INSTITUTT FOR GEOVITENSKAP
Department of Earth Science

GEOVITEN *-ekstern*

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Geoviten-ekstern er Institutt for geovitenskap ved Universitetet i Bergen sitt eksterne nyhetsblad og utgis en gang pr. måned. Geoviten-ekstern kan også leses fra vår eksterne nettside: www.uib.no/geo
Gunn Mangerud, instituttleder

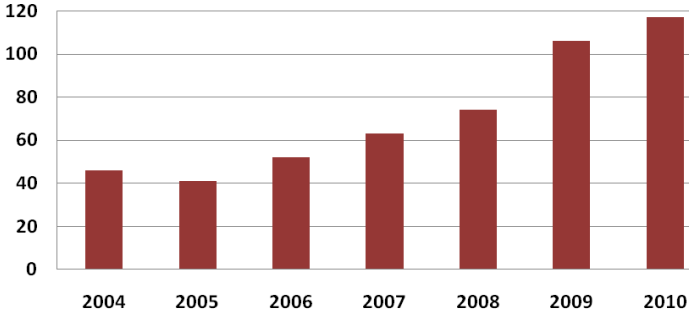
Geoviten-ekstern is the Department of Earth Science at the University of Bergen's external newsletter. It is issued once per month and can also be read from our webpages http://www.uib.no/geo/en
Gunn Mangerud, Head of department

Rekordsøking

Årets søkertall til bachelorutdanningen viser at interessen for å studere ved Institutt for geovitenskap fremdeles er økende. Siden bunnivået i 2005, hvor kun 41 kandidater søkte om opptak til instituttets bachelorprogrammer i geologi og geofysikk (se figur), har vi opplevd en jevn økning frem til i vår, hvor tallet på søkere var 116. Ingen andre bachelorprogram ved fakultetet kan vise til en tilsvarende kontinuerlig økning over tid. Kanskje skyldes dette våre mange dyktige mediepersonligheter som formidler gleden ved faget gjennom å snakke om klima, ved å dykke etter runde steiner i iskalde jettegryter eller snakker påpeke sannsynligheter for nye aske skyer, jordskjelv eller tsunamier? Eller kanskje har det nye geofaget i skolen spilt en rolle ved å gjøre ungdom bevisste på mulighetene som ligger i en utdannelse hos oss? Vi kan vel også være ubeskjedne nok til å tro at "jungeltelegrafen" forteller om et interessant og morsomt studium formidlet av dyktige forelesere. Og så er det jo selvsagt sterk drahjelp i at alle lett får jobb.

Den økte interessen innebærer at instituttet i år for første gang har måttet avvise kvalifiserte søkere. Geologiprogrammet er dermed nå et lukket studium hvor opptak avhenger av inntakspoeng fra videregående skole. Poenggrensen er imidlertid fremdeles lavere enn på det tverrfaglige programmet i petroleumsteknologi, hvor GEO er ett av flere institutter ved fakultetet som bidrar.

Instituttet har valgt å stabilisere opptakstallene rundt fjorårets nivå. Det innebærer at 86 studenter har takket ja til å starte hos oss i høst; 62 i geologi og 24 i geofysikk. Et så høyt antall innebærer imidlertid at logistikken på flere av de store grunnkursene representerer en utfordring, ikke minst på emner hvor ekskursjoner og praktiske øvelser på laboratorier og i felt inngår som en vesentlig del av undervisningen. Vi er derfor på stadig jakt etter nye løsninger for å sikre oss at et økende antall studenter ikke går på bekostning av kvaliteten. Det har vi også fokus fremover slik at vi kan møte utfordringene når disse store kullene når masternivå.



Årlige søkertall til bachelorprogrammene i geovitenskap

Gunn Mangerud og Harald Walderhaug (leder for programstyret GEO)

Nytt fra Geo

Nicola McLoughlin

Researcher at the Centre of excellence in geobiology/GEO Dr. Nicola McLoughlin has been awarded this year's recruitment stipend from the Bergen Research Foundation. The Bergen Research Foundation (BFS) gives grants toward research and research supporting activities at the University of Bergen and is open to outstanding young researchers. Its goal is to give talented young scholars from all disciplines particularly good framework conditions in order to help them realize their potential to achieve international excellence. In this way the program contributes to the recruitment and development of world-class leaders in various fields of research at the University of Bergen. The BFS awards consist of funding for four years aimed to establish a small research group and to develop a world-class potential research theme. The funding will support not only Nicola, but enable her to hire and train a team of young researchers.

