

IFT-POSTEN

NYTT FRA INSTITUTT FOR FYSIKK
OG TEKNOLOGI
UNIVERSITETET I BERGEN



DEPARTMENT HEAD'S INTRO

WEEK 50, 2014



The end of the semester is getting near, and most of the people are busy with finishing off their courses and other activities. The most diligent of us are perhaps already done with everything and focusing on Christmas instead and ticking off Christmas gift lists. There was discouragingly very little Christmas joy or positive surprises from the Norwegian Research Council this year. This is something that we obviously need to improve. That is why we can report with an even greater joy that we have received from the 10 year old Bergen Forskningsstiftelse funding for two projects. One of them is the earlier mentioned project in medical physics (3D Microdosimetry and Studies of the Relative Biological Effectiveness (RBE) in Proton- and Carbon Ion Therapy), and in addition a slightly smaller project in nanophysics (Advanced Electron Beam Lithography for the Fabrication of Nanostructures).

We have otherwise a very great output when it comes to presentation in the media in recent days. Bodil wrote [an interesting article](#) on how to look at the small things with the acute precision with her article on microscopy published in BT, and Thomas also published in BT a nice [article which raised](#) IFT's activities from the small things and toward the space station. We have thus shown in the media that we are dealing with everything from heaven to earth, and in addition Jan Petter has had his say on the future. He explained in [Sunday's P2 radio broadcast](#) that he is just mildly impressed by the speed in energy conversion, and painted a rather bleak picture of the future situation.

All employees and pensionists are welcome to the department's Christmas lunch next Friday. This will be a great occasion for lifting up the Christmas spirit a bit and to have a pleasant social gathering with your colleagues. Don't forget to sign up with Stine latest by Wednesday at 12:00.

Øyvind



CHRISTMAS LUNCH

The department invites all employees and seniors to a Christmas lunch on Friday, December 19th.

Time and place: 13.00 hrs at the canteen.

If you wish to participate, you must sign up for the event through Stine at the administration so that we know the amount of food to be ordered.

**NB! DEADLINE FOR REGISTRATION:
WEDNESDAY 17th December at noon.**



PHD - DISPUTATION

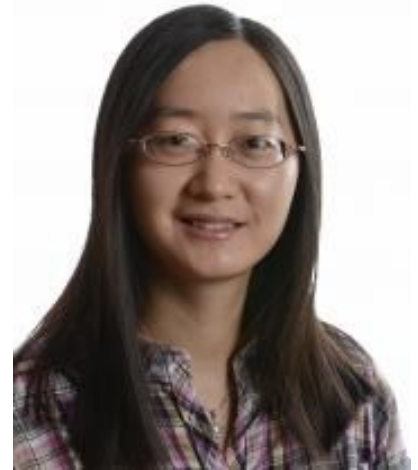
Dujuan Wang holds a PhD disputation by the following title:

Rotation and Turbulence in Peripheral Heavy Ion Collisions

[Check out the press release here.](#)

Tuesday, December 16th, at 13:15 in Auditorium 2, Allégaten 41 (Realfagsbygget.)

Open for all interested parties.



MASTER'S EXAM

Marius Ole Johansen will be examined for a master's degree in reservoir physics by the following title:

Heavy Flavour Azimuthal Correlations in PYTHIA Generated Proton-Proton Collisions at LHC Energies

Thursday, December 18th at 13.15, room 546, Bjørn Trumpys hus (Physics building).

Dieter Röhrich and Sedat Altinpinar at IFT are the thesis supervisor.

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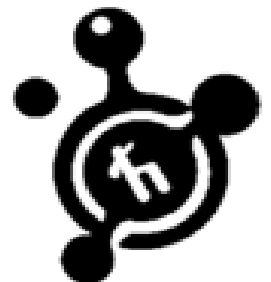
H-BAR

H-bar is open every Friday from 19.00 - 01.00.

On Tuesdays, every even-numbered week, there are organized pub-lectures at H-bar.

More info at H-bar's [facebook page](#).

H-bar is run by IFT's Fagutvalget, and is primarily aimed at department's students – but employees are also welcome!



