNIVERSITÄT BASEL" is displayed next to the university's logo, a stylized snowflake. A navigation bar contains links for "De Eng", "SUCHE", "DOKUMENTE", "SITEMAP", "KONTAKT", and "NEWSLETTER". A secondary navigation bar lists "AKTUELL", "UNIVERSITÄT", "STUDIUM", "FORSCHUNG", "WEITERBILDUNG", "UNI-LEBEN", and "UNI-INTERN". A banner image features a collage of photos: a woman's face, a modern building interior, a group of people in a gymnasium, and a man holding a blue sign with "UNIV" on it. The main content area is divided into four columns: 1. "Alle Organisationseinheiten der Universität Basel >" with a dropdown for "Fakultäten". 2. "EINSTIEGSSEITEN FÜR..." with a list of categories: >Studieninteressierte, >Studierende/Doktorierende, >Forschende, >International Students, >International Researchers, >Mitarbeitende, >Dozierende, >Alumni, >Medien, >Uni für Alle, >Wirtschaft und Industrie. Below this is a "550 JAHRE WISSEN BEWEGT UNS 1460-2010" graphic. 3. "News" with a list of articles: "23.04.2010 Latein-Sommerschule 2010 der Universität Basel mehr...", "23.04.2010 Basler Münster im Zeichen der Universität Basel mehr...", "22.04.2010 Neue Argovia-Professur der Universität Basel am Kantonsspital Aarau mehr...", and a link "alle News >". 4. "Veranstaltungen" with a list of events: "550 Jahre Universität Basel Jubiläumsprogramm >", "23.04.2010 12.15 Allen, Marx & Co.: Slavoj Žižek im Porträt mehr...", "23.04.2010 15.15 The diamond approach to quantum spintronics mehr...", "23.04.2010 19.00 Der freie Wille aus neurowissenschaftlicher Sicht: Mythos, Fiktion oder Tatsache? mehr...", and a link "alle Veranstaltungen >". 5. "SUCHE" with radio buttons for "Uni Website" (selected) and "Personen", a search input field, a "GO" button, and a link "Erweiterte Suche >". 6. "Quick Links" with a list of links: > MOnA My Online Account (Login), > Termine, Semesterdaten: 09/10, > Kinder-Uni 2010, > Sprachenzentrum Kurse 2010, > Vorlesungsverzeichnis, > Fortbildung, > Universitätsbibliothek, > Universitätsrechenzentrum, > Webmail Login, > Offene Stellen Universität Basel, > Unisport, > Virtueller Rundgang, > Marktplatz. At the bottom right, there is a footer with "@Universität Basel | Impressum | [swissuniversity.ch](http://swissuniversity.ch)" and the date "23/04/2010". The bottom of the page features a large green banner with the text "unibas.ch" in a light green font.

Biozentrum, University of Basel, Switzerland, Welcome :::

http://www.biozentrum.unibas.ch/

tromsweather dolueg ImageProcessingPlace track ILIAS TeLL Drishti EGÜconvenor eva Google Maps Wikipedia News (679)

**BIOZENTRUM**  
Universität Basel

Legal Sitemap Contact Search

Biozentrum Research Education Services Events Intranet News

Friday, April 23, 2010

Welcome to the Website of the Biozentrum,  
University of Basel, Switzerland

*Dedicated to excellence in research and teaching.*

*Focus on the investigation of biological nanomachines and communication systems in health and disease.*

550  
JAHRE  
UNIVERSITÄT  
BASEL  
WISSEN  
BEWEGT  
UNS

[Click here for more info.](#)

**Latest publications**

Vascular Morphogenesis in the Zebrafish Embryo. *Dev Biol*, 341. →

A liquid chromatography-coupled tandem mass spectrometry method for quantitation of cyclic diguanosine monophosphate. *J Microbiol Methods*. →

Second messenger mediated adjustment of bacterial swimming velocity. *Cell*, 141(April 2). →

[More](#)

**Network**

[D-BSSE](#)

[Department of Biomedicine](#)

[FMI](#)

[Swiss Institute of Bioinformatics](#)

[Swiss Nanoscience Institute](#)

[Swiss National Science Foundation](#)

[Swiss Tropical and](#)

**Research**

**Prestigious Award for Biozentrum Researchers**  
A publication by Karl G. Hofbauer's group from the Biozentrum, University of Basel, will receive The Endocrine Society and Pfizer, Inc. International Award for Excellence in Published Clinical Research. [Whole Text](#)

**Boost for stem cell research**  
Neural stem cells have the remarkable ability to make the enormous numbers of nervous cells in the brain. However, they can become abnormal, and as a result turn into a deadly brain tumor.. [Whole Text](#)

**In honor of Hans-Peter Hauri**  
Hans-Peter Hauri, Professor for Cell Biology and former Dean of the Faculty of Science at the University of Basel, gave his farewell lecture on March 12, 2010... [Whole Text](#)

**A molecular brake for the bacterial flagellar nano-motor**  
Biozentrum researchers have now discovered that *Escherichia coli* bacteria harness a sophisticated chemosensory and signal transduction machinery... [Whole Text](#)

**Molecular Basis for *Pseudomonas Aeruginosa* Chronic Cystic Fibrosis Infections**  
Biozentrum researchers identified Small Colony Variants of *Pseudomonas aeruginosa* to be a hallmark of chronic infection in cystic fibrosis patients... [Whole Text](#)

**BINDER Innovation Prize for Anne Spang**  
Anne Spang will be presented with the BINDER Innovation Prize at the Annual Meeting of the Society for Cell Biology (DGZ), on 10th March, 2010... [Whole Text](#)

**The Biozentrum – Best Places to Work for Postdocs 2010**  
In its March issue, the American magazine *The Scientist* published the results of its annual survey of *Best Places to Work for Postdocs 2010*... [Whole Text](#)

**Obituary for Marco Faustmann**  
The Biozentrum is mourning the sudden death of one of its students, Marco Faustmann, who died on February 20, 2010 at the young age of 29, as a result of a tragic accident... [Whole Text](#)

**International PhD Program**

**Open for registration now!**

**Seminars & Events**

**Registration is open now**  
June 24th, 2010  
June 25th, 2010  
8th [BC]2 Basel Computational Biology Conference [Details](#)

**April 26th, 2010**  
Beyond the Resolution Limit: The use of prior knowledge in protein structure determination. [Details](#)

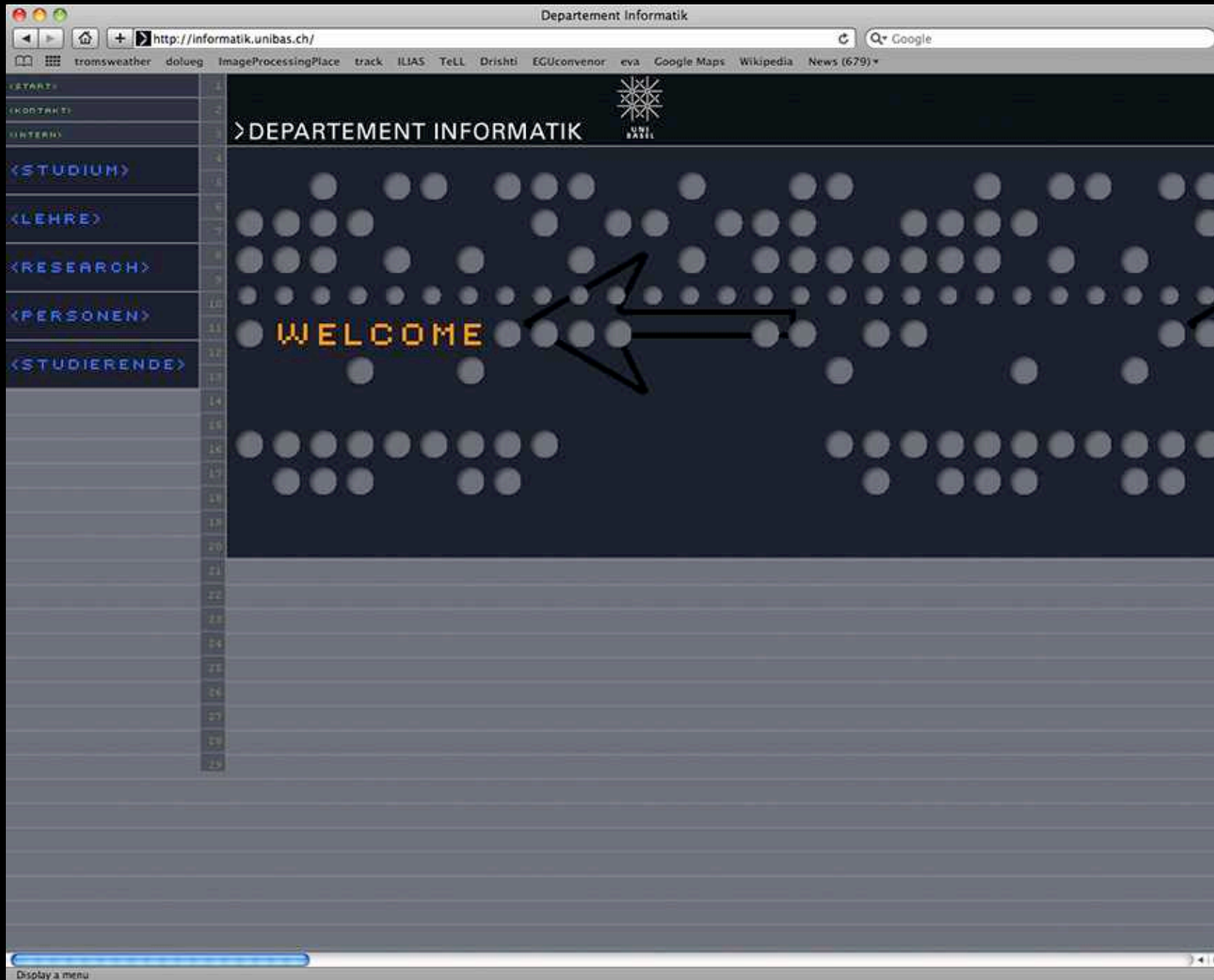
**April 26th, 2010**  
Our complicated neighbourhood with *Staphylococcus aureus* [Details](#)

