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Time Pacific UTC -7	Time Eastern UTC -4	Time London UTC +1	Time Berlin UTC +2	Time Tokyo and Seoul UTC +9 9-10 May	Time Brisbane UTC +10 9-10 May	Note all regular sessions, including both live and on-demand only papers, will be available for on-demand viewing as part of your registration some time after the live session has concluded, and will be available for viewing for a month post-conference.
		<b>Day 1: N</b>	nal Development Courses and Icebreaker			
5:00-7:00	8:00- 10:00	13:00- 15:00	14:00- 16:00	21:00- 23:00	22:00- 0:00	Professional Development Course: Respiratory Protection for Infectious Disease, Aerosol Transmission, and Respiratory Protective Equipment Selection and Use Programs (Main auditorium) MO1: Aerosol transmission seminar Aerosols and pandemic respiratory viruses; Prof. Raymond Tellier Risks of Aerosol Transmission by Different Routes; Dr. Rachael Jones Will COVID-19 change the way we control airborne transmission of respiratory infections? Prof. Lidia Morawska
7:00-8:05	10:00- 11:05	15:00- 16:05	16:00- 17:05	23:00- 0:05	0:00-1:05	MO2: Respirator Selection and Use for Biological Aerosol Exposures Respirators and protection overview; Dr. Nikki McCullough Respirator programme management and fit testing; Stacy Richardson The COVID-19 pandemic and NIOSH; Jeff Peterson
8:20-9:30	11:20- 12:30	16:20- 17:30	17:20- 18:30	0:20-1:30	1:20-2:30	Operational control banding; Dr. Margaret Sietsema Control banding for respirator selection; Dr. Simon Smith
9:45- 10:35	12:45- 13:35	17:45- 18:35	18:45- 19:35	1:45-2:35	2:45-3:35	Respirator Selection and Use in healthcare 1; Dr. Nikki McCullough Respirator Selection and Use in healthcare 2; Dr. Stella Hines
10:50- 12:00	13:50- 15:00	18:50- 20:00	19:50- 21:00	2:50-4:00	3:50-5:00	Q&A Case studies: small group work for participants Review and wrap-up
12:00- 14:00	15:00- 17:00	20:00- 22:00	21:00- 23:00	4:00-6:00	5:00-7:00	Icebreaker/social (Gather)  Meet up with ISRP colleagues new and old in our Gather virtual rooftop venue – games, conversations, find clues to compete on our leaderboard



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Day 2: 1	Tuesday :	L0 May –	- Exhibiti	on – Post	ter Sessio	on – Technical Sessions
22:00- 0:00	1:00-3:00	6:00-8:00	7:00-9:00	14:00- 16:00	15:00- 17:00	Exhibition (Exhibit hall)  Visit the booths in the exhibit hall for the latest technology and products in respiratory protection
0:10-0:55	3:10-3:55	8:10-8:55	9:10-9:55	16:10- 16:55	17:10- 17:55	TU1: Lessons from the Pandemic (Main auditorium)  135 – Keynote speaker Prof. Makoto Tsubokura: Digital Transformation of Droplet/Aerosol Infection Risk Assessment and Evaluation of Countermeasures Realized on the Supercomputer "Fugaku"
1:10-3:10	4:10-6:10	9:10- 11:10	10:10- 12:10	17:10- 19:10	18:10- 20:10	TU2: Poster Session 1 (Poster hall) 47 - An analysis of three-dimensional head anthropometric data to select respirators for Korean users; Dr. Jung-Keun Park, Mr. Se-Dong Kim, Mrs. Hyoun-Min Cho, Ms. Eunji Lee 53 - Differences in fit of N95 respirators by face size; Ms. Huiju Kim, Prof. Hyekyung Seo, Mr. Hoyeong Jang, Ms. Sua Shim, Mr. SungWook Park 67 - Filtration characteristics and effective lifetime of an electret filter with intermittent use; Ms. Jiyul Lee, Ms. Kyeongeun Lee, Ms. Hanjou Park, Ms. Jooyoun Kim 76 - Respiratory protection effect of disposable type dust respirators and non-medical face masks using non-woven fabric; Dr. Yukiko lida, Mr. Takuya Iwamoto, Mr. Toshiyuki Toyoguchi, Prof. Narufumi Suganuma 79 - Comparisons of fit factors between two quantitative fit testers; Prof. Don-Hee Han; Prof. Hyekyung Seo, Mr. Byoung-kab Kang, Mr. Hoyeong Jang, Ms. Huiju Kim, Ms. Sua Shim 81 - Mask wearing time and changes in microbial growth; Mr. Hoyeong Jang, Prof. Hyekyung Seo, Ms. Huiju Kim, Ms. Sua Shim, Mr. SungWook Park, Prof. Young-Il Kwon 83 - Changes in filtration efficiency according to mask wearing time; Mr. SungWook Park, Prof. Hyekyung Seo, Mr. Hoyeong Jang, Ms. Huiju Kim, Ms. Sua Shim, Prof. Young-Il Kwon