The BFS awards are very competitive, the recipients have been evaluated by 6 independent (international) referees and the competition runs across the entire University of Bergen.

Topo-Europe ESF Eurocores Project: PYRTEC

Professor **Ritske Huismans** is the project leader of the Topo-Europe ESF Eurocore project: PYRTEC. The project is one of 10 projects in the ESF Eurocores programme TOPO-EUROPE (www.esf.org/activities/eurocores/programmes/topo-europe.html). It is funded by the Research Council of Norway, The Government of Asturias (Spain), the Centre National de Recherche Scientifique (CNRS), ISES Research School of Integrated Solid Earth Sience (VU), and Statoil-Hydro. It will run from the end of 2008 to 2012.

PYRTEC studies the interaction between surface processes, climate, and tectonic deformation during mountain building in the Pyrenean-Cantabrian belt. Collision between the Iberian and European plates resulted in mountain building in the Pyrenees and passive margin inversion in the Cantabrian area. The mountain range topography, however, was shaped by both collision and associated surface processes. Whereas large amounts of material were eroded in the Pyrenees, only minor erosion took place in the Cantabrian mountain range. Although operating at vastly different time and length scales, a significant potential exists for feedback between largescale tectonic deformation and redistribution of mass by erosion processes. This CRP uses a multidisciplinary approach involving field-based studies, regional data compilation, geochronology and quantitative modelling approaches that couples tectonic and surface process models.

Denne utgavens medarbeider

Bjarte Hannisdal is a researcher at the Department of Earth Science and the Centre for Geobiology. He describes himself as a geologist gone awry who wants to solve biological problems using techniques from physics. After completing his studies in geology and biology at the University of Bergen and a MSc thesis in paleontology that his advisor correctly described as undoable according to himself, Bjarte went on to obtain a PhD in Geophysical Sciences at the University of Chicago. His dissertation identified ways in which stratigraphic architecture adversely affects our ability to infer patterns of evolutionary change in the fossil record, and showed how some of these challenges can be met by analyzing geological and paleontological data jointly with stochastic models using probabilistic inverse methods and ensemble inference.

Ignoring all advice that he should build on his dissertation work, Bjarte returned to Bergen in 2007 and began studying the role organisms play in Earth surface dynamics, and its implications for sediment transport, carbon cycling, and landscape evolution. However, while engaged in pilot work on coupled numerical models of bioturbation and sediment dynamics, he was "distracted" by a project on quantitative stratigraphy. Numerical basin-fill experiments were used to show how the spatiotemporal dynamics of gap-bound rock packages quantitatively capture the underlying geological processes that control depositional architecture. Again, there were unintended consequences. In an attempt to fill the gaping holes in his knowledge of time-series analysis, Bjarte veered off on a new path: the use of non-parametric techniques derived from information theory to infer causal relationships from geological records.

Currently, Bjarte is applying this method to understand the relationship between atmospheric CO_2 and global abundance of calcifying phytoplankton over the Cenozoic, and to disentangle causal interactions from patterns of sedimentary rock volume, seawater isotope ratios and the history of biodiversity over the Phanerozoic. In his spare time, he plays around with paleoclimate records, evolution of temperature optima in thermophilic bacteria, and modeling efforts to bridge the scales from sedimentary events to margin stratigraphy. He is happy to discuss the geological impact of walrus feeding with anyone willing to listen!

Although his CV might benefit from a bit more focus, Bjarte enjoys doing research in this eclectic and haphazard manner, under the motto: "more can be learned by analyzing old data in new ways, than by analyzing new data in old ways".

Vil dere lese mer nytt fra instituttets 3 sentre for fremragende forskning gå til hjemmesidene:

http://www.bjerknes.uib.no/

http://www.cipr.uib.no/

http://www.uib.no/geobio/en/

Geo ute i verden

Travelletter from professor **Tor Arne Johansen** presently at Stanford :

I am enjoying sushi for lunch at Tresidder Union– the main place where students and employees at Stanford University gathers for lunch. The fall semester started last week, and most places are these days crowded, particularly with the new students. Also some of the parents of these new ones are mingling around making themselves confident that this really was a good choice for their kids. Representatives from the Wells Fargo Bank close by are eager to review and offer their services. The rush for finding an appropriate student apartment is similar to other university cities at the start of the academic year. However, the prices here compared to almost everywhere else may be a magnitude of difference – in the wrong way. This is the heart of Silicon Valley! And somebody claims you can rent a flat of 1000 square meters in Los Angeles relative cheap… The sunny California is of course still sunny, but the chilly flavour of the autumn during the morning hours can unfortunately not be neglected anymore.