**April 27th, 2010**  
Protein Kinases as Drug Targets: Potentials and Limitations. [Details](#)

WELCOME

Display a menu

# Beispiel




# Beispiel

Math. Institut der Universität Basel

http://www.math.unibas.ch/


tromsweather dolueg ImageProcessingPlace track ILIAS TeLL Drishti EGUconvenor eva Google Maps Wikipedia News (679) ▾

## Departement Mathematik Universität Basel



Google Benutzerdefinierte Suche  Suche

Institut  
Aktuell - News  
Adresse  
Mitarbeitende  
Arbeitsgruppen  
Stellen - Jobs  
Aktivitäten  
Studium  
Bibliothek  
Interna




UNIVERSITÄT BASEL | KONTAKT

Display a menu

Basel Universität – Departement Physik – Start

http://www.physik.unibas.ch/

23.4.2010 Deutsch English



## Departement Physik

- Start
- Über uns
- Veranstaltungen
- Forschung
- Studium
- Personen
- Schule@Uni
- Kontakt



Google Custom Search

### Anstehende Kolloquien und Seminare

**Kernstruktur-, Elementarteilchen- und Astrophysik Seminar**  
 Do 22 Apr, 17:15, Lect. Hall 2  
**D. Blaschke**, Univ. Wroclaw (Polen)  
*"Towards a microscopic equation of state for astrophysical applications"*  
 (hosted by M. Liebendörfer)

**Kolloquium**  
 Fr 23 Apr, 15:15, Lect. Hall 1  
**Jörg Wrachtrup**, Universität Stuttgart  
*"The diamond approach to quantum spintronics"*  
 (host: D. Zumbühl)

**Kondensierte Materie Seminar**  
 Mo 26 Apr, 16:15, Lect. Hall 1  
**Fabio Pistolesi**, LPMCM Grenoble  
*"Resonant magneto-conductance of a suspended carbon nanotube quantum dot"*  
 (host: M. Poggio)



### News & Veranstaltungen


**PhD defense: Serpil Boz**, Universität Basel  
*"Controlling intermolecular interactions at surfaces through chemical ligands: supramolecular aggregation, covalent coupling and chirality at reduced dimensions"*  
 Friday, 7th May 2010, 13:30, Lecture hall 1, Foyer

**Kurze Geschichte des Departements Physik der Universität Basel**  
 2010 feiert die Universität Basel ihr 550-jähriges Jubiläum. Die zu dieser Gelegenheit verfasste kurze Geschichte des Departements Physik kann [hier](#) heruntergeladen werden.


**Vorkurs Mathematik an der Universität Basel**, 6.-10. September 2010  
 Das Mathematische Institut der Universität Basel bietet erneut einen intensiven einwöchigen Vorkurs Mathematik an. Dieser Vorkurs dient zur Vorbereitung des Studiums und erlaubt es, Mathematikkenntnisse aus der Schule aufzufrischen und allfällige Lücken zu erkennen. Er richtet sich an alle studienanfängerinnen und studienanfänger der Philosophisch-Naturwissenschaftlichen Fakultät. Weitere Angaben zum Kurs finden Sie auf folgender Webseite: <http://www.math.unibas.ch/vorkurs/>

Semesterdaten:  
 Frühjahrssemester 2010: 1.3.2010 - 4.6.2010  
 Herbstsemester 2010: 20.9.2009 - 23.12.2010


Seiten Inhalt:  




Swiss  
Nanoscience  
Institute



Basel Center for  
Quantum Computation and  
Quantum Coherence



NCCR  
Nanoscale  
Science



Intern. Graduiertenkolleg  
Basel-  
Graz-Tübingen: Hadronen im  
Vakuum, Kernen und Sternen

Display a menu




Department of Pharmaceutical Sciences – University of Basel – Switzerland

http://www.pharma.unibas.ch/ Google

tromsweather dolueg ImageProcessingPlace track ILIAS TeLL Drishti EGUconvenor eva Google Maps Wikipedia News (679)


# DEPARTMENT OF PHARMACEUTICAL SCIENCES

UNIVERSITY OF BASEL



Home Agenda Department Faculty Seminars Teaching Pharmsquare Lm@il-Offizin Open Positions Contact

- » Pharmaceutical Biology
- » Industrial Pharmacy Lab
- Pharmaceutical Technology
- » Molecular Modeling
- » Pharmaceutical Care
- » Clin. Pharmacology/Toxicology
- » Clin. Pharmacy/Epidemiology
- Biopharmacy
- » Molec. & Systems Toxicology
- » Molecular Pharmacy
- » Museum of Pharm. History



## News

9<sup>th</sup> Swiss Course on Medicinal Chemistry: October 10–15, 2010 in Leysin

- First announcement
- More information

Last update: April 16, 2010

Display a menu

Department of Chemistry, University of Basel

http://www.chemie.unibas.ch/index.php

UNIVERSITY OF BASEL

Department of Chemistry

UNIBAS

HOME UNIVERSITY FACULTY PHIL. II





ORGANIZATION RESEARCH STUDY CHEMISTRY ONLINE INTRANET VISITORS SEARCH

Upcoming seminars:

26. April 2010 at 14:15:  
Physikalische Chemie, Klingelbergstr. 80, grosser Hörsaal, PC 3.10  
**Heilbronner-Hückel Lecture: About Free Electrons, Molecules, Ions, and Processes between them (PC)**  
Prof. Dr. J. Troe, Institute of Physical Chemistry, University of Göttingen, Germany

26. April 2010 at 17:30:  
Organische Chemie, St. Johannis-Ring 19, kleiner Hörsaal OC  
**Redesign of enantioselective borohydride reductions catalyzed by optically active cobalt complexes (OC/3ème cycle)**  
Prof. Dr. Tohru Yamada, Keio University, Yokohama, Japan

30. April 2010 at 14:15:  
Organische Chemie, St. Johannis-Ring 19, kleiner Hörsaal OC (OC)  
Prof. Dr. Tamejiro Hiayama, Kyoto University, Japan



Display a menu for "http://550.unibas.ch/Sonderbriefmarke-zum-550-Jahr-Jubiläum-der-Universitaet-Bas.74.0.html"

Departement Umweltwissenschaften: Home

http://duw.unibas.ch/

tronsweather dolueg ImageProcessingPlace track ILIAS TeLL Drihti EGUconvenor eva Google Maps Wikipedia News (730)

UNIVERSITÄT BASEL

Departement Umweltwissenschaften

DE | EN    **SUCHE**    HOME    SITEMAP    KONTAKT    LOGIN

**AKTUELLES    DEPARTEMENT    INSTITUTE    STUDIENANGEBOT    PERSONEN    FOTOS**

**NEWS**

**18.04.2010** Impressionen vom DUW-Stand am Markt des Wissens von Sonntag, 18. April 2010 unter dem Menüpunkt Fotos [\[mehr\]](#)

**14.03.2010** Die Masterfeier Biologie 2010 findet am 6. November 2010 statt. [\[mehr\]](#)

**BEREICHE DES DEPARTEMENTS UMWELTWISSENSCHAFTEN**

- Integrative Biologie
- Geowissenschaften
- Mensch-Gesellschaft-Umwelt
- Prähistorische und Naturwissenschaftliche Archäologie

Departement Umweltwissenschaften  
Bernoullistrasse 32  
CH-4056 Basel

Telefon und Auskunft:  
+41 (0)61 267 36 14

[sonja.zuercher-at-unibas.ch](mailto:sonja.zuercher-at-unibas.ch)

**VERANSTALTUNGEN**

**03.05.2010 18:15 bis 19:15** - IPNA-Kolloquium: Forschungskolloquium "Kränzli" IPNA und UFG [\[mehr\]](#)

**05.05.2010 17:15 bis 18:15** - MCR Aktuell: Hyper Swiss Net [\[mehr\]](#)

**QUICKLINKS**

- :: **Webmail Login**
- :: **Personen UNI Basel**
- :: **Vorlesungsverzeichnis UNI Basel**
- :: **Dekanat Phil.-Nat. Fakultät**
- :: **Campus Studium & Lehre**
- :: **EVA**
- :: **Web-Kolloquium**
- :: **Forschungsdatenbank Uni Basel**


© Universität Basel Fakultät Departement Impressum

Departement Umweltwissenschaften

University of Basel • Institute of Botany • Sect. Plant Ecology

http://pages.unibas.ch/botschoen/index.html

tromsweather dolueg ImageProcessingPlace track ILIAS TeLL Drishti EGUconvenor eva Google Maps Wikipedia News (679)



Institute of Botany  
Sect. Plant Ecology

News  
How to find us  
Addresses  
Staff

Research  
Projects  
Publications  
Books

Teaching  
Essay/Research task  
Field courses  
Image database


Lectures  
Kolloquium  
Abendkolloquium

Master  
Program  
Topics  
Scholarship

References  
Archive  
Links


# Institute of Botany

## Sect. Plant Ecology



Botanisches Institut der Universität Basel  
Schönbeinstrasse 6, CH - 4056 Basel (Switzerland)  
Tel. ++41 (0)61 267 35 00, Fax ++41 (0)61 267 35 04

Sect. Plant Ecology [this website] Schönbeinstr. 6, 4056 Basel <a href="http://www.unibas.ch/botschoen">www.unibas.ch/botschoen</a>	Sect. Plant Physiology Hebelstr. 1, 4051 Basel <a href="http://plantbiology.unibas.ch">plantbiology.unibas.ch</a>	Botanical Garden Spalengraben 8, 4051 Basel <a href="http://www.unibas.ch/botgarten">www.unibas.ch/botgarten</a>
---	---	--



Display a menu

Evolutionary Biology | Universität Basel

http://www.evolution.unibas.ch/

tromsweather dolueg ImageProcessingPlace track ILIAS TeLL Drishti EGUconvenor eva Google Maps Wikipedia News (679)

EvolutionaryBiology

Universität Basel  
Phil.-Natw. Fakultät  
Zoologisches Institut

Home Kurse / Courses People Research Seminars Miscellaneous Intranet

Print view

Kurse  
Frühjahrssemester  
2010

Contact/  
Location  
W.D. Hamilton

## Evolutionary Biology at the Zoological Institute

The group for evolutionary biology at the Zoological Institute of the University of Basel promotes higher education and research in organismic biology, in particular the fields of evolution, evolutionary ecology and behavioral ecology. It complements existing strengths in life-sciences at the University of Basel. We offer courses covering different aspects of evolutionary biology, including evolutionary ecology, evolutionary genetics, molecular evolution and behavioral ecology. Current research interests of members of the group include population genetics, host-parasite interactions, life-history evolution, the evolution of the immune system, the evolution of animal diversity, parent-offspring interactions, sex allocation and sexual conflict in hermaphrodites. The organisms studied in our experimental work are water fleas (*Daphnia*) including their various parasites and pathogens, earwigs, flatworms, and cichlid fishes. Our work is strongly supported with bioinformatics and mathematical modeling.



