



AMERICAN NUCLEAR SOCIETY & HEALTH PHYSICS SOCIETY
JOINT TOPICAL - SEPTEMBER 30 - October 3, 2018
TRI-CITIES, WASHINGTON

Preliminary Program

2018-05-21

Monday October 1, 2018

Morning

- 8:00 PLENARY SESSION #1, Opening Session Chair: Alan Waltar
- 8:00 Welcome and Introductions. Alan Waltar
- 8:15 Goals of the Conference. Mike Lawrence
- 8:30 Society Presidents' Welcome . . . HPS President Nolan Hertel, ANS President John Kelly
- 8:40 Keynote Address:
The Strengths and Weaknesses for Linearity in Radiation Risks at Very Low Doses
David Brenner
- 9:10 Historical Context:
Understanding Exposure-Dose-Response Relationships for
Radiation and Radionuclides
Roger McClellan
- 9:40 Radiobiology Perspective:
Scientific Update on Dose and Dose-rate-Response to Radiation at Low Doses
Gayle Woloschak
- 10:00 BREAK
- 10:20 PLENARY SESSION #2, Dose-Response Relationships in the Context of
Standards for Radiation Protection. Chair: Christopher Clement
- 10:20 ICRP - Status of ICRP Committee 1 on Low Dose and Low Dose Rate Effects
for Ionizing Radiation Werner Rühm
- 10:40 UNSCEAR - Protection against Low-Dose Radiation: An Evolving International
Paradigm for Regulatory Decisions Abel Gonzalez
- 11:00 IAEA - Radiation Response Models and International Radiation Protection
Guidelines Oleg Belyakov
- 11:20 NRC - Nuclear Regulatory Commission Perspectives on the
Linear No-threshold Dose Response Relationship (speaker to be determined)
- 11:40 EPA - Environmental Protection Agency Perspectives on Risk Projections
for Exposures to Low Dose Rate Radiation. David Pawel

12:00 Noon - Luncheon Speaker: Michael Shellenberger
Monday Afternoon

1:00 PANEL #1

Can Regulators Accommodate an Alternative
Dose-Response Paradigm?
Moderator: William Magwood

David Pawel Time for a Change?
Julian Preston Biological Basis for Regulation
William Sacks Radiation Harm vs Hormesis: Paradigms, Assumptions, and Biases
Peter Colgan IAEA Safety Standards
Antony Hooker South Australian Experience
Ed Calabrese Solutions for Regulatory Reform

2:00 PLENARY SESSION #3 Epidemiology Chair: Barrett Fountos

2:00 Russian Health Studies Barrett Fountos

2:10 Dosimetry for Mayak and Techa River Populations Bruce Napier

2:30 Epidemiology of the Mayak and Techa River Populations Dan Stram

2:50 Comparing High and Low Dose Radiation Rates Dale Preston

3:10 Low Dose and Dose Rate Solid Cancer Risks Based on
Epidemiological Studies David Hoel

3:30 BREAK

4:00 PANEL #2

Epidemiology and Basis for Current Radiation
Protection Standards
Moderator: Roger O. McClellan

Richard Bull Internal dosimetry (3 minute Introduction)
Bruce Napier Dose reconstruction
Dan Stram Low Dose Rate vs High Dose Rate
David Hoel Solid Cancers
Yutaka Hamaoka Analysis of Worker Data
Dale Preston Comparing High and Low Dose Radiation Rates

5:00 Poster session and "Walk-Around Dinner/Reception"

Tuesday October 2, 2018
Morning

8:00 PLENARY SESSION #4, Mechanistic Biology and
Radiation Standards Chair : Doug Boreham

8:00 Keynote Address
Paradigm Shifts in Radiation Biology
Antone Brooks

8:25 Molecular Biology and Mechanisms of Action Sujeenthar Tharmalingam

8:50 Radiation Induced Epigenetic Changes Randy Jirtle

9:15 Using Mechanism of Action to Reduce Uncertainty in Risk Estimates Julian Preston

9:30 Learning from Molecular, Cellular and Animal Data Alia Zander, Stephanie Puukila