PUBLICATIONS:

- Kosinski, Pawel; et al.: Mechanisms of Non-Newtonian Polymer Flow Through Porous Media Using Navier-Stokes Approach JOURNAL OF DISPERSION SCIENCE AND TECHNOLOGY Volume: 36 Issue: 3 Pages: 310-325
- Mestad, Idar; Kolsto, Stein Dankert: Using the Concept of Zone of Proximal Development to Explore the Challenges of and Opportunities in Designing Discourse Activities Based on Practical Work SCIENCE EDUCATION Volume: 98 Issue: 6 Pages: 1054-1076
- Csernai, L. P.; et al.: Time dependence of partition into spectators and participants in relativistic heavy-ion collisions PHYSICAL REVIEW C Volume: 90 Issue: 4 Article Number: 044907
- Buanes, T.; Dale, O.; Eigen, G.; Kastanas, A.; Liebig, W.; Lipniacka, A.; Rosendahl, P. L.; Sandaker, H.; Sjursten, T. B.; Stugu, B.; Ugland, M.; et al.: [Evidence for Electroweak Production of \$W\(+/-\)W\(+/-\)jj\$ in pp Collisions at root s=8 TeV with the ATLAS Detector](#) ATLAS Collaboration PHYSICAL REVIEW LETTERS Volume: 113 Issue: 14 Article Number: 141803
- Osland, P.; et al.: Precise determination of $Z-Z'$ mixing at the CERN LHC PHYSICAL REVIEW D Volume: 90 Issue: 5 Article Number: 055025
- Buanes, T.; Dale, O.; Eigen, G.; Kastanas, A.; Liebig, W.; Lipniacka, A.; Rosendahl, P. L.; Sandaker, H.; Sjursten, T. B.; Stugu, B.; Ugland, M.; et al.: Measurements of fiducial and differential cross sections for Higgs boson production in the diphoton decay channel at TeV with ATLAS ATLAS Collaboration JOURNAL OF HIGH ENERGY PHYSICS Issue: 9 Pages: 1-61
- Pacifico, N.; Gligorov, A.; Sandaker, H.; et al.: Investigation of silicon sensors for their use as antiproton annihilation detectors NUCLEAR INSTRUMENTS & METHODS IN PHYSICS RESEARCH SECTION A-ACCELERATORS SPECTROMETERS DETECTORS AND ASSOCIATED EQUIPMENT Volume: 765 Pages: 161-166
- Eigen, G.; Stugu, B.; et al.: Search for a Dark Photon in $e(+)e(-)$ Collisions at BABAR PHYSICAL REVIEW LETTERS Volume: 113 Issue: 20
- Winkler, M.; Myrseth, V.; Harnes, J.; Borve, K. J.: Electron attenuation in free, neutral ethane clusters JOURNAL OF CHEMICAL PHYSICS Volume: 141 Issue: 16

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PUBLICATIONS (CONT.):

- Buanes, T.; Dale, O.; Eigen, G.; Kastanas, A.; Liebig, W.; Lipniacka, A.; Latour, B. Martin dit; Rosendahl, P. L.; Sandaker, H.; Sjusen, T. B.; Smestad, L.; Stugu, B.; Ugland, M.; et al.: Search for the lepton flavor violating decay $Z \rightarrow e \mu$ in pp collisions at root s=8 TeV with the ATLAS detector ATLAS Collaboration PHYSICAL REVIEW D Volume: 90 Issue: 7
- Buanes, T.; Dale, O.; Eigen, G.; Kastanas, A.; Liebig, W.; Lipniacka, A.; Rosendahl, P. L.; Sandaker, H.; Sjusen, T. B.; Stugu, B.; Ugland, M.; et al.: Measurement of long-range pseudorapidity correlations and azimuthal harmonics in root s(NN)=5.02 TeV proton-lead collisions with the ATLAS detector PHYSICAL REVIEW C Volume: 90 Issue: 4
- Buanes, T.; Dale, O.; Eigen, G.; Kastanas, A.; Liebig, W.; Lipniacka, A.; Rosendahl, P. L.; Sandaker, H.; Sjusen, T. B.; Stugu, B.; Ugland, M.; et al.: Measurements of fiducial and differential cross sections for Higgs boson production in the diphoton decay channel at TeV with ATLAS ATLAS Collaboration JOURNAL OF HIGH ENERGY PHYSICS Issue: 9 Pages: 1-61
- Johansen, Kristoffer; Yddal, Torstein; Kotopoulos, Spiros; Postema, Michiel. 2014. Acoustic filtering of particles in a flow regime. IEEE International Ultrasonics Symposium Proceedings. 1436-1439. doi: [10.1109/ULTSYM.2014.0355](https://doi.org/10.1109/ULTSYM.2014.0355)
- Johnston, Keith; Tapia-Siles, Cecilia; Gerold, Bjoern; Postema, Michiel; Cochran, Sandy; Cuschieri, Alfred; Prentice, Paul. 2014. Periodic shock-emission from acoustically driven cavitation clouds: a source of the subharmonic signal. Ultrasonics. 54: 2151-2158. doi: [10.1016/j.ultras.2014.06.011](https://doi.org/10.1016/j.ultras.2014.06.011)
- Kotopoulos, Spiros; Delalande, Anthony; Popa, Mihaela Lucia; Mamaeva, Veronika; Dimcevski, Georg Gjorgji; Gilja, Odd Helge; Postema, Michiel; Gjertsen, Bjørn Tore; McCormack, Emmet. 2014. Sonoporation-enhanced chemotherapy significantly reduces primary tumour burden in an orthotopic pancreatic cancer xenograft. Molecular Imaging and Biology. 16: 53-62. doi: [10.1007/s11307-013-0672-5](https://doi.org/10.1007/s11307-013-0672-5)
- Kotopoulos, Spiros; Dimcevski, Georg Gjorgji; Gjertsen, Bjørn Tore; Gilja, Odd Helge; McCormack, Emmet; Postema, Michiel. 2014. Sonoporation: from the lab to human clinical trials. IEEE International Ultrasonics Symposium Proceedings. 846-849. doi: [10.1109/ULTSYM.2014.0208](https://doi.org/10.1109/ULTSYM.2014.0208)

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PUBLICATIONS (CONT.):

- Yddal, Torstein; Cochran, Sandy; Gilja, Odd Helge; Postema, Michiel; Kotopoulis, Spiros. 2014. Open source, high throughput, ultrasound treatment chamber. Biomedical Engineering. 11 sider. doi: [10.1515/bmt-2014-0046](https://doi.org/10.1515/bmt-2014-0046)
- Yddal, Torstein; Kotopoulis, Spiros; Gilja, Odd Helge; Cochran, Sandy; Postema, Michiel. 2014. Transparent glass-windowed ultrasound transducers. IEEE International Ultrasonics Symposium Proceedings. 2079-2082. doi: [10.1109/ULTSYM.2014.0518](https://doi.org/10.1109/ULTSYM.2014.0518)
- Delalande, Anthony; Kotopoulis, Spiros; Postema, Michiel; Midoux, Patrick; Pichon, Chantal. 2013. Sonoporation: mechanistic insights and ongoing challenges for gene transfer. Gene. 525: 191-199. doi: [10.1016/j.gene.2013.03.095](https://doi.org/10.1016/j.gene.2013.03.095)
- Kotopoulis, Spiros; Dimcevski, Georg Gjorgji; Gilja, Odd Helge; Hoem, Dag; Postema, Michiel. 2013. Treatment of human pancreatic cancer using combined ultrasound, microbubbles, and gemcitabine: a clinical case study. Medical physics (Lancaster). 40. doi: [10.1118/1.4808149](https://doi.org/10.1118/1.4808149)
- Kotopoulis, Spiros; Eder, Sabrina Daniela; Greve, Martin Møller; Holst, Bodil; Postema, Michiel. 2013. Lab-on-a-chip device for fabrication of therapeutic microbubbles on demand. Biomedical Engineering. 58. 2 sider. doi: [10.1515/bmt-2013-4037](https://doi.org/10.1515/bmt-2013-4037)





USEFUL LINKS

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[The Faculty- Strategy and Vision](#)

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