I am closing the lunch by buying a cup of coffee five times bigger than those I usually get in the cantina at UiB before I do the 5 minutes walk back to The Mitchell Building, housing The School of Earth Sciences. This school was founded just after the Second World War but at that time called The School of Mineral Sciences. By the way, Stanford University was initiated by Leland Stanford, a governor of California and later on senator, who offered his land to this cause. The official opening was Oct 1 1891, and their first PhD graduated in 1894. Since then, more than 8000 PhDs have graduated from here. I am told that the previous US Foreign Minister Condoleeza Rize was a director here at the time she was head hunted by former President George W. Busch.

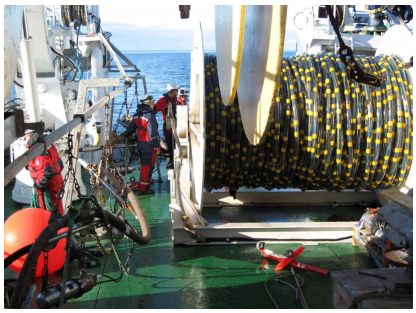
On my way back to the office at third floor, I invite myself to Professor Gary Mavko, who is the director of the Stanford Rock Physics and Borehole Program (SRB) and my main scientific affiliate here. "I just have a couple of questions that might be of interest for some of my colleagues back home", I say. "Go ahead", he replies. "1 – What were the main reasons for establishing the SRB program more than 30 years ago? and 2 – What should be the main research areas in rock physics the next decade?". Gary gently suggests to give his response by email so that there will be no lack of precision. Another sip of the

coffee and almost at the time when my webmail finally opens, the email is there: "1.- The SRB program was established in 1977 by Professor Amos Nur. The SRB goal is to create an environment that fosters rock physics research collaboration between academic, industrial, and government scientists, and in doing so, provide the best possible educational environment for our students.
"2 - I believe that fruitful directions for rock physics in the future will come from exploiting the constantly improving technologies: This includes measurements that span many scales, ranging from new nano-scale imaging methods up through km-scale 3D seismic and CSEM, intensive computational methods to make realistic simulations of rock and fluid properties; and continued improvements in theoretical models."

This is my second 6 months sabbatical at the Department of Geophysics at Stanford University - at least I have understood the phrase of Governor Arnold Schwartzenegger to say when I leave California at Christmas time: "I'll be back". Still three quarters of my coffee is left. But never mind the small coffees back home – at the end of the day I am glad to be an employee of UiB.

Glimt fra utdanningen ved GEO

På Svalex studenttokt



Årets SVALEX ble avviklet i perioden 19-31 august. 87 studenter fra alle landets universiteter deltok, under veiledning av ca 20 lærere fra de samme universitetene. I tillegg deltok en rekke fagpersoner fra Statoil, som finansierer prosjektet. Studentoktet, som foregår i Van Mijenfjorden og Isfjorden på Svalbard, integrerer petroleumsgeologi, petroleumsgeofysikk og petroleumsteknologi. Svalbards geologi, der reservoarbergarter, kildebergarter og ulike sedimentære- og strukturgeologiske prosesser kan studeres i blotninger, utgjør en perfekt ramme. Været i år var flott, og ekskursjonen forløp uten uhell av noe slag. Instituttets rolle i SVALEX er i hovedsak innsamling og prosessering av refleksjonsseismiske data ved hjelp av forskningsfartøyet Håkon Mosby. Hovedansvarlig fra vårt institutt er professor Rolf Mjelde. De resterende aktiviteter ble foretatt med polarskipet MS Expedition som base. På en del av den biten deltok vår kollega som nå er viserektor for utdanning, professor Kuvvet Atakan.

Andre nyheter

The biannual event **Lofotenseminaret** covering research themes in petroleum geophysics was this year arranged 17 – 20th of August at the small island Røst close to the south-western border of Lofoten. Three main topics were addressed: 1) 4D seismic, 2) Exploration for gas hydrates outside Norway and 3) The basis for evaluation of possible hydrocarbon resources outside Lofoten and Vesterålen. For a closer look at the program, see
www.lofotenseminaret.no

Lofotenseminaret was arranged for the first time in 1993 and it was then solely an initiative of The Department of Solid Earth Physics at the University of Bergen.