Participants of the block course in Zoology and Evolutionary Biology, April 2010.  
(click picture for enlarged version)

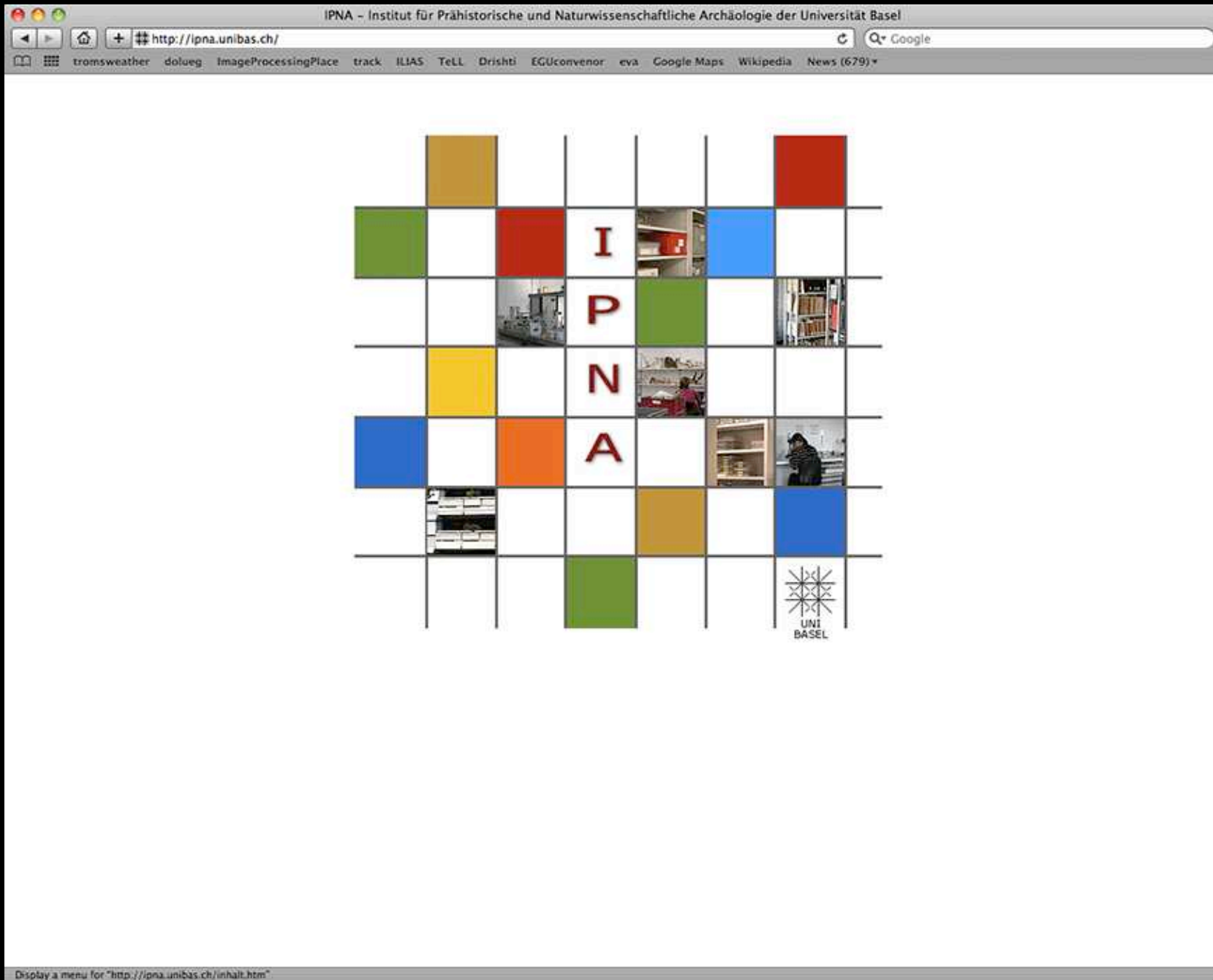
[back to top](#)

Universität Basel, Zoologisches Institut  
Evolutionsbiologie  
Vesalgasse 1  
CH-4051 Basel  
Switzerland

[Get Feedback](#)  [XHTML](#)  [CSS](#)  
last modified: 12 April 2010  
[Impressum](#)

Display a menu

# Beispiel



Display a menu for "<http://ipna.unibas.ch/inhalt.htm>"

MGU - home

http://www.programm-mgu.ch/de/home.html

tromsweather dolueg ImageProcessingPlace track ILIAS TeLL Drishti EGUconvenor eva Google Maps Wikipedia News (679)

Programm MGU  
Mensch Gesellschaft Umwelt

Vesalgasse 1  
CH - 4051 Basel

Tel. ++41 61 267 04 00  
Fax ++41 61 267 04 09

LEHRE FORSCHUNG DIENSTLEISTUNGEN *mgu*

KONTAKT TEAM MGU

**MGU: Mensch - Gesellschaft - Umwelt**

**MGU gestern...**

Das einst 1992 nach einem Chemieunfall (1986) der Sandoz von einer basellandschaftlichen Stiftung getragene Programm Mensch-Gesellschaft-Umwelt (MGU) wurde per 2005 in die universitären Strukturen integriert. Das Angebot von MGU umfasste ein fächerübergreifendes, praxisorientiertes Programm zu Umweltfragen und Nachhaltigkeit in Lehre und Forschung, das in den bisherigen Lizentiats- oder Diplomstudiengängen als Neben- bzw. Wahlfach studiert werden konnte. Im Zuge der Bologna-Reform an der Universität Basel werden diese Studiengänge von den Bachelor- und Masterstudiengängen abgelöst, MGU als Neben- oder Wahlfach läuft aus.

Das von der ehemaligen Stiftung MGU getragene [Forschungsprogramm](#) wurde Mitte Mai 2006 offiziell abgeschlossen.

**...und heute**

In der Forschung konzentrieren wir uns bei MGU heute auf aquatische Ökologie und Ökotoxikologie. Zahlreiche Projekte sind interdisziplinär angelegt und laufen in Kooperation mit Instituten und Arbeitsgruppen im In- und Ausland.

Mit dem neuen spezialisierten [Masterstudiengang in Sustainable Development MSD](#) werden die Grundideen von MGU weiter entwickelt. Der MSD wird getragen von der Philosophisch-Naturwissenschaftlichen, der Philosophisch-Historischen und der Wirtschaftswissenschaftlichen Fakultät der Universität Basel. [Mehr...](#)

Weiterhin können im Rahmen des gesamtuniversitären [Transfakultären Querschnittsprogramms TQ](#), [Programm Nachhaltige Entwicklung](#) freie Kreditpunkte erworben werden (Leitung Prof. Patricia Holm).

Im Bereich Lehre wird Studierenden, die bisher MGU im Nebenfach belegt haben, der Abschluss nach alter Studienordnung gewährleistet (Leitung Prof. Paul Burger).

- [Influenza A/H1N1: Informationen der Universität Basel](#)
- [Offene Stellen bei MGU](#)
- [Jahresbericht 2007](#)

UNIVERSITÄT BASEL

Display a menu

# Beispiel: Geowissenschaften Basel

Departmentum Geowissenschaften Uni Basel – Institut für Umweltgeowissenschaften

http://pages.unibas.ch/environment/

Departmentum Umweltwissenschaften  
Umweltgeowissenschaften

HOME AKTUELLES MITARBEITERINNEN STUDIUM FORSCHUNG PUBLIKATIONEN LABOR

Institut für Umweltgeowissenschaften  
Departmentum Umweltwissenschaften  
Universität Basel

Bemoullistrasse 30  
CH-4056 Basel  
Schweiz  
Tel.: ++41/61/267 04 80  
Fax: ++41/61/267 04 79

Öffnungszeiten Sekretariat  
Mo 13.00 - 16.30 Uhr  
Mi 08.30 - 16.30 Uhr  
Do 08.30 - 16.30 Uhr  
[sekretariat-ugw@unibas.ch](mailto:sekretariat-ugw@unibas.ch)

[Direktnummern](#)

[Wegbeschreibung \(E\)](#)

[Site in ENGLISH](#)

Display a menu



# Beispiel: Geowissenschaften Basel

Welcome to the MPI's homepage

http://titan.minpet.unibas.ch/minpet/

tromsweather dolueg ImageProcessingPlace track ILIAS TeLL Drishti EGUconvenor eva Google Maps Wikipedia News (679) ▼

Department of Geosciences  
Institute of Mineralogy & Petrography

UNI  
BASEL

Student Infos News People Research Groups Facilities Photo Galleries Miscellaneous Links

Related Institutes:

- [Swiss Gemmological Institute \(SSEF\)](#)
- [Geology and Paleontology](#)
- [Environmental Geosciences](#)
- [Biogeography](#)
- [Meteorology](#)
- [Physiogeography](#)
- [Human Geography](#)
- [Museum of Natural History](#)

## Institute of Mineralogy and Petrography

Address: Bemoullistrasse 30  
CH-4056 Basel  
Switzerland

Contact: ++41-61-267 35 91 (phone)  
++41-61-267 36 13 (fax)  
joelle.glanzmann@unibas.ch

Fun: [Matching Pairs \(Minerale\) - Basler Bausteine](#)

### Was ist Mineralogie?

View from the lake di Valloggia (upper Val Bavona) towards the south, with graphite structure

Made on a Mac.