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						87 - Correlation of fit factor in two inspections devices according to differences in method; Ms. Sua Shim, Prof. Hyekyung Seo, Mr. Hoyeong Jang, Ms. Huiju Kim, Mr. SungWook Park 89 - PAPRs in the Pandemic Hospital; Mr. Cade Hines 92 - Roles for Data and Data-Analysis in Respiratory Protection; Mr. Alex Virr, Dr. Alex Birrell, Mr. Alex Maunder 93 - Physiological Effects of N95 by Age According to Exercise Intensity; Ms. Sulbee Go, Ms. Yeram Yang, Prof. Chungsik Yoon 116 - A Study on the Correlation Between Static Electricity and Filtration Efficiency of Particulate Respirators; Ms. Jimin Kim, Prof. Chungsik Yoon
4:20 -6:00	7:20-9:00	12:20- 14:00	13:20- 15:00	20:20- 22:00	21:20- 23:00	TU3: Science and Characterization (Main auditorium) Contributed live talks  105 - Finite element modelling of respirators interacting with the soft tissues of the face; Prof. Sam Evans, Dr. Bethany Keenan, Dr. Silvia Caggiari, Dr. Peter R. Worsley, Prof. Dan L. Bader  106 - Evaluating facial soft tissue deformation through 3D imaging; Dr. Bethany Keenan, Prof. Sam Evans, Prof. Stephen Richmond  121 - Mobile application SIZE 4 FACE supporting the determination of individual dimensions of the RPD users faces; Mr. Krzysztof Makowski  55 - The Inherent Variability of Count-based Measurements of Respirator Fit; Mr. Andrew Viner  36 - Laboratory Assessment of Bacterial Contamination of a Sterile Environment when Using Respirators Not Traditionally Used in a Sterile Field Environment; Dr. Ziqing Zhuang, Warren Myers, Segun Ajewole, Susan Xu, Patrick Yorio, Adam Hornbeck  Contributed pre-recorded talks  70 - Biomechanical and physiological evaluation of respiratory protective equipment application; Dr. Silvia Caggiari, Prof. Dan L. Bader, Dr. Peter R. Worsley  119 - Mobile application supporting the selection of respiratory protective devices for use against biological agents; Prof. Katarzyna Majchrzycka, Dr. Małgorzata Okrasa, Dr. Justyna Szulc



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6:10-8:00	9:10- 11:00	14:10- 16:00	15:10- 17:00	22:10- 0:00	23:10- 1:00	TU4: International Standards (Main auditorium) 99 - Keynote speaker Dr. Simon Smith: The ISO Technical Specifications for Chemical-Biological-Radiological-Nuclear Respiratory Protective Devices Contributed live talks 24 - Respiratory Standards in Europe - recent developments; Dr. Gabriele Troescher 40 - Robust measurement of particle filtration efficiencies: Evaluated quantities and experimental sensitivities; Dr. Timothy Sipkens, Dr. Joel Corbin, Dr. Gregory Smallwood, Dr. Andrew Oldershaw, Dr. Ian Leroux, Dr. Jalal Norooz Oliaee, Dr. Fengshan Liu, Dr. Thierry Lavoie, Dr. Triantafillos Koukoulas, Dr. Richard Green, Dr. Prem Lobo 23 - A New Respirator Performance Standard and Certification System for Canada; Dr. Simon Smith, Prof. Eva Dickson, Mr. Dennis Nikkel
8:40- 10:40	11:40- 13:40	16:40- 18:40	17:40- 19:40	0:40-2:40	1:40-3:40	Exhibition (Exhibit Hall)  Visit the booths in the exhibit hall for the latest technology and products in respiratory protection