The main purpose was to establish a Norwegian forum for research in geophysics, with specific emphasis of gathering academic institutions in Norway (universities and research institutes) and geophysical companies involved in exploration in Norway. Today the universities of Oslo, Trondheim, Tromsø and Bergen are all represented in the organizing committee, making the seminar important in strengthening the national network for this kind of research. Thanks to economical support from oil and contactor industry in Norway, the expenses of the participating PhD-students were covered by the seminar.

This year's event became fully booked with more than 50 participants, which implied two participants per hotel room. As the only bus driver at Røst was on vacation this period, the participants also increased their personal fitness due to a 20-25 minutes walk – 4 to 6 times per day -from the hotel to the re-arranged local pub where the lectures were held. Fortunately, the weather gods blessed the seminar providing blue sky and light wind. The picture shows geophysicists hunting for geology!

The next Lofotenseminar is scheduled to August 14 – 17th 2012, but now the hot spot is Henningsvær – see you there!

Bli klimaklok!

Klimaløftet inviterer i høst lærere i videregående skoler og ungdomstrinnet til et motiverende kurs om klima og klimaendringer. Kurset er for de som vil lære mer om klima og diskutere hvordan man kan lære unge mer om dette utfordrende temaet.

Vår kollega **Kikki Kleiven** (som begynner i full stilling her ved instituttet 1. januar 2011, men er pt engasjert i ll'er stilling fra Uni Bjerknes) er sammen med Siri Kalvig og Tobias Thorleifsson lærere på kurset.

Og: Kurset er gratis!

Kurssteder, datoer og påmeldingsfrister:

Mandag 18. oktober
Bergen, Høgskolen i Bergen (HiB)
Frist for påmelding er 8. oktober
Påmelding
(http://skolelab.no/minside/login/?kurs_id=528&S=00bd48e1049a8cd68fb21bc3f5f3a747)

Fredag 22. oktober
Stavanger, Universitetet i Stavanger (UiS)
Frist for påmelding er 12. oktober
Påmelding

http://skolelab.no/minside/login/?kurs_id=529

Mandag 25. oktober
Trondheim, Høgskolen i Sør-Trøndelag (HiST)
Frist for påmelding er 15. oktober
Påmelding

http://skolelab.no/minside/login/?kurs_id=530

Tirsdag 30. november
Oslo, Høgskolen i Oslo (HiO)
Frist for påmelding er 20. november
Påmelding

http://skolelab.no/minside/login/?kurs_id=531

Nyansatte på instituttet/gjester

Wiesława Król (Violka) is visiting from Cracow Research Centre Institute, the of Geological Sciences in Polish Academy of Sciences. She has a 8 months scholarship and will work under supervision of Gunn Mangerud on Late Cretaceous biostratigraphy in the Barents Sea area.

Hanne Israelsen tiltrådet i august som studiekonsulent i et vikariat for Kristin Miskov Nodland som har permisjon ut 2010. Hanne Israelsen vil jobbe ved instituttet frem til mai 2011.

Marcus Landschulze har startet som PhD stipendiat I høst. Landschulze er den første kandidaten instituttet har som har en nærings PhD. Han skal jobbe med prosjektet "Investigation and optimization of OBC sensor array coupling to the seafloor "

Nye uteksaminerte masterkandidater

Nedenfor følger en oversikt over nye uteksaminerte kandidater i denne perioden.