Display a menu

# Beispiel: Geowissenschaften Basel

Institut für Meteorologie, Klimatologie und Fernerkundung – Departement Umweltwissenschaften der Universität Basel: Home

http://www.mcr.unibas.ch/typo3/

tronsweather dolueg ImageProcessingPlace track ILIAS TeLL Drishti EGUconvenor eva Google Maps Wikipedia News (679)

Departement Umweltwissenschaften  
Meteorologie, Klimatologie und Fernerkundung

Home | Aktuelles | Mitarbeiter | Lehre | Forschung | Publikationen | Aktuelle Modelldaten | Aktuelle Messdaten | Intranet

**Aktuelles:**

28.04.2010  
MCR Aktuell Vortrag  
Turbulenter Austausch von Impuls, Energie und Wasserdampf in und über einem mediterranen Pflanzterrasse

30.04.2010  
Exkursion  
Agrarklimatologie am Beispiel Kaiserstuhl

05.05.2010  
MCR Aktuell Vortrag  
Hyper Swiss Net

**Aktualisierte Seiten:**

- Offene Arbeitsthemen [16.04.2010 17:05]
- Abgeschlossene Arbeiten [16.04.2010 16:01]
- Laufende Arbeiten [16.04.2010 16:01]
- Offene Arbeitsthemen [16.04.2010 15:59]
- Home [16.04.2010 13:56]

## Institut für Meteorologie, Klimatologie und Fernerkundung

### Departement Umweltwissenschaften Universität Basel

**Adresse**

Klingelbergstrasse 27  
CH-4056 Basel  
Schweiz

Lageplan | streetview

ÖV: Linie 33 oder 30, Bushaltestelle "Bernoullianum"

**Kontakt**

Tel. +41 61 267 07 00  
Fax +41 61 267 06 89

Mail: [McrLab-Geogra@unibas.ch](mailto:McrLab-Geogra@unibas.ch)

Direkte Telefonnummern

**Aktuelle Wetterdaten**

Basel Klingelbergstr.  
23.4.2010 11:30

**Lufttemperatur**

Aktuell	13.4 °C
24h-Min.	6.3 °C
24h-Max.	17.5 °C

**Luftfeuchte**

Aktuell	44 %
24h-Min.	34 %
24h-Max.	59 %

**Globalestrahlung**

Aktuell	604 W/m <sup>2</sup>
24h-Max.	835 W/m <sup>2</sup>

**Strahlungsbilanz**

Aktuell	444 W/m <sup>2</sup>
24h-Min.	-92 W/m <sup>2</sup>
24h-Max.	634 W/m <sup>2</sup>

**Wind**

Aktuell	2.3 m/s
24h-Mittel	2.0 m/s
24h-Spitze	3.8 m/s

Windrichtung NNE

**Luftdruck**

Aktuell	977.8 hPa
Tendenz	-0.15 hPa/h

**Niederschlag**

Aktuell	0.0 mm/h
24h-Summe	0.0 mm/h

**CO<sub>2</sub>**

Aktuell	* ppm
24h-Mittel	* ppm
24h-Min.	* ppm
24h-Max.	* ppm

Online since: 1. February 2010; Last content update: 16. April 2010  
© 2008 Departement Umweltwissenschaften, Institut für Meteorologie, Klimatologie und Fernerkundung, Universität Basel.


Display a menu

# Beispiel: Geowissenschaften Basel


Uni Basel – Departement Geowissenschaften – Geographisches Institut

http://pages.unibas.ch/geo/geographie/


tromsweather dolueg ImageProcessingPlace track ILIAS TeLL Drishti EGUconvenor eva Google Maps Wikipedia News (679) ▾



Departement Geowissenschaften  
Geographisches Institut



**Physiogeographic.**  
Geographisches Institut  
Physiogeographie und  
Umweltwandel



**Humangeographic.**  
Geographisches Institut  
Humangeographie  
Stadt- und Regionalforschung

Display a menu

# Beispiel: Geowissenschaften Basel

Institut für Biogeographie - Homepage

http://www.nlu.unibas.ch/

Department Umweltwissenschaften  
Biogeographie

NLU	BIOGEOGRAPHIE:	INFO	MITARBEITER/INNEN	STUDIUM	FORSCHUNG	PUBLIKATIONEN
	NATURSCHUTZBIOLOGIE:	INFO	MITARBEITER/INNEN	STUDIUM	FORSCHUNG	PUBLIKATIONEN

**Institut für Biogeographie**  
 Departement Umweltwissenschaften  
 Universität Basel

English

Aktuelles und Änderungen zum  
 Vorlesungsverzeichnis des laufenden Semesters

Kommission für Reiestipendien der SCNAT+

**Latest Biogeography Research News:**  
*Gradual adaptation toward a range-expansion phenotype  
 initiated the global radiation of toads*  
 in *Science* 327, 5 Feb 2010, pp.679-682

St. Johannis-  
 Vorstadt 10  
 CH-4056 Basel  
 Schweiz  
 Tel: +41-61-267 08  
 00  
 Fax: +41-61-267 08  
 01

Öffnungszeiten  
 des Sekretariates  
 Mo: nachmittags  
 Di: ganzer Tag  
 Do: 11.30 - 12.30  
 Fr: vormittags

**Direktnummern**



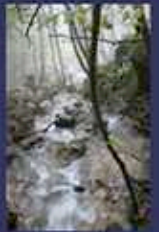
Lageplan  
 St. Johannis-  
 Vorstadt 10

Lageplan  
 Klingelbergstrasse  
 27

**Was ist Biogeographie?**


**Paussinae-  
 Studien**

**Quellen in der  
 Region Basel -  
 biogeographische  
 Lehrpfade**

picture © G. Goergen  
 (Cotonou)

Ökologie und Biogeographie der afrotropischen Biota und ihrer Lebensräume sind Schwerpunkte unserer Forschung.



Display a menu

# Beispiel: Geowissenschaften Basel

Conservation Biology (University of Basel)

http://www.conservation.unibas.ch/

Department of Environmental Sciences  
Conservation Biology

DE EN CONSERVATION BIOLOGY: NEWS TEAM TEACHING RESEARCH PUBLICATIONS  
BIOGEOGRAPHY: NEWS TEAM TEACHING RESEARCH PUBLICATIONS

Section of Conservation Biology  
University of Basel

St. Johanns-Vorstadt 10  
CH-4056 Basel  
Switzerland  
Tel. +41 61 267 08 31  
Fax +41 61 267 08 32

map

- Team
- MSc in ecology
- Research projects
- Publications
- Partners

New book

Biodiversität

UTB Profile

Evolution MegaLab

Evolution MegaLab.org

University of Basel | Faculty of Science | Department of Environmental Sciences | Section of Conservation Biology | Imprint

Display a menu

# Beispiel: Geowissenschaften Basel

Basel University - Geology and Paleontology

http://pages.unibas.ch/earth/

Department of Environmental Sciences  
Institute of Geology & Paleontology

HOME    STUDYING GEOSCIENCES    CURRENT SEMESTER    GEO @ BERNOLLIANUM

**Group Links:**  
Applied Geology  
Paleontology  
Rock Deformation  
Sedimentology


**Tectonics**  
EUCOR URGENT project

**Department:**  
Environmental Sciences  
Faculty and staff

**Institut für Geologie und Paläontologie**  
Departement Umweltwissenschaften  
Universität Basel

**Adresse:**  
Bernoullistrasse 32  
CH-4056 Basel  
Schweiz

**Sekretariat:**  
++41-61-267 35 91 (Telefon)  
++41-61-267 36 13 (Fax)  
e-mail



**ANNUAL REPORTS**  
Jahresberichte der Erdwissenschaftlichen Institute

- 2001 (PDF file 196KB)
- 2002 (PDF file 220KB)
- 2003 (PDF file 2.52KB)
- 2004 (PDF file 560KB)
- 2005 (PDF file 464KB)
- 2006 (PDF file 480KB)
- 2007 (PDF file 664KB)

**Institute of Geology and Paleontology**  
Department of Environmental Sciences  
Basel University

**Address:**  
Bernoullistrasse 32  
CH-4056 Basel  
Switzerland

**Secretary:**  
++41-61-267 35 91 (phone)  
++41-61-267 36 13 (fax)  
e-mail

Garus Thrust, Switzerland.