10:00 BREAK

10:30 Paracrine Signaling and differentiation of stem cells. Nick Dainiak

10:50 Low Dose Radiation Biology in Canada Dmitry Klovov

11:10 PANEL #3

Can we use Mechanistic Data in Risk Assessment?
Moderator: Ludwig Feinendegen

Janet Baulch Epigenetics in Brain (3 minutes)
Ludwig Feinendegen. Protective adaptation (3 minutes)
Noy Rithidech Delayed Effects radiation (3 minutes)
Helmut Sies Redux Biology (3 minutes)
Tony Brooks

12:00 "Walk-Around" Lunch Visiting Posters

Tuesday Afternoon

- 1:00 PLENARY SESSION #5 The role of Modeling in
Radiation Protection Chair: Kathy Higley
- 1:00 Keynote Address
Basis for Updating the Limits on Radiation Dose to the Public
Darrell Fisher
- 1:20 Arguments Against Linearity at Low Doses..... John Dunn
- 1:40 Information needed to alter standards..... Kathy Higley
- 2:00 GAO report: Interagency Collaboration to Improve
Health Effects Research Allen Chan
- 2:20 Radiation Hormesis and radiation protection Mohan Doss
- 2:40 The Case for a Threshold Bennett Greenspan
- 3:00 BREAK
- 3:30 PANEL #4
Models of Dose Response Relationships
Moderator: David Brenner
Jerry Cuttler..... Hormesis and disease (3 minutes)
Mark Miller SARI and its goals (3 minutes)
Darrell Fisher
Kathy Higley
- 4:30 PLENARY SESSION #6 Needs in Low Dose Radiation Biology for
Medicine and Industry Chair: Michael O'Connor
- 4:30 Keynote Address
Benefits of the low doses of radiation delivered in medical imaging
Cynthia McCollough
- 5:00 Nuclear Industry..... Jim Conca
- 5:20 Public Support for Nuclear Power Wade Allison
- 6:00 BANQUET and Posters

Wednesday October 3, 2018
Morning

- 8:00 PLENARY SESSION #7 Continuing Needs in Low Dose Radiation Biology
for Medicine and Industry Chair: ??????
- 8:00 Low dose radiation in Space. Robin Elgart
- 8:20 Low dose Radiation in the Airline industry Edward Bramlitt
- 8:40 PLENARY SESSION #8 Risk Communication,
Fear and Regulations Chair, Tony Hooker
- 8:40 Lessons learned in communication from the Fukushima accident Jacques Lochard
- 9:00 Connecting science and life with trust Ryoko Ando
- 9:20 Public communication after accidents Yuliya Lyamzina
- 9:40 Science must develop trust and empathy in the public. Ohtsra Niwa
- 10:00 BREAK
- 10:30 Risk Tradeoffs in policy making Thomas Hansen
- 11:00 PANEL #5
Communication and Policy
Moderator, Paul Lussier
Neil Alexander How can we improve communication (3 minutes)
John Gilleland Can Revised Dose Limits Enhance Nuclear Power Economics?
Ryoko Ando
Thomas Hansen
Ohtsra Niwa
Paul Lussier
- 12:00 Lunch --- Speaker, Paul Lorenzini

Wednesday Afternoon

- 1:00 PLENARY SESSION #9 Scientific Needs to Move Forward in
Low Dose Biology and Risk. Moderator, Doug Boreham
- 1:00 Incorporating low dose information into US Laws, regulations and Policy Paul Locke
- 1:20 Research needs in Low Dose Biology. Dmitry Klokov
- 1:40 Needs in communication Nick Priest
- 2:00 PANEL #6
Requirements to update regulations
Moderator, Christopher Clement
Nick Priest
Dmitry Klokov
Mohan Doss
Doug Boreham
Dan Stram
Barrett Fontos
Paul Locke
- 3:00 BREAK
- 3:30 PANEL #7
Path Forward-- How and Who Have the Action?
Moderator, Alan Waltar
Roger O. McClellan
Werner Rühm
David Pawel
Gayle Woloschak
David Brenner
Antone Brooks
Christopher Clement
- 4:30 Open discussion to focus on the Future????
- 5:00 Summarize Meeting Ludwig Feinendegen