Avlagte mastergrader siste periode

Dato	Kandidat	Oppgavetittel	Veileder(e)	Sensor (eksern/intern)
10.08.10	**Anne Øvreeide**	Gravity modeling: Calculations based on porosity-density context	A. Austegard	Jan Inge Faleide, UiO/R. Huismans
23.08.10	**Helge Tjelmeland**	Studiar av havbotnstrukturar i Vigrid-diapirfeltet på midt-norsk kontinentalmargin	H.Haflidason B.Hjelstuden	Oddvar Longva H.P. Sejrup
11.08.10	**Aalbu, Jan Helge**	Holosen klimautvikling på Romsdalshalvøya, rekonstruert på grunnlag av analyser av innsjøsediment	A. Nesje, J. Bakke	Anne Bjune/H. Linge
03.09.10	**Tore G. Klausen**	Sedimentology and sequence stratigraphy of the Late Cretaceous Lower Ferron Sandstone: application of 3-D geocellurar modelling to the Drunkards Wash CMB-field in central Utah, USA	J.Howell	Gary Hampson W. Nemec
10.09.10	**Ingelin Lunde**	Strontiumisotopstratigrafi basert på østers i et av de neogene bassengene i sørøst-Spania, Lorcabassenget	Mike Talbot / G.Sælen fom nov2009	Ståle Monstad Helga Kleiven
15.09.10	**Mari Lie Larsen**	Inversjon av syntetiske og reelle 4D-seismiske data med hensyn på trykk- og metningseffekter	M.Jakobsen	Per Avseth Bent Ole Ruud
17.09.10	**Kristin W. Porten**	Microfacies, diagenesis and reservoir properties of Tortonian temperate and subtropical carbonate platforms, Lorca Basin, southeastern Spain	Mike Talbot/ G.Sælen fom nov2009	Catherine D. Baird Wojtek Nemec

GEO i media

Dagens Næringsliv. Tittel: **Hull i panelet** (Eystein Jansen, GEO/Bjerknessenteret) PÅ INNSIDEN: FNs klimapanel må pusses opp, viser ny rapport. Rapporten gir også norske klimaforskere noe å tygge på: Hvor lurt er det egentlig å høres ut som Frederic Hauge?

http://www.dn.no/forsiden/kommentarer/article1967365.ece

Stavanger Aftenblad (Gunn Mangerud, Institutt for geovitenskap)
Tittel: Preikestolen kan bli «Geologisk nasjonalmonument»
Lysefjorden med Preikestolen har kommet til finalen i kåringen av Geologisk nasjonalmonument.

Vitenskapelig produksjon

PUBLIKASJONER

Andersen C. F. & Johansen T.A., 2010. Test of rock physics models for prediction of seismic velocities in shallow unconsolidated sands: a well log data case. Geophysical prospecting, p.16. Doi: 10.1111/j.1365-2478.2010.00870.x

Bigg G.R. et al **(Haflidason H., Nygård A. & Sejrup H.P**.), 2010. Last glacial ice-rafted debris off southwertern Europe: the role of the British-Irish Ice Sheet. Journal of Quaternary science, XXXX, Doi:10.1002/jqs.1345

Bjelland T., Grube M., Hoem S., Jorgensen S.L., Daae F.L., **Thorseth I.H**. & Øvreås L., 2010. Microbial metacommunities in the lichen-rock habitat. Environmental microbiology reports. Doi: 10.1111/j.1758-2229.2010.00206.x

Bøe R., **Fossen H.** & Smelror M., 2010. Mesozoic sediments and structures onshore Norway and in the coastal zone. Norges geologiske undersøkelser Bulletin, 450, 15-32.

Chen Y., Ussler III W., **Haflidason H**., Lepland A., Rise L., Hovland M. & **Hjelstuen B.O**., 2010. Source of methane inferred from pore-water $\delta^{13}C$ of dissolved inorganic carbon in Pockmark G11, offshore Mid-Norway. Chemical Geology, 275, 127-138. Doi: 10.1016/j.chemgeo.2010.04.013

Fanavoll S., **Hesthammer J**., Danielsen J.E. & Stefatos A., 2010. Controlled source electromagnetic technology and hydrocarbon exploration efficiency. First Break, 28, 61-69.

Fliegel D., Klementova M. & **Kosler J**., 2010. Phase and composition changes of titanite during laser ablation inductively coupled plasma mass spectrometry analysis. Analytical Chemistry 82, 4272-4277.

Fossen H., 2010. Extensional tectonics in the North Atlantic Caledonides: a regional view. In: Law R. D., Butler R.W.H., Holdsworth R. E., Krabbendam M. & Strachan R. A. (eds) Continental Tectonics and Mountain Building: The Legacy of Peach and Horne. Geological Society, London, Special Publications, 335, 767-793. Doi: 10.1144/SP335.31

Fossen H., Schultz R.A., Rundhovde E., **Rotevatn A.** & Buckley S.J., 2010. Fault linkage and graben stepovers in the Canyonlands (Utah) and the North Sea Viking Graben, with implications for hydrocarbon migration and accumulation. AAPG Bulletin, v94, no5, 597-613. Doi:10.1306/10130909088

Hesthammer J., Fanavoll S., Stefatos A., Danielsen J.E. & Boulaenko M., 2010. "CSEM performance in light of well results". The Leading Edge, January, 34-41.