Display a menu

# Beispiel: Geowissenschaften Bern

home universität > philosophisch-naturwissenschaftliche fakultät > institut für geologie  
 Studium | Campus | Bibliotheken | Forschung | Organisation | Arbeiten an der Uni | Öffentlichkeit

Suchen | Kontakt | Lageplan | E

**Institut für Geologie**

**Willkommen am Institut für Geologie**

» **Vulkan legt Europa lahm**  
**BZ-Talk, Donnerstag 22. April, ab 19:30 stündlich**  
 (TeleBärn)  
 Die Vulkan-Ashewolke aus Island hat Europa lahmgelegt. Drohen weitere Ausbrüche? Wie setzt sich die Wolke zusammen? War das strenge Flugverbot nötig?  
 Gäste:  
 - Martin Engi, Professor Universität Bern, Institut für Geologie  
 - Max Ungricht, Aviatikexperte, Pilot, Chefredaktor Cockpit  
 Moderation:  
 - Stefan Geissbühler, Newschef BZ

**BZ Talk**  
 Jeden Donnerstag um 19:30 Uhr im Stundentakt auf TeleBärn.  
 Vorschau auf die Sendung des 22. 4. 2010  
**Vulkan legt Europa lahm**

» **Vortrag: Neue Eruptionen auf Island: Mechanismen und Auswirkungen**  
 Wann: **29. April 2010, 19:30 Uhr**  
 Wo: Universität Bern, Hauptgebäude Hochschulstrasse 4, 3012 Bern (Lageplan)  
 Wer: Prof. Martin Engi

» Veranstaltungshinweis der Naturforschenden Gesellschaft in Bern  
 » Präsentation auch am 29.5.2010

» **Festballsgulium** zum 60. Geburtstag von Prof. Martin Engi mit spannenden Vorträgen  
**23. April 2010, 15:00**, Universität Bern, UniS, Hörsaal A003, Schanzeneckstrasse 1, 3012 Bern

» **Einweihung Geozentrum Burgdorf** (28.4.2010):  
 Labor für Geotechnik und Ingenieurgeologie. Zusammenarbeit der Berner Fachhochschule Architektur Holz und Bau, Kompetenzzentrum Naturereignisse und Geotechnik (Verantwortlicher: Martin Stolz) und Institut für Geologie der Universität Bern, Forschungsgruppe Quartär- und Umweltgeologie (Verantwortlicher: (Prof. Christian Schlüchter)

» **Program der Einweihung**

**u<sup>b</sup>**  
**UNIVERSITÄT BERN**

**Quick Links**

» Infos zum Studium  
 » Download Informationsbrochüre  
 » Forschungsgruppen  
 » Personen am Institut  
 » Publikationen  
 » Welcome guide  
 » Login Webmail  
 » Offene Stelle (PhD)

**INQUA Bern 2011**

**XVIII INQUA BERN 2011 SWITZERLAND**

**Deadlines:**

» **December, 2009:** Official excursion programme  
 » **January 1 – June 30, 2010:** Submission of proposals for sessions and symposia and Submission of proposals for supplementary self-organised pre- and post-congress excursions

**Contact:**

» Prof. Christian Schlüchter  
 +41 (0)31 631 87 63  
 E-Mail

» **Einweihung Geozentrum Burgdorf** (28.4.2010):  
 Labor für Geotechnik und Ingenieurgeologie. Zusammenarbeit der Berner Fachhochschule Architektur Holz und Bau, Kompetenzzentrum Naturereignisse und Geotechnik (Verantwortlicher: Martin Stolz) und Institut für Geologie der Universität Bern, Forschungsgruppe Quartär- und Umweltgeologie (Verantwortlicher: (Prof. Christian Schlüchter)

» **Program der Einweihung**  
 - **Medieninformation** (15.4.2010)  
 - **Geotechnische Untersuchungsmethoden** werden am **29. Mai am Tag der offenen Tür** vorgestellt (Erlebnis Geologie).

» **MSc in Erdwissenschaften:**  
 Hier finden Sie Informationen zum **Masterstudium** in Bern und zu den ausgeschriebenen **Masterarbeiten**.

» **Am 28./29. Mai 2010** entdeckt die Schweiz die Geologie. Nutzen Sie die Gelegenheit und besuchen Sie unseren **Tag der offenen Tür (TOT)** oder eine der zahlreichen Exkursionen, die über die Homepage [www.erlebnis-geologie.ch](http://www.erlebnis-geologie.ch) angeboten werden.

» Geologiestudium:  
 Auf unserer **Studienseite** finden Sie Informationen wie **Studienführer, Studienpläne, Stundenplan** oder das **Vorlesungsverzeichnis**. Weitere Fragen können Sie an die **Studienberater** oder an die **Fachschaft GMP** richten. Einen ersten Überblick zum Studium bekommen Sie in unserer **Informationsbrochüre** (pdf, 613kb). Schauen Sie für einen kleinen Vorgeschmack aufs Studium in der **Foto-galerie** vorbei!

» Die **Forschungsgruppen** des Instituts für Geologie stellen sich vor, darunter auch zwei **SNF Professuren**. Oder suchen Sie eine bestimmte **Person** oder eine **Publikation**?

» Was Sie schon immer über die **Geologie** wissen wollten... Oder haben Sie zur Geologie direkt eine **Frage** an uns?

↑

Universität Bern | Institut für Geologie | Baltzerstrasse 1+3 | CH-3012 Bern |  
 Tel.: +41 (0)31 631 87 61 | FAX: +41 (0)31 631 48 43 | [E-Mail](mailto:)

© Universität Bern 22.04.2010 | Impressum

**title**

http://pages.unibas.ch/earth/micro/

>>> BASEL UNIVERSITY HOMEPAGE  
>>> DEPARTMENT ENVIRONMENTAL SCIENCES  
>>> GEOLOGICAL INSTITUTE

**URL**

>>> BASEL UNIVERSITY SCIENCE FACULTY (PHIL II)  
>>> BASEL UNIVERSITY LIBRARY  
>>> BASEL UNIVERSITY Vorlesungsverzeichnis  
>>> BASEL UNIVERSITY PERSSEARCH

**logo**



ROCK DEFORMATION HOME

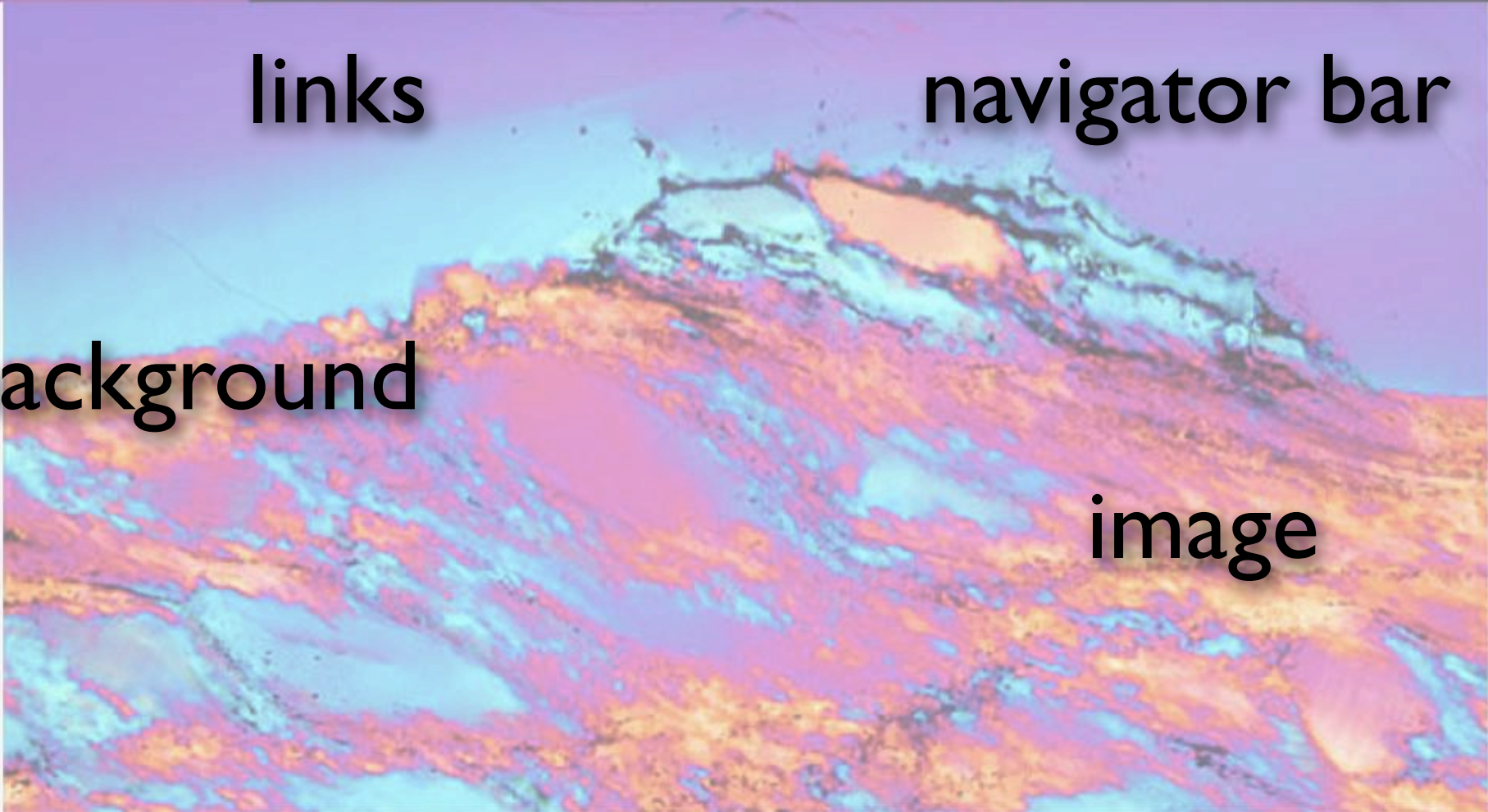
address lectures workshops software SXM macros manuals projects publications