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11:10- 14:15	14:10- 17:15	19:10- 22:15	20:10- 23:15	3:10-6:15	4:10-7:15	TU5: Underserved Populations (Main auditorium)  127 – Keynote speaker Prof. Claire Horwell: Respiratory protection for children: lessons learned from volcanic eruption crises and Covid-19 mitigations  Contributed live talks  46 - A National Strategy for Promoting Equitable Personal Protective Equipment Protections for all U.S. Workers; Dr. Susan Moore, Dr. Patrick Dempsey, Dr. Tyler Quinn, Dr. Katherine N. Yoon, Mr. Mathew Duling, Ms. Crystal Forester, Dr. F. Selcen Kilinc-Balci, Dr. Adam Smith  63 - Needs and Challenges in Personal Protective Equipment for Underserved User Populations: Responses to a Federal Register Notice (June–October 2021); Dr. Katherine N. Yoon, Dr. Maryann D'Alessandro, Dr. Patrick Dempsey, Dr. Susan Moore, Dr. Tyler Quinn  114 - Keynote speaker Dr. Maryann D'Alessandro, Dr. Patrick Dempsey, Dr. Susan Moore, Dr. Adam Smith; The Evolving National U. S. Landscape for Respiratory Protection  Contributed live talks  111 - Respiratory protection for Break in Mask Seals; Jordan Bray-Miners, Harry Angel

#### Day 3: Wednesday 11 May – Exhibition – Poster Session – Technical Sessions

						WE1: Wildland Firefighting (Main auditorium)
				128 - Keynote speaker Dr. Mike Logan: Protecting Firefighters from the effects of		
23:10 -	2,10,2,40	0-3:40 7:10-8:40 8:10-9:40 15:	15:10-	16:10-	Wildfire smoke emissions	
00:40	2:10-3:40	7:10-8:40	8:10-9:40	16:40	17:40	Contributed live talks
						16 - Do respirators have a thermoregulatory impact on volunteer firefighters?
						Mrs. Jane Whitelaw, Dr. Jennifer Hines, Dr. Vinod Gopaldasani



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						17 - How effective are P2 respirators against bushfire smoke? Mrs. Jane Whitelaw, Dr. Jennifer Hines, Ms. Linda Apthorpe
0:50-2:50	3:50-5:50	8:50- 10:50	9:50- 11:50	16:50- 18:50	17:50- 19:50	Exhibition (Exhibit hall)  Visit the booths in the exhibit hall for the latest technology and products in respiratory protection
3:00-4:50	06:00- 7:50	11:00- 12:40	12:00- 13:40	19:00- 20:50	20:00- 21:50	WE2: Radiological Protection (Main auditorium) Workshop discussing requirements and examples from UK experience Introduction; Prof. David Crouch 124 - Basics of Radiological Protection; Christopher Jones, Amit Desai 134 - Case Study – Radiological RPE Requirements in Decommissioning – Particulate Hazards; Peter Hiller Q&A Session
6:10-7:40	9:10- 10:40	14:10- 15:40	15:10- 16:40	22:10- 23:40	23:10- 0:40	WE3: First responder/military (Main auditorium) Protection issues in high hazard environments  118 - Keynote speaker Prof. David Crouch: First responders, the multidirectional RPE challenge  Contributed live talks  49 - Enhanced Duration SCBA; Mr. Hans Almqvist  34 - Respiratory protection for Canadian Armed Forces members with headdress and/or beards Part 1: A non-powered accessory for the C5 respirator for use in CBRN training; Prof. Eva Dickson, Dr. Paul Bodurtha, Maj. Christian Doucet, Ms. Lisa Prior, Ms. Linda Tremblay, Ms. Hannah Mills  Contributed pre-recorded talks  45 - NIOSH Expands its CBRN Air-purifying Respirator Protection List: An Evaluation of Emerging Chemical and Radiological Threats; Dr. Lee Greenawald, Mr. Jonathan Szalajda



