Session 2
Dose assessment of occupational radiation exposures
Summary of Contributed Papers

Stefan Mundigl
Rapporteur
Introduction

• High interest in this session – a total of 35 papers accepted

• Main areas covered
  – Dosimetry of external exposure (26 papers)
    • International guidance and standards (2 papers)
    • Secondary standards dosimetry laboratory (1 paper)
    • Development of dosemeters (4 papers)
    • (Type) Testing of dosemeters – pulsed fields (4 papers)
    • Computational techniques (2 papers)
    • Intercomparison exercises (4 papers)
    • Extremity and eye-lens dosimetry (9 papers)

  – Dosimetry of internal exposure (6 papers)
  – Programmes to monitor occupationally exposed workers (3 papers)
External exposure (1)

• International guidance and standards
  – J. H. Garcia Alves et al., EURADOS WG02 Actions: Harmonization of Individual Monitoring in Europe

• Secondary standards dosimetry laboratory
  – E. Caseria et al., Upgrading the National Radiation Standards for Protection Level Calibration at the Secondary Standard Dosimetry Laboratory(SSDL) in the Philippines
External exposure (2)

• Development of dosimeters
  – S. Baradaran et al., Comparison Of The Response and Behavior of TL Neutron - Gamma Dosimeters Used in Individual Dosimetry System for $^{241}$Am-Be and $^{252}$Cf Sources
  – M. Baptista de Freitas et al., A New Personal Dosimetry Badge Based on Combined Luminescence Techniques (TL and OSL)
  – P. Antonio et al., Commercial TL and OSL Al2O3:C Detectors for Use in Beta Occupational Monitoring
  – J. T. Osko et al., Invention of Unique and Development of Routine Radiation Monitoring Techniques for Polish Nuclear Programme, Industry and Medicine
External exposure (3)

• (Type) Testing of dosemeters – pulsed fields
  – H. Zutz et al., Can a Medical LINAC Be Used for Testing Radiation Protection Dosemeters?
  – S. Friedrich et al., Pulsed Radiation Facility with about 115 ns Pulse Durations
  – O. Hupe et al., Type Test Requirements and Reference Fields for Radiation Protection Dosimetry in Pulsed Radiation Fields
  – P. Papírník et al., Inaccuracy of Personal OSL Dosimeters in Interventional Radiology
External exposure (4)

• Computational techniques
  – P. Gyekye et al., Monte Carlo Investigation Into Scatter Radiation From CT Fluoroscopy Gantry: Effect on Staff Dose
  – E. Oyekunle et al., Total Reference Air Kerma as Dosimetric Parameter for Assessing Occupational Radiation Protection in Brachytherapy

• Intercomparison exercises
  – M. Arib et al., Measurement of Personal Dose Equivalent Hp(10) in Photon Fields in the Africa Region
  – M. Bero et al., Personal Dosemeters Performance Testing for Six Service Providers in Five Different Countries in Western Asia Region
  – E. Fantuzzi et al., Gaps and Challenges in Neutron Personal Dosimetry: Intercomparisons and Applicable Criteria for Dosimetric Performance
  – V. Chumak et al., The First National Intercomparison of Whole Body Dosemeters in Photon Fields in Ukraine: Preliminary Results
Extremities and eye lens dosimetry (1)

- **R. Sapoi et al.**, Extremities and Eye Lens Dosimetry in Romania: Challenges and Developments
- **V. Nilsson**, Assessment of the Conformity of Dosimeters Used to Measure Dose to the Lens of the Eye - A Regulatory Approach
- **A. Lima et al.**, Equivalent Dose Estimation of Eye Lens on Planned Exposure Situation of Industrial Gamma Radiography using the Visual Monte Carlo Brazilian Software
- **L. Alejo Luque et al.**, Estimated Radiation Dose to the Eye Lens with Photoluminescence Dosimeters
- **Z. Cemusová et al.**, Angular Dependence of Two Different (LiF based) Eye Lens TL Dosimeters
Extremities and eye lens dosimetry (2)

– **Z. Knezevic et al.**, Overview of the Activities on Occupational Dosimetry within EURADOS WG 12, Dosimetry in Medical Imaging

– **J. Vinklář et al.**, The Possibility of Determining the Dose in the Lens of the Eye for Radiation Workers

– **W. J. Chase et al.**, Implications of the New Lens Dose Limit for Dosimetry and Radiation Protection Programs at Nuclear Power Plants

– **J. Sabol et al.**, Skin Exposure: A Specific Problem in Occupational Monitoring
Internal exposure

• International guidance and standards
  – *C. Challeton de Vathaire et al.*, Development of a Standard for the Monitoring and Internal Dosimetry of Exposed Workers of Nuclear Medicine

• In-vivo measurements – whole-body counting
  – *D. Franck et al.*, Development of a New Tool of Expertise for Internal Contamination Assessment of Nuclear Medicine Workers
  – *M. A. Saizu*, Internal Contamination Monitoring for Workers from Nuclear Facilities in IFIN-HH Romania - Current and Future Practices
Internal exposure (2)

• Computational techniques
  – *N. Helal et al.*, A Comparative Study between Mondal Software and a Constructed Model for Calculating Internal Exposure of some Radionuclides
  – *E. Davesne et al.*, OPSCI: Software to Optimize Individual Routine Monitoring Programme of Internal Contamination

• Accidents and events
  – *M. Zagyvai et al.*, Preliminary Investigations of an Occupational Am-241 Incorporation
Programmes to monitor occupationally exposed workers

– *F. Mihai et al.*, Doses Recorded through Occupational Exposures using two Enshrined Passive Dosimetry Methods and Personal Monitoring Option

– *E. Okuno et al.*, Thirty Five Years of Occupational Individual Monitoring at University of S. Paulo

– *S. Mikheenko et al.*, ARMIR: The System for Estimation of Radiological Risk from Occupational Exposure
Summary

• High interest in this session – a total of 35 papers accepted

• Some challenges
  – Dosimetry in new medical procedures and techniques
  – Eye lens dosimetry
  – Dosimetry in pulsed fields

Please go and see the posters and discuss with the authors!

Thank you!