Larsen B. & Gudmundsson A., 2010. Linking of fractures in layered rocks: Implications for permeability. Tectonophysics 492, 108-120.

Larsen B., Gudmundsson A., Grunnaleite I., **Sælen G., Talbot M.R.** & Buckley S.J. Effects of sedimentary interfaces on fracture pattern, linkage, and cluster formation in peritidal carbonate rocks. Marine and petroleum geology, 27, 1531-1550. Doi:10.1016/j.marpetgeo.2010.03.011

McLoughlin N., Staudigel H., **Furnes H., Eickmann B**. & Ivarsson M., 2010. Mechanisms of microtunneling in rock substrates: distinguishing endolithic biosignatures from abiotic microtunnels. Geobiology, 8, 245-255. Doi: 10.1111/j.1472-4669.2010.00243.x

Novak M., Mikova J., Krachler M., **Kosler J**., Erbanova L., Prechova E., Jackova I., 2010. Radial distribution of lead and lead isotopes in stem wood of Norway spruce: A reliable archive of pollution trends in Central Europe. Geochemica et Cosmochemica Acta, 74, 4207-4218.

Pasava J., Vymazalova A., **Kosler J**., Koneev R.I., Jukov A.V., Khalmatov R.A., 2010. Platinum-group elements in ores from the Kalmakyr porphyry Cu-Au-Mo deposit, Uzbekistan: bulk geochemical and laser ablation ICP-MS data. Mineralium Deposita 45, 411-418.

Poujol M., Boulvais P., **Kosler J**., 2010. Regional-scale Cretaceous albitization in the Pyrenees: evidence from in-situ U-Th-Pb dating of monazite, titanite and zircon. Journal of Geological Society London 167, 751-767.

Sømme T. O., Helland-Hansen W., Granjeon D., 2010, Impact of eustatic amplitude variations on shelf morphology, sediment dispersal, and sequence stratigraphic interpretation: Icehouse versus greenhouse systems: REPLY. Geology; Volum 38. p. e209. doi: 10.1130/G31134Y.1

Tajcmanova L., Soejono I., Konopasek J., **Kosler J**., Klötzli U., 2010. Structural position of high-pressure felsic to intermediate granulites from NE Moldanubian domain (Bohemian Massif). Journal of Geological Society London, 167, 329-345.

Waldman N., Anselmetti F.S., Ariztegui D., Austin J.A., Pirouz M., Moy C.M. & Dunbar R., 2010. Holocene mass-wasting events in Lago Fagnano, Tierra del Fuego (54ºS):implications for paleoseismicity of the Magallanes-Fagnano transform fault. Basin Research, XXXX , p.20. Doi: 10.1111/j.13652117.2010.00489.x

Waldman N., Torfstein A. & Stein M., 2010. Northward intrusions of low-and mid-latitude stroms across the Saharo-Arabian belt during past interglacials. Geology, v38, n6, 567-570. Doi: 10.1130/G30654.1

Zackova E., Konopasek J., Jerabek J., Finger F., **Kosler J**., 2010. Early Carboniferous blueschist facies metamorphism in metapelites of the West Sudetes (Northern Saxothuringian Domain, Bohemian Massif). Journal of Metamorphic Geology 28, 361-379.

Zak J., Kratinova Z., Trubac J., Janousek V., **Slama J**. & Mrlina J., 2010. Structure, emplacement, and tectonic setting of Late Devonian granitoid plutons in the Tepla´–Barrandian unit, Bohemian Massif. Int. J Earth Sci. XXXXX, DOI 10.1007/s00531-010-0565-7.

POPULÆRVITENSKAP

Hesthammer J. & Carstens H., 2010. CSEM reduces exploration risk. GeoExpro, May, 32-34.

Heggen H.P., 2010. Istider, mammut og tidlege menneske i arktisk Russland. Naturen, nr4, 186-192.

RAPPORTER

Haflidason H. et al. Marin geological cruise report from Mid-Norwegian continental shelf, Ranafjorden-Sørfjorden and Lofoten-Vesterålen margin. R/V.G.O.SARS. Report No. 100-02/10, Department of Earth Science, UiB, Norway, p.39

Haflidason H., Hjelstuen B.O., Thorseth I.H & Scientific Party. Marine geological cruise report from Western Barents Sea Margin, Western Svalbard Margin and South Knipovich Ridge – R/(V G.O.SARS, 23.06 – 2.07.2010. Reprot No. 100-03/10, Department of Earth Science, UiB, Norway, p 52,.

