

58th AORS 2020

Army Resilience in the Face of Global Crisis



GENERAL SCHEDULE OF EVENTS

Virtual Location	Start	End	Event
Tuesday - 20 October 2020			
Room 101	0900	0930	Understanding International Programs / How to Become Involved
Rooms 102 & 103	0930	1030	CP36 / FA49 Update Briefs (<i>simultaneously - 2 rooms</i>)
	1030	1045	<i>Break</i>
Conference Hall	1045	1100	Call to Order / Welcome / Administrative Remarks
	1100	1200	Keynote Speaker - Announcement of Awards, HoF, