6th Workshop on Nuclear Level Density & Gamma Strength Program

Sunday May 7

17:00 – 19:00  
Registration and reception  
(Location: Physics building, Origo room)

Monday May 8

08:30 – 09:30  
Registration and coffee  
(Location: Helga Engs hus, main hall)

09:30  
Welcome and opening of workshop  
(Location: Helga Engs hus, Auditorium 3)  
Sunniva Siem (chair) and  
Heidi Sandaker

1st session  
Chair: Sunniva Siem

09:40  
Neutron captures far from stability and astrophysical implications  
Artemis Spyrou

10:10  
Statistical vs. direct γ-decay of 64,65Ni  
Lucia Crespo Campo

10:30  
QRPA E1 and M1 strengths and their impact on reaction rates  
Stéphane Goriely

11:00  
Coffee

2nd session  
Chair: Lee A. Bernstein

11:30  
Investigating the Pygmy Dipole Resonance in deformed nuclei  
Luna Pellegri

12:00  
A pygmy quadrupole resonance in the stable Sn isotopes  
Mark Spieker

12:30  
Level densities and γ strength functions in modeling neutron interactions with iron isotopes  
Gustavo Nobre

13:00  
Lunch
3rd session

14:00  Chair: Ramona Vogt
Valence particle-core excitations couplings: new experimental investigations and novel theoretical approaches
Simone Bottoni

14:20  Realistic radiative strength functions within fast neutron-induced reactions in the mass range A~90
Vlad Avrigeanu

14:40  Constraining the low energy limit of the strength function through nuclear-plasma interactions
Darren L. Bleuel

15:00  Application of Oslo Method on Heavy Nd Isotopes
Kursad Osman Ay

15:20  Experimentally constrained $^{73}$Zn(n,$\gamma$)$^{74}$Zn reaction rate
Rebecca Lewis

15:40  Preliminary results on photon strength functions of $^{195}$Pt from resonance neutron radiative capture measured by DANCE experiment
Nina Bazhazhina

16:00  Coffee

4th session

16:30  Chair: Mathis Wiedeking
Investigation of radiative proton-capture reactions using high-resolution $\gamma$-ray spectroscopy
Philipp Scholtz

16:50  Spin distribution of excited nuclear states in $^{nat}$Fe(p,n)
Andrew S. Voyles

17:00  Investigation of Scissors Resonance in $^{145,149,151}$Nd
Mustafa Ozgur

17:10  Resonances in odd-odd $^{182}$Ta
Christiaan P. Brits

17:25  Characterization of an EJ301 detector for pulse shape discrimination of keV neutrons
Amanda Lewis

17:35  A new approach to estimate spin distributions and fitting the $\gamma$SF – finally the end of the many parameter nightmare?
Fabio Zeiser

17:45  Test of recent expressions for photon strength functions
Vladimir Plujko

18:00-20:00  Poster session
Tuesday May 9

08:30 – 09:00  Coffee  
(Location: Helga Engs hus, main hall)

1st session  
Chair: Stéphane Goriely  
(Location: Helga Engs hus, Auditorium 3)

09:00  The shape distribution of nuclear level densities in the shell model Monte Carlo method  
Yoram Alhassid

09:30  Particle-number projection in finite-temperature mean-field approximations to level densities  
Paul Fanto

10:00  Interaction dependence of the nuclear level density calculated using Hartree-Fock-Bogoliubov theory  
Naoya Furutachi

10:20  A new formulation of the nuclear level density by spin and parity  
Richard B. Firestone

10:40  Studies of spin cutoff parameters for Pt isotopes  
Steven M. Grimes

11:00  Coffee

2nd session  
Chair: Stéphane Hilaire

11:30  Absence of rotational collectivity in a large number of fission excitation functions  
Luciano G. Moretto

12:00  Rotational enhancement of the level density in deformed nuclei  
Thomas Døssing

12:30  Spin cutoff studies from $^6$,7Li and $\alpha$-induced reactions  
Alexander V. Voinov

13:00  Lunch

3rd session  
Chair: Luna Pellegri

14:00  Fission dynamics with microscopic level densities  
Jørgen Randrup

14:20  Investigating the surrogate method via the simultaneous measurement of fission and $\gamma$ probabilities  
David Denis-Petit

14:40  The Oslo Method in Inverse Kinematics  
Vetle W. Ingeberg

15:00  On deuteron interactions in surrogate (d,p$\gamma$) reactions  
Marilena Avrigeanu

15:20  Nuclear level densities and $\gamma$-ray strength functions of $^{180,181,182}$Ta and neutron capture cross sections  
Kgashane L. Malatji

15:40  Experimental evidence of chaos in the bound states of $^{208}$Pb  
Jose M. G. Gómez

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16:00  Coffee

16:30-18:00  Chair: Sven Åberg
            Discussions on level density
Wednesday May 10

08:30 – 09:00  Coffee  
(Location: Helga Engs hus, main hall)

1st session  
Chair: Augusto Macchiavelli  
(Location: Helga Engs hus, Auditorium 3)

09:00  E1 and M1 excitations in $^{54}$Fe and low-energy M1 strength in open-shell Fe isotopes  
Ronald Schwengner

09:30  Understanding the nature of the low-energy enhancement in the photon strength function of $^{56}$Fe  
Michael D. Jones

10:00  Large scale QRPA predictions of $\gamma$ ray strength functions based on the D1M Gogny interaction  
Stéphane Hilaire

10:20  Studies of nuclear statistical properties with the nuclear shell model  
Jørgen E. Midtbø

10:40  Statistical nuclear reaction uncertainties important for the astrophysical rp and $\alpha$ processes  
Zach Meisel

11:00  Coffee

2nd session  
Chair: Hiroaki Utsunomiya

11:30  Magnetic and electric dipole strength at low energy  
Kamila Sieja

12:00  Validating the $\beta$-Oslo technique for neutron capture rates far from stability  
Sean N. Liddick

12:30  Simultaneous microscopic description of nuclear level density and radiative strength function  
Nguyen Dinh Dang

13:00  Lunch

3rd session  
Chair: Jørgen Randrup

14:00  Spectroscopy of prompt fission decay processes induced with fast directional neutrons  
Jonathan N. Wilson

14:20  Microscopic calculations of the photon strength functions in magic and semi-magic nuclei  
Oleg Achakovskiy

14:40  Isomeric ratio measurements for the radiative neutron capture $^{176}$Lu(n,$\gamma$) at DANCE  
Olivier Roig

15:00  Statistical properties of nuclei far from stability for national security applications  
Adriana Ureche
15:20  Relativistic Quasi-particle Random Phase Approximation (RQRPA) and Photon Strength Functions (PSF)  
Yuan Tian

15:40  Nuclear Level Density and Gamma Strength from Quasi-Continuum Lifetimes with GRETINA  
Leo E. Kirsch

16:00  Coffee

16:30-18:00  Chair: Peter von Neumann-Cosel  
Discussions on gamma strength
Thursday May 11

08:30 – 09:00  Coffee  
(Location: Helga Engs hus, main hall)

1st session  Chair: Hiroaki Utsunomiya  
(Location: Helga Engs hus, Auditorium 3)

09:00  Tests of the Brink-Axel hypothesis with high-resolution small-angle inelastic proton scattering  
Peter von Neumann-Cosel

09:30  Gamma strength function and level density of $^{120}$Sn  
Sergej Bassauer

10:00  The radiative width of the Hoyle state from cascading $\gamma$-ray measurement  
Tibor Kibédi

10:20  The 3$\alpha$ process studied through pair conversion transitions from the Hoyle state in $^{12}$C  
Tomas K. Eriksen

10:40  Study of Photon Emission with the Fission Event Generator FREYA  
Ramona Vogt

11:00  Coffee

2nd session  Chair: Luciano G. Moretto

11:30  The measurement programme of the n_TOF facility at CERN  
Frank Gunsing

12:00  Radiative strength functions and population of isomers in deformed nuclei from (n,$\gamma$) reaction  
Milan Krticka

12:30  Improved neutron capture cross sections, level densities, and $\gamma$-ray strength functions via total-cross-section measurements at the Los Alamos Neutron Science Center  
Paul E. Koehler

13:00  Lunch

13:30  Excursion, the Munch Museum

18:00  Conference dinner, Frøgnerseteren Restaurant

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Friday May 12

08:30 – 09:00 Coffee
(Location: Helga Engs hus, main hall)

1st session Chair: Ronald Schwengner
(Location: Helga Engs hus, Auditorium 3)
09:00 Gamma-ray strength functions and a new dimension of partial GDR cross section measurements
Hiroaki Utsunomiya
09:30 Photoneutron reactions studies at ELI-NP using a direct neutron multiplicity sorting method
Dan M. Filipescu
10:00 Recent developments in neutron capture on actinides using the DANCE detector
John L. Ullmann
10:20 Addressing Nuclear Data Needs with FIER
Eric Matthews
10:40 Photonneuclear Reaction Methods and Needs for Global Security Applications
Micah S. Johnson

11:00 Coffee

2nd session Chair: Richard B. Firestone
11:30 Updating the Photoneuclear Data Library and Generating a database for Photon Strength Functions
Vivian Dimitriou
12:00 Update on (n,γ) studies of photon strength functions at Budapest
Tamas Belgya
12:30 Evaluation of Photoneuclear Reaction Cross Sections for $^{90}$Zr
Jimin Wang

12:50 Summary by Lee A. Bernstein, end of workshop

13:30 IAEA meeting (by invitation only)
(Location: Helga Engs hus, room U35)