MUNTLIGE OG POSTER PRESENTASJONER PÅ KONFERANSER

Ali A. & Jakobsen M., 2010. On the accuracy of Ruger's approximations for PP reflection coefficients in HTI media, peer-reviewed expanded abstract and oral presentation by Aamir, 72nd EAGE Conference and Exhibition, Barcelona, xx.06.2010.

Astakhov A, **Mangerud J. & Svendsen J.I**., 2010. Middle Weichselian ice advance: new data from northern Russia. IPY project: Arctic Paleoclimate proxies and Chronologies. Fourth International Conference and workshop. Pp. 22-23. University of Iceland, 26.-30.05.2010.

Chang M.Y., **Kosler J., Dundas S.H**., Geffen A., 2010. Comparison of ablation lines to improve temporal resolution for determining recent residence location of hake. 10th European Workshop on Laser Ablation, Kiel, 1.-3.07.2010.

Dolphin A., **Dundas S. H., Kosler J**., Tvinnereim H. M.: Comparison of Laser Ablation & Solution ICP-MS Trace Element Analysis of Human Tooth Enamel, Poster presentasjon, 2010 Winter Conference on plasma Spectrochemistry, Florda, USA. Xx.xx.2010

Dundas S. H. Isotopic Ratio Measurements in Zircons. 1st Nordic Thermo Scientific ICP-MS User Meeting, Gardemoen, xx.01.2010.

Furnes H., De Wit M. & **Robins B.** Petrological and tectonic evolution of the Palaeoarchean Barberton Greenstone Belt, South Africa. Goldschmidt 2010, Knoxville, TN, USA, 14.-18.06.2010.

Furnes H., McLoughlin N., Staudigel H. & Muehlenbachs K. Bioalteration of ocean floor pillow lavas through time – 3.5Ga to present. 63rd Geological Congress of Turkey, XX.XX.2010.

Gyllencreutz R., Mangerud J., Svendsen J.I. & Lohne Ø. S., 2010. The DATED Chronology and Reconstruction of the Deglaciation of the Eurasian Ice Sheets. IPY project: Arctic Paleoclimate proxies and Chronologies. Fourth International Conference and workshop. P. 33. University of Iceland, 26-30.05.2010. http://www.apex.geo.su.se/meetings/apex-2010.html

Jakobsen M. & **Keers H**., 2010. Modelling and inversion of time-lapse seismic waveform data using integral equation methods. 7th international workshop

meeting "Seismic Waves in Laterally Inhomogeneous Media (SWLIM), Tepla premonstratensian monastery, xx.06.2010.

Jakobsen M., **Keers H., Ruud B.O.,** Psencik I., & Shahraini I., 2010. Inversion of time-lapse seismic waveform data using the ray-Born approximation in the frequency domain. 72nd EAGE Conference and Exhibition, Barcelona, xx.06.2010.'

Kosler J., Müller W., Cheng C. H., Holbrook D.S., Broude S., 2010. 'Deep' drilling of geological samples: effects of laser crater taper and aspect ratio on elemental fractionation during LA ICP-MS analyses. 10th European Workshop on Laser Ablation, Kiel, 1.-3.07.2010.

Mikova J**., Kosler J**., Wiedenbeck M., 2010. Evaluation of matrix effects during laser ablation MC ICP-MS analysis of boron isotopes in tourmaline. 10th European Workshop on Laser Ablation, Kiel, 1.-3.07.2010.

Shahraini A., **Jakobsen M. & Ali A**., 2010. Seismic history matching in fractured reservoirs using a consistent stiffness-permeability model: Focus on the effects of aperture, peer-reviewed expanded abstract and oral presentation by Jakobsen, 72nd EAGE Conference and Exhibition, Barcelona, xx.06.2010.

Svendsen J.I. et al (Astakhov V., **Gyllencreutz R., Heggen H., Henriksen M., Lohne Ø.S., Mangerud J.),** 2010. The Ice Age Development and Human Settlement in Northern Eurasia (ICEHUS) – what did we find in Northern Russia? 29th Nordic Geological Winter Meeting, Oslo, 11-13.01.2010. Abstract and Proceedings of the Geological Society of Norway, No. 2010, pp. 193-194.