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						<b>51 - Consideration of a Tiered Approach to Respiratory Protection for Emergency Workers Responding to a Nuclear/Radiological Incident;</b> Armin Ansari, Adela Salame-Alfie, Frieda Fisher-Tyler
7:50-8:35	10:50- 11:35	15:50- 16:35	16:50- 17:35	23:50- 0:35	0:50-1:35	WE4: Lessons from the Pandemic (Main auditorium)  133 - Keynote speaker Mario Possamai: COVID-19, Dogma, Hubris, and the Forgotten Lessons of SARS-1
8:50- 10:50	11:50- 13:50	16:50- 18:50	17:50- 19:50	0:50-2:50	1:50-3:50	WE5: Poster session 2 (Poster hall) 25 - Efficiency of KN95 FFR and qualitative knowledge on numerous FFRs during the COVID-19 pandemic; Dr. Clothilde Brochot, Dr. Mohamed Nejib Saidi, Dr. Ali Bahloul 41 - Respiratory protection for Canadian Armed Forces members with headdress and/or beards Part 2: Powered-air purifying respirators for interim use in CBRN training; Dr. Paul Bodurtha, Prof. Eva Dickson, Maj. Christian Doucet, Dr. Steven Trepanier, Mr. Mulu Gebremedhin 43 - Improving surgical mask efficacy with 3D-printed frames; Ms. Nathalie Duponsel; Dr. Clothilde Brochot; Dr. Ali Bahloul; Prof. Barbara Layne, Dr. Ann-Louise Davidson 65 - Size-specific Filtration Efficiency and Pressure Drop of School-aged Children's Woven and Nonwoven Masks; Solbee Seo, Conor A. Ruzycki, Warren Finlay, Dan L. Romanyk, Andrew R. Martin 68 - Source-control mask design provides significant wearer protection, is reusable, and accommodates underserved populations; Dr. Paul Baglin, Ms. Chris Baglin, Mr. Axel Bawor, Dr. Ngozi Amaeze, Dr. Mia Burleigh, Dr. Claire Chalmers, Dr. Chris Easton, Dr. Fiona Henriquez, Dr. William "Gordie" Mackay, , 71 - Animatronic Headform Evaluation of Face Coverings Used by First Responders in the COVID-19 Pandemic; Melissa Armistead, Anuja Dandekar, Marc Mathews, R. Bryan Ormond, 80 - Healthcare Worker User Acceptance and Tolerability Ratings of CleanSpace Halo Respirators Over Time; Dr. Eileen Zhuang, Dr. Hegang Chen, Dr. Stella Hines



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						96 - Development of a Proof of Concept Respirator Lens Fog Test Chamber; Cody Kendig 97 - Analysis of the Performance of Medical Masks; Anuja Dandekar, Melissa Armistead, Mark Gaskill, Marc Mathews, R. Bryan Ormond 120 - New materials for seals of respiratory protective devices; Dr. Małgorzata Okrasa, Dr. Milena Leszczyńska, Dr. Kamila Sałasińska, Dr. Leonard Szczepkowski 122 - Rapid intrahospital modification of surgical helmets into a respiratory protective device as an emergency measure; Dr. Max Temmesfeld, Dr. Agnieszka Gorzkowska-Sobas, Mr. Kenny Hedlund, Dr. Lars Kanten, Dr. Peter Grant, Dr. Rune Bruhn Jakobsen
11:00- 13:00	14:00- 16:00	19:00- 21:00	20:00- 22:00	3:00-5:00	4:00-6:00	Exhibition (Exhibit hall)  Visit the booths in the exhibit hall for the latest technology and products in respiratory protection
			Day 4: T	hursday	12 May -	- Exhibition – Technical Sessions
23:00- 24:00	2:00-3:00	7:00-8:00	8:00-9:00	15:00- 16:00	16:00- 17:00	TH1: Fit and Fit Testing 1 (Main auditorium) Contributed live talks 90 - Workplace Protection Factors for Workers with and without Facial Hair Wearing a PAPR. Mr. Alex Virr, Ms. Tiffany Beeson 15 - An Innovative Approach to Evaluating Protection Level of PAPRs' Tight-Fitting Facepiece when the Face Seal Is Compromised; Mr. Dmitri Kazakov 11 - RESP-FIT: An Australian Respirator Fit Testing Competency Program; Mr. Mark Reggers, Mrs. Jane Whitelaw Contributed pre-recorded talks 69 - 3D Modeling of Head Forms Representing Japanese Facial Features for Adequate Respirator Fit Testing; Hiroki Haruta 98 - Proposal of New APFs for PAPRs with Half Mask Facepiece and Face-Shield through SWPF Study; Dr. Yoshimi Matsumura, Dr. Hisashi Yuasa