**links**

**navigator bar**

**background**

**image**



ROCK DEFORMATION HOME

address rock deformation lab pictures miscellaneous

-impressum-

>>> TROMSØ HARVARD ROCK HOMEPAGE  
>>> TROMSØ GEOLOGICAL INSTITUTE  
>>> TROMSØ UNIVERSITY

**links to external web sites**





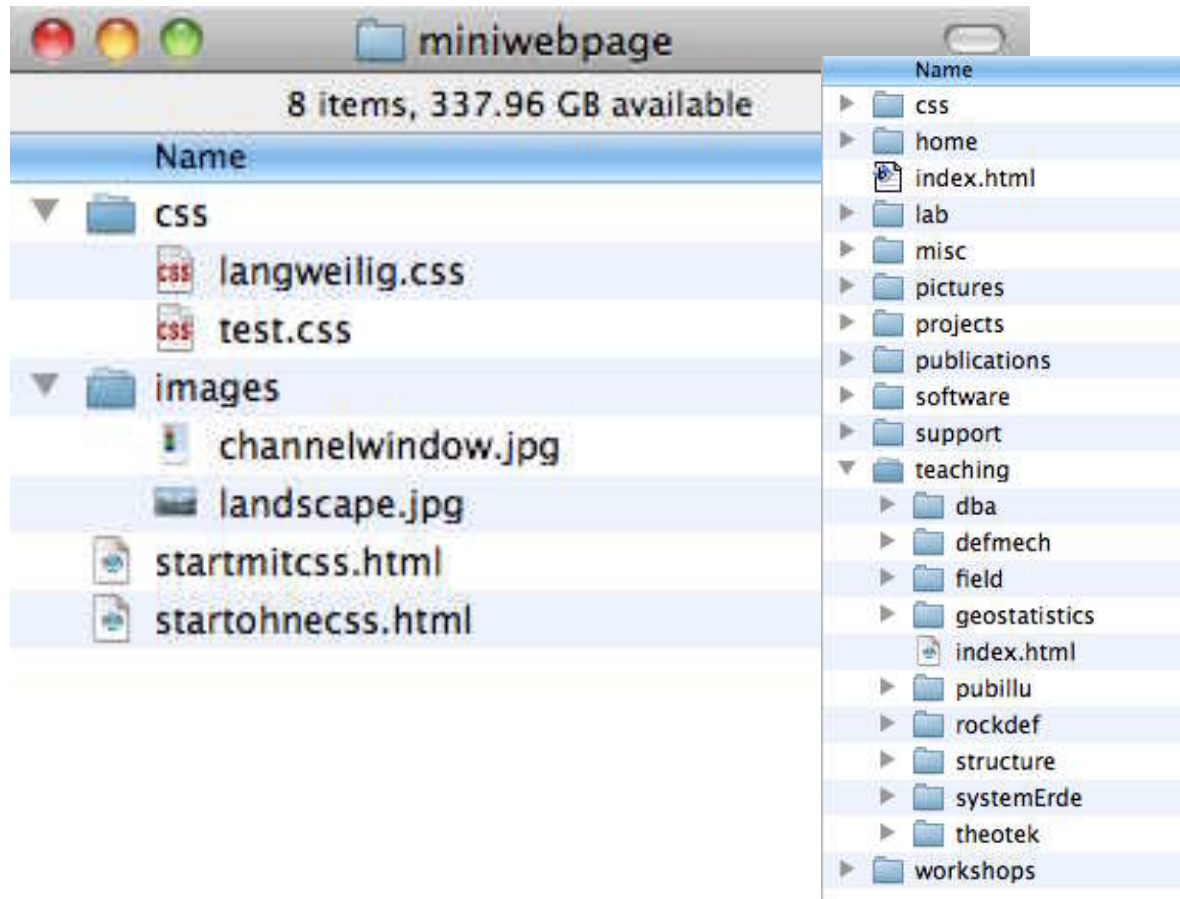
# struktur

The image shows a web browser window displaying a website titled "Rock Deformation & Structure Analysis". The browser's address bar shows the URL <http://pages.unibas.ch/earth/micro/index.html>. The website content includes a navigation menu with links like "address", "lectures", "workshops", "software", "SXM macros", "manuals", "projects", and "publications". A large, colorful, abstract image of a rock surface is the main visual element. At the bottom of the page, there are links to "TROMSØ HARD ROCK HOMEPAGE", "TROMSØ GEOLOGY HOMEPAGE", and "TROMSØ UNIVERSITY HOMEPAGE".

Overlaid on the right side of the browser window is a file explorer window showing a directory structure. The "Name" column lists the following items:

- css
- home
- index.html
- lab
- misc
- pictures
- projects
- publications
- software
- support
- teaching
  - dba
  - defmech
  - field
  - geostatistics
  - index.html
  - pubillu
  - rockdef
  - structure
  - systemErde
  - theotek
- workshops

# struktur



file:///pub\_illu 2008-11-02/web/index.html

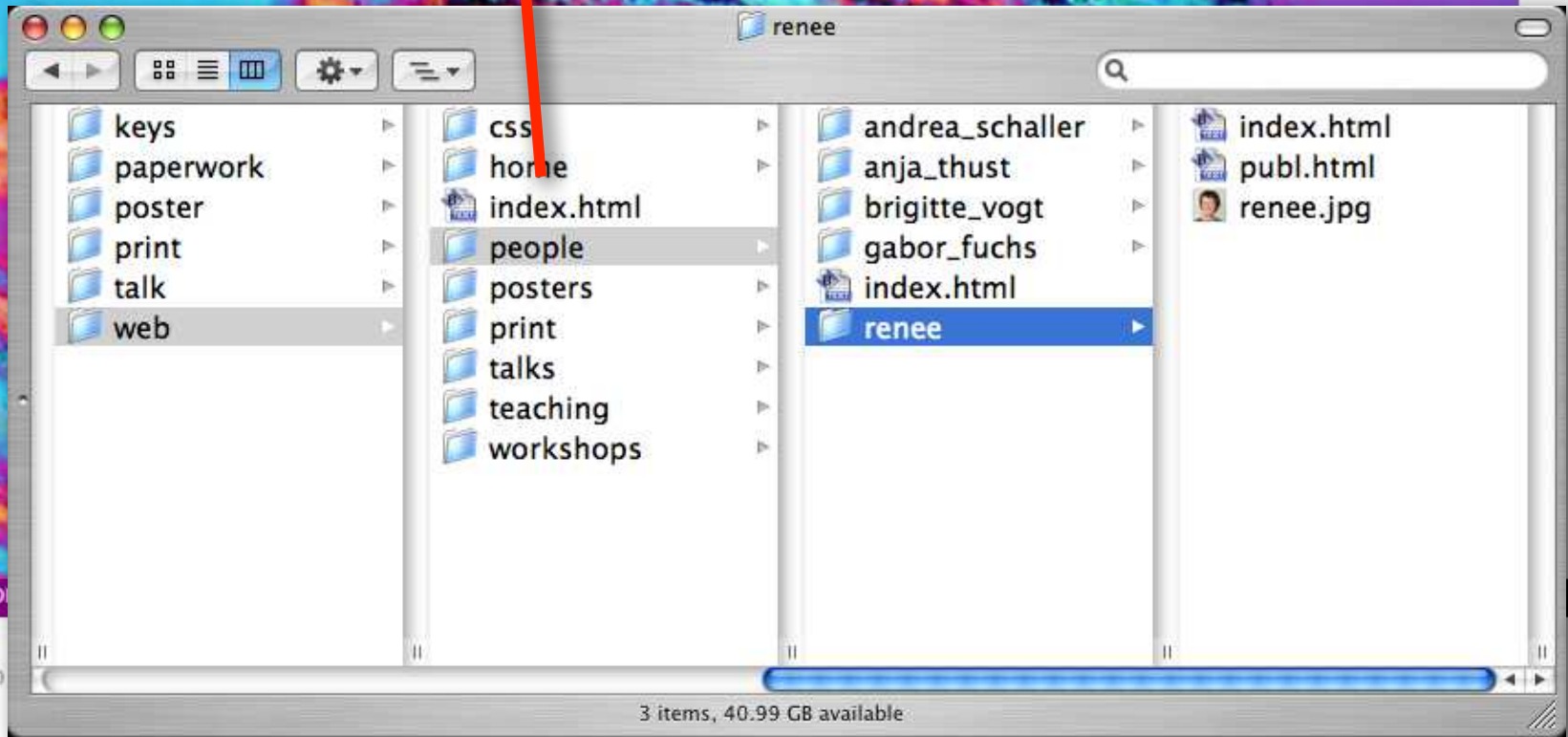
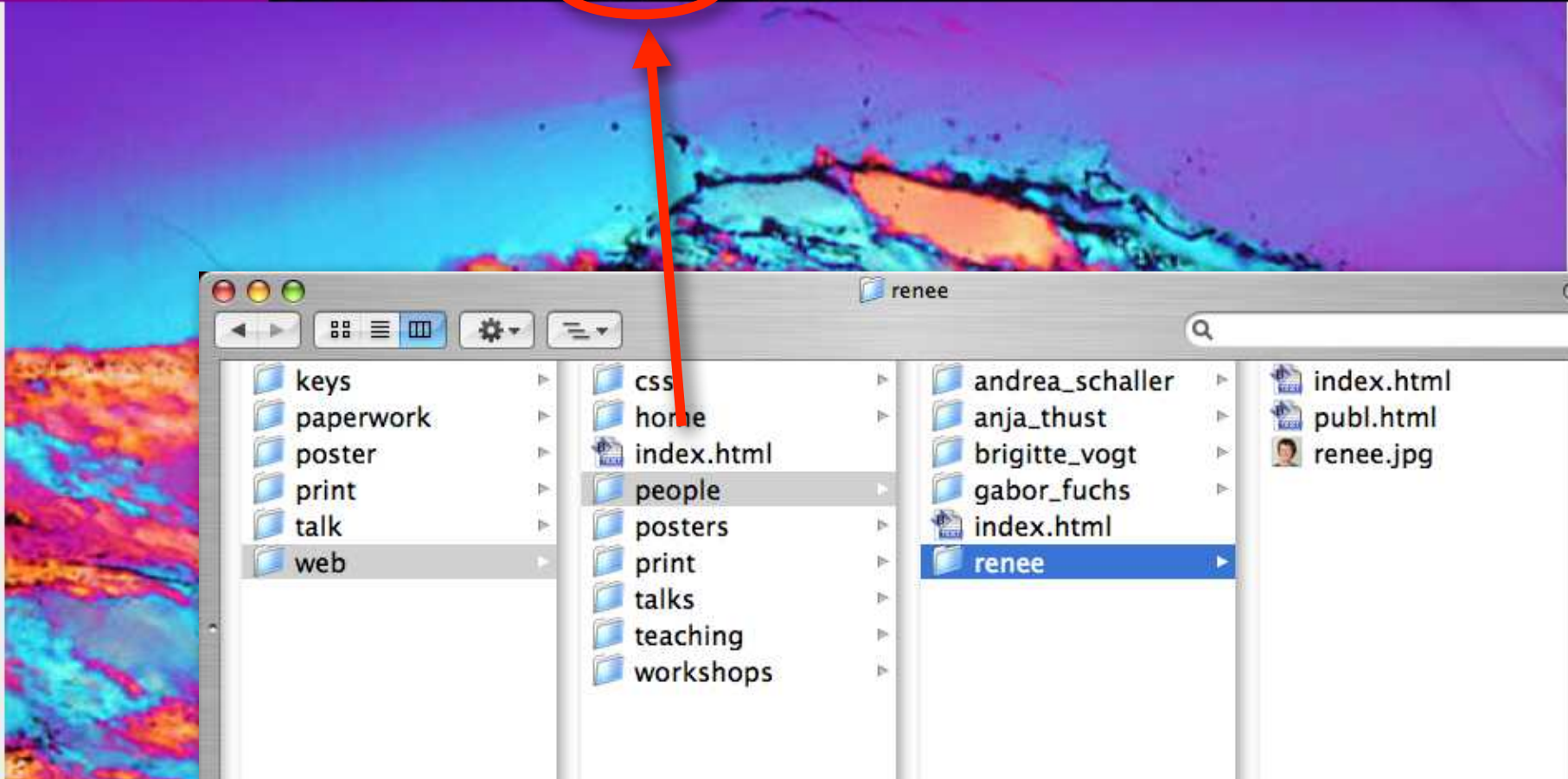
>>> BASEL UNIVERSITY HOMEPAGE  
>>> BASEL UNIVERSITY SCIENCE FACULTY (PHIL II)  
>>> DEPARTMENT ENVIRONMENTAL SCIENCES  
>>> GEOLOGICAL INSTITUTE