Svendsen J.I., Astakhov V**, Færseth L.M., Gyllencreutz R., Henriksen M., Lohne Ø.S., Mangerud J.** & Nazarov D. **2010**: Glacial and climate history in the Polar Urals, Russian Arctic. IPY project: Arctic Paleoclimate proxies and Chronologies. Fourth International Conference and workshop. P. 80. University of Iceland, 26-30.05.2010. http://www.apex.geo.su.se/meetings/apex-2010.html

Svendsen J.I. et al (Astakhov V., **Gyllencreutz R., Heggen H., Henriksen M., Lohne Ø.S., Mangerud J**.), 2010. The Ice Age Development and Human Settlement in Northern Eurasia (ICEHUS). International Polar Year (IPY), Oslo Science Conference, 8-12.05.2010.

Waldmann N., Haflidason H., Zühlsdorff C. & Hjelstuen B.O. Dynamic response of gas hydrates to lithological changes: evidence from the Mid-Norwegian Continental Margin. AAPG Annual Conv-ention and Exhibition, 11.-14.04.2010.

Thermo 2010, 12th International Conference on Thermochronology, Glasgow, 16-20 August, 2010.

Emmel B., Kumar R., Daszinnies M.C, **Ueda K., Jacobs J.** & Matola R., 2010. From late orogenic cooling to continental break-up – a fission track record from northern Mozambique. Abstract p. 99.

Kohlmann F., Gleadow A. J. W., Kohn B. P. & Siegele R., 2010. New surface fission track formation model derived by nanoscale studies of 11.5 to 101 MeV iodine ion impact sites in apatite, mica and zircon. Abstract p. 168.

Kohlman F., Kohn B. P., Gleadow A. J. W. & Osadetz K. G., 2010. Low-temperature thermochronological reconstruction of Pennsylvanian strata thickness on the Slave Craton, Northwest Territories, Canada.Abstract, p. 125.

Ksienzyk A. et al (Kohlmann F., Kumar R., Jacobs J., Fossen H. & Emmel B.), 2010. Post-Caledonian fault activity in the Bergen area (south- western Norway): New insights from low-temperature thermochronology. Abstract p. 244.

Kumar R., Emmel B., Ueda K & Jacobs J., 2010. Low temperature thermochronology of the Rovuma transform margin, north Mozambique. Abstract p. 127.

Peternell M., **Kohlmann F.**, Wilson C. J. L., Gleadow A. J. W. & Seiler C., 2010. A new approach to crystallographic orientation measurement for apatite fission track analysis: Effects of crystal morphology and implications for automation. Abstract p. 124.

Ueda K., Emmel B., Gerya T., **Jacobs J., Kumar R.** & Matola R., 2010. Did orogenic collapse control the breakup and rifting of Gondwana? Forward modelling and backwards comparison of a comprehensive multichronometer dataset from the N Mozambique orogen - passive margin system. Abstract p. 64.

ANDRE FOREDRAG

Brendryen J. The Intertropical Convergence Zone over the past 90 000 years: teleconnector of North Atlantic climate signals? UiB, 23.06.2010.
Ksienzy A. How old are our mountains? How (not) to interpret low-temperature thermochronological data with respect to the current controversy. Geodynamics seminar. UiB, 10.06.2010.
Mangerud. G. The relevance of biostratigraphy in petroleum exploration and production. Petroleum education seminar. Makerere University, Uganda
Meyer O. The Wiki technology and usage. Marin geology and geophysics seminar, UiB, 22.06.2010.
Minakov A. The Ægir Ridge cruise: OBS survey and geological sampling. Marin geology and geophysics seminar, UiB, 22.06.2010.
Ueda K. How (and why) do plate-tectonic processes initiate. UiB, 24.06.2010.

GUEST LECTURES

Nesje A. Holocene climate variability - a global perspective. Summer school on 'Monsoon Variability, Teleconnections and Impacts on Mid to Low latitude Glaciers', Obergurgl, Austria, 20.- 30.06.2010.

Nesje A. Holocene climate change in Scandinavia with implications for hydrology and sediment transport. Summer School, Loen. 1.09.2010.

Nesje A. & Bakke, J. Reconstructing glaciers and deriving past climate changes from glaciers. Summer school on 'Monsoon Variability, Teleconnections and Impacts on Mid to Low latitude Glaciers', Obergurgl, Austria, 20.- 30.062010.