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2:50-4:50	5:50-7:50	10:50- 12:50	11:50- 13:50	18:50- 20:50	19:50- 21:50	Exhibition (Exhibit hall) Visit the booths in the exhibit hall for the latest technology and products in respiratory protection
5:00-6:40	8:00-9:40	13:00- 14:40	14:00- 15:40	21:00- 22:40	22:00- 23:40	TH2: Fit and Fit Testing 2 (Main auditorium) Contributed live talks 33 - A next-generation fit testing approach for the Canadian Armed Forces; Ms. Hannah Mills, Prof. Eva Dickson, Dr. Paul Bodurtha, Ms. Linda Tremblay, Ms. Lisa Prior, Maj. Christian Doucet 115 - Respirator Fit Testing with Controlled Negative Pressure: Product Development Pandemic Response; Dr. Stephanie Lynch 123 - Next-Generation Custom-Fit Reusable Respiratory Protective Device with Continuous Fit Monitoring; Dr. Sungmee Park, Ms. Yuanqing Tian, Mr. Michael Bergman, Dr. Ziqing Zhuang, Ms. Jonisha Pollard, Prof. Sundaresan Jayaraman 126 - Interactive Control of Particle Generation in Quantitative Respirator Fit Testing Mr. William Hill 130 - Comparison Study of In-Market Filtering Facepiece Respirators using ASTM F3407-20 RFC Standard to Evaluate Design and Component Impact on Overall Fit Capabilities; James Wyner, Mark Holbrow, Larry Weldon, Don Seeto Contributed pre-recorded talks 18 - A Laboratory-based Quantitative Fit Assessment of N95 Filtering Facepiece Respirators with the Application of Skin Protectants; Mr. Michael Bergman, Dr. Ziqing Zhuang, Ms. Brooke Vollmer, Dr. Katherine N. Yoon, Dr. Sergey Grinshpun, Dr. Michael Yermakov
7:00- 09:00	10:00- 12:00	15:00- 17:00	16:00- 18:00	23:00- 1:00	0:00-2:00	Exhibition (Exhibit hall) Visit the booths in the exhibit hall for the latest technology and products in respiratory protection
9:15- 12:10	12:15- 15:10	17:15- 20:10	18:15- 21:10	1:15-4:10	2:15-5:10	TH3: Lessons from the Pandemic (Main auditorium) 136 - Keynote speaker Prof. Trish Greenhalgh; Prisoners of mental models: a tale of two diseases Contributed live talks



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						113 - Infectious exhaled particles: Experimental characterization of the source and estimation of the risk of infection; Dr. Mohsen Bagheri 35 - Healthcare and first responder initial experiences with elastomeric half mask respirators and the likelihood of their adoption; Dr. Emily Haas, Ms. Alexa Furek, Dr. Lee Greenawald 102 - A combined 3D imaging and registration methodology to assess the goodness of fit of respiratory protective equipment; Dr. Silvia Caggiari, Dr. Bethany Keenan, Prof. Sam Evans, Prof. Dan L. Bader, Dr. Peter R. Worsley 131 - NIOSH Respirator Approval Program 2020 to present, we have been busy! Colleen Miller 132 - An Update on Achieving NIOSH Surgical N95 Approval; Heidi Sewchok 28 - Extending Supplies During Respirator Shortages - How Does Repeated Decontamination of Healthcare's Most Used Respirator Impact Respirator Performance? Ms. Brooke Vollmer, Mr. Michael Bergman, Ms. Jonisha Pollard, Dr. Ziqing Zhuang, Mr. Andrew Wilson, Mr. Kevin Strickland, Dr. Tyler Quinn, Mr. Jordan Meyers, Ms. Rebecca Streeter Contributed pre-recorded talks 91 - The work of HSE's PPE Task Force during COVID-19; Mrs. Helen Beattie, Mr. Duncan Smith 110 - Rapid Design of HCH-40, in Response to the COVID-19 Pandemic—The Development of a Non-Invasive, 'One Size Fits All' CPAP Hood; Mr. Dominic Leatherland, Mr. Nick Hunter 44 - Do Stockpiled Conditions Impact Respirator Performance? Dr. Lee Greenawald, Dr. Susan Moore, Dr. F. Selcen Kilinc-Balci 125 - A Study on the Use of Reusable Respiratory Protective Devices in a University Community Setting; Dr. Sungmee Park, Ms. Helen Liu, Dr. F. Selcen Kilinc-Balci, Prof. Sundaresan Jayaraman 82 - Use of Elastomeric Half-Face Respirators during the COVID-19 Pandemic in Healthcare Settings in British Columbia, Canada; Rita Ciconte, Joseph Tio, Jesse Cooper