>>> BASEL UNIVERSITY LIBRARY  
>>> BASEL UNIVERSITY Vorlesungsverzeichnis



ROCK DEFORMATION HOME

address lectures workshops **people** print posters talks



ROCK DEFORMATION HO

>>> TROMSØ GEO

3 items, 40.99 GB available

HTML    hypertext markup language  
URL     uniform resource locator  
HTTP    hyper text transfer protocol

PDF     portable document format

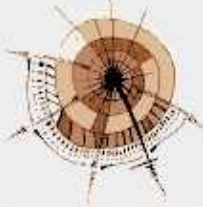
GIF     graphics interchange format  
by compuserve:    Lossless - LZW  
(Abraham Lempel, Jacob Ziv, Terry Welch)

JPEG    joint photographic experts group  
lossy discrete cosine transform  
followed by Huffman coding

PNG     portable network graphics  
lossless "deflation"

http://de.selfhtml.org/index.htm

SELFHTML: Version 8.1.2 vom 01.03.2007



Die Energie des Verstehens  
HTML-Dateien selbst erstellen

# SELFHTML

**News**  
Online-News  
rund um  
SELFHTML

Suche nach:

**Inhalt: Allgemeines**

- [Editorial](#)
- [Einführung](#)

**Inhalt: Web-Technologien**

- [HTML/XHTML](#)
- [Stylesheets \(CSS\)](#)
- [XML/DTDs](#)
- [JavaScript/DOM](#)
- [Dynamisches HTML](#)
- [Perl](#)
- [PHP](#)

**Inhalt: Ergänzendes Wissen**

- [Internationalisierung](#)
- [Grafik](#)
- [Web-Projektverwaltung](#)
- [Webserver/CGI](#)
- [Diverse technische Ergänzungen](#)

**Inhalt: Extras**

- [Fertige Layouts](#)
- [Kleine Helferlein](#)

**Navigation: Einstieg**

- [Wie fange ich an?](#)
- [Häufig gestellte Fragen \(FAQ\)](#)

**Navigation: Kurzreferenzen**

- [Kurzreferenz: HTML](#)
- [Kurzreferenz: CSS](#)

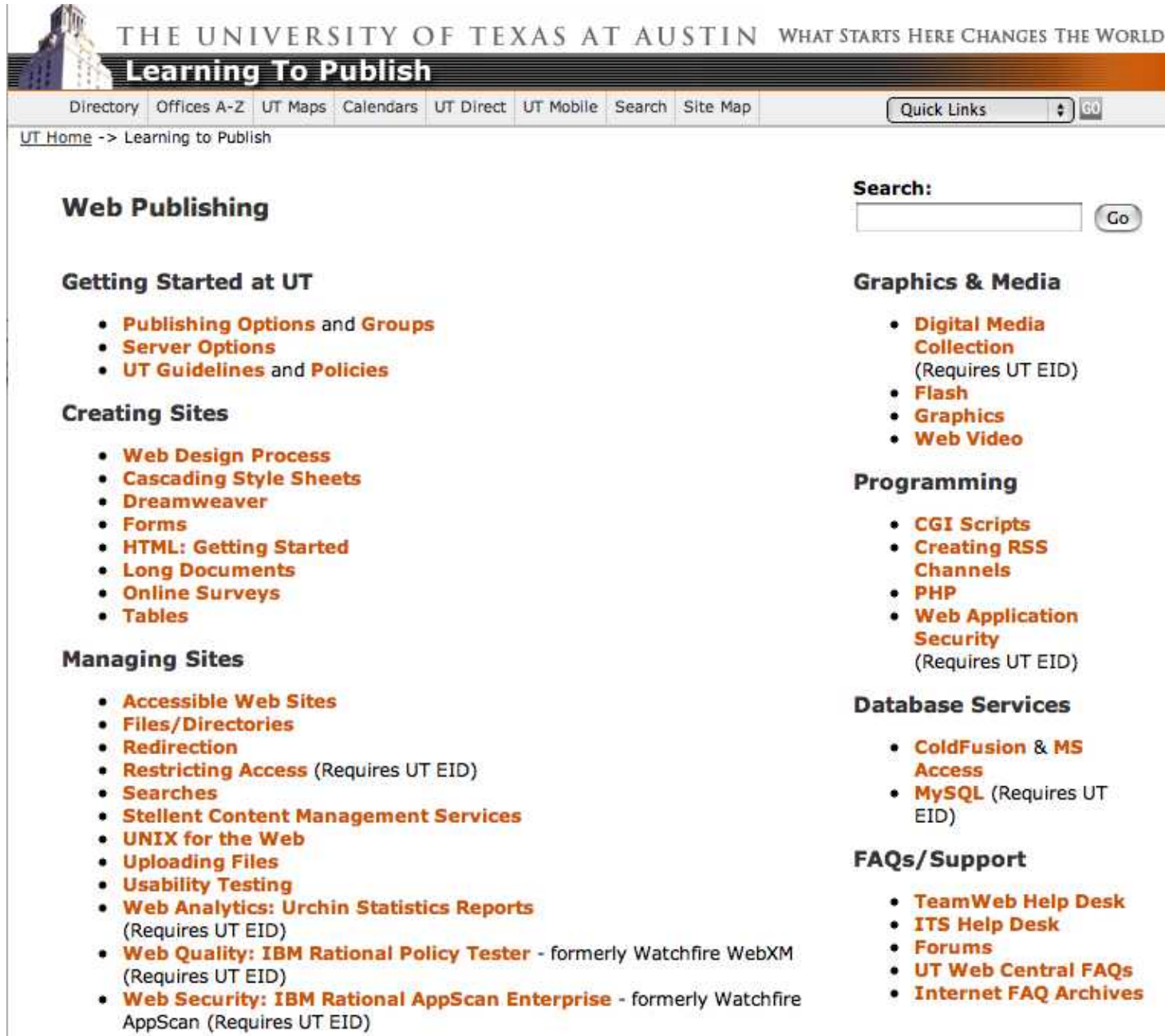
**Navigation: Verzeichnisse**

- [Inhaltsverzeichnis](#)
- [Syntaxverzeichnis](#)
- [Stichwortverzeichnis](#)

**Navigation: Extras**

- [Quickbar](#)
- [Sidebars](#)
- [Suche](#)

http://www.utexas.edu/learn/



**THE UNIVERSITY OF TEXAS AT AUSTIN** WHAT STARTS HERE CHANGES THE WORLD

## Learning To Publish

Directory Offices A-Z UT Maps Calendars UT Direct UT Mobile Search Site Map Quick Links

[UT Home](#) -> Learning to Publish

### Web Publishing

#### Getting Started at UT

- [Publishing Options](#) and [Groups](#)
- [Server Options](#)
- [UT Guidelines](#) and [Policies](#)

#### Creating Sites

- [Web Design Process](#)
- [Cascading Style Sheets](#)
- [Dreamweaver](#)
- [Forms](#)
- [HTML: Getting Started](#)
- [Long Documents](#)
- [Online Surveys](#)
- [Tables](#)

#### Managing Sites

- [Accessible Web Sites](#)
- [Files/Directories](#)
- [Redirection](#)
- [Restricting Access](#) (Requires UT EID)
- [Searches](#)
- [Stellent Content Management Services](#)
- [UNIX for the Web](#)
- [Uploading Files](#)
- [Usability Testing](#)
- [Web Analytics: Urchin Statistics Reports](#) (Requires UT EID)
- [Web Quality: IBM Rational Policy Tester](#) - formerly Watchfire WebXM (Requires UT EID)
- [Web Security: IBM Rational AppScan Enterprise](#) - formerly Watchfire AppScan (Requires UT EID)

#### Search:

### Graphics & Media

- [Digital Media Collection](#) (Requires UT EID)
- [Flash](#)
- [Graphics](#)
- [Web Video](#)

### Programming

- [CGI Scripts](#)
- [Creating RSS Channels](#)
- [PHP](#)
- [Web Application Security](#) (Requires UT EID)

### Database Services

- [ColdFusion & MS Access](#)
- [MySQL](#) (Requires UT EID)

### FAQs/Support

- [TeamWeb Help Desk](#)
- [ITS Help Desk](#)
- [Forums](#)
- [UT Web Central FAQs](#)
- [Internet FAQ Archives](#)

# Aufbau einer Seite

```
<html>
```

```
<head>
```

```
  <title> ... </title>
```

```
</head>
```

```
<body>
```

```
  <p> ... ..
```

```
  <table> ... </table>
```

```
</body>
```

```
</html>
```

# html tags

table

`<table>`      `</table>`

row

`<tr>`            `</tr>`

cell

`<td>`            `</td>`

paragraph

`<p>`

break

`<br>`

bold

`<b>` `</b>`

headers

`<h1>` `</h1>` `<h2>` `</h2>` etc. `<h5>` `</h5>`

bullet list

`<ul>` `<li>` ... `</ul>`

list

`<ol>` `<li>` ... `</ol>`

link

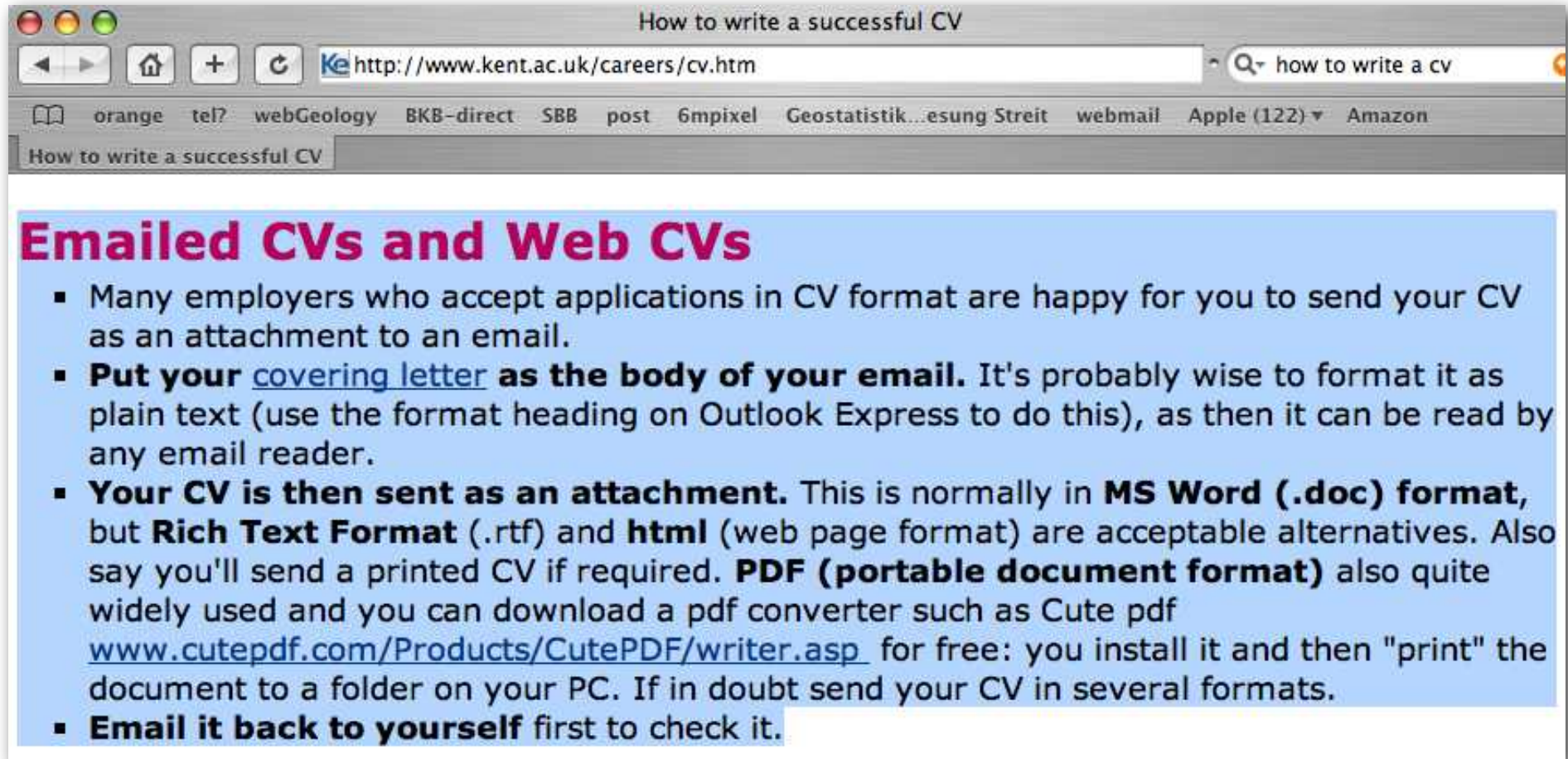
`<a href = " URL ">` `</a>`

image

`<img src = " image ">`



# about CVs and web CVs



The image shows a screenshot of a web browser window. The title bar reads "How to write a successful CV". The address bar contains the URL "http://www.kent.ac.uk/careers/cv.htm". The browser's search bar has the text "how to write a cv". The browser's address bar shows several tabs: "orange", "tel?", "webGeology", "BKB-direct", "SBB", "post", "6mpixel", "Geostatistik...esung Streit", "webmail", "Apple (122)", and "Amazon". The main content area of the browser displays a page titled "How to write a successful CV" with a blue background. The page content includes a section header "Emailed CVs and Web CVs" and a list of four bullet points providing advice on how to email a CV.

## Emailed CVs and Web CVs

- Many employers who accept applications in CV format are happy for you to send your CV as an attachment to an email.
- **Put your covering letter as the body of your email.** It's probably wise to format it as plain text (use the format heading on Outlook Express to do this), as then it can be read by any email reader.
- **Your CV is then sent as an attachment.** This is normally in **MS Word (.doc) format**, but **Rich Text Format (.rtf)** and **html** (web page format) are acceptable alternatives. Also say you'll send a printed CV if required. **PDF (portable document format)** also quite widely used and you can download a pdf converter such as Cute pdf [www.cutepdf.com/Products/CutePDF/writer.asp](http://www.cutepdf.com/Products/CutePDF/writer.asp) for free: you install it and then "print" the document to a folder on your PC. If in doubt send your CV in several formats.
- **Email it back to yourself** first to check it.

# Aufgabe 4 - Vortrag

1. Inhalt definieren

2. Struktur entwerfen

3. Grafik zusammenstellen

4. Vortrag üben

# AGU 2009 guidelines for talks

<http://www.projectionnet.com/styleguide/PresentationStyleGuide.aspx>

(full text, see AGU.pdf)

- keep to time
- talk same as abstract
- prepare and rehearse

<http://www.projectionnet.com/styleguide/PresentationStyleGuide.aspx>

- give opening statement
- speak to audience (not screen)
- simple graphics (don't show data scatter)
- one slide = one thought / fact / idea

<http://www.projectionnet.com/styleguide/PresentationStyleGuide.aspx>

- minimum 20 s / slide - 1 to 2 slides / minute
- bold characters not serif - use standard fonts
- tables: maximum 4 columns by 6 rows
- dark background - bright lettering

# google: how to give a good talk

<http://www.cs.dartmouth.edu/farid/tutorials/goodtalk.html>

(full text, see HanyFarin.pdf)

- one (15 min) talk = one idea
- talk  $\neq$  paper
- be gracious and honest

- structure:
  - (1) introduce the problem
  - (2) why this is interesting or important
  - (3) describe previous work
  - (4) describe specific problem
  - (5) explain how you solved this problem
  - (6) explain why your work is important
  - (7) discuss remaining problems
- use simple slides (KISS keep it simple, stupid!)

- explain slides - talk to audience
- practise/memorize opening & closing lines
- practice talk & time it
- careful with laser pointers
- repeat & answer questions - ...“I don’t know”
- “Thank you” at the end



[http://www.cs.berkeley.edu/~messer/Bad\\_talk.html](http://www.cs.berkeley.edu/~messer/Bad_talk.html)

## BAD TALK

- Launch into the material without stating goals or purpose.
- End abruptly after your last point.
- Throughout, keep your audience clueless about *what* you are doing and *why*.

## GOOD TALK

Give your talk a beginning, a middle, and an end:

- Summarize scope and goals
- Main concepts and conclusions
- Summarize points you would like to see the audience go away with, and provide pointers to additional information

[http://www.cs.berkeley.edu/~messer/Bad\\_talk.html](http://www.cs.berkeley.edu/~messer/Bad_talk.html)

## BAD TALK

- Attempt to cover far more material than is practical in the time allotted.
- End the talk abruptly about halfway through your material.
- Be really really speedy to make sure every detail is covered.

## GOOD TALK

- Carefully scope what you can cover to the time allotted, allocating time for questions and discussion.
- Decide how many concepts or points you can adequately get across in the allotted time (one concept every 5 minutes is a reasonable rule of thumb), and prioritize to the most important ones.
- View your talk as an opportunity to motivate the audience to learn more about the topic on their own (and provide them the pointers to do so), rather than attempting to teach them everything in the talk itself.

[http://www.cs.berkeley.edu/~messer/Bad\\_talk.html](http://www.cs.berkeley.edu/~messer/Bad_talk.html)

## BAD TALK

- Target the talk to *your* knowledge, sophistication and interests, and ignore that of the audience.
- Either bore the audience to death, or impress them with a snow job.
- Don't be concerned whether the audience comes away with new knowledge or renewed interest or enthusiasm about anything you have said.

## GOOD TALK

Know your audience, and what you are trying to achieve with this audience, and carefully adjust the content of your talk accordingly:

- How much do they already know about the subject?
- How much background do they have to understand the subject?
- From their perspective, what are they likely to find interesting and exciting?
- How much diversity is there in the audience? Can you provide something of value for both the well-informed and the clueless?

[http://www.cs.berkeley.edu/~messer/Bad\\_talk.html](http://www.cs.berkeley.edu/~messer/Bad_talk.html)

## BAD TALK

- Bombard your audience with lots of text on vu-graphs, so as to force them to choose between listening to you or reading.
- Don't waste your time on pictures and figures.

## GOOD TALK

- The written word and the spoken word clash, so rely primarily on the spoken word (this is a *talk*, after all).
- The spoken word and images and pictures reinforce each other, so come up with a visual representation of your concepts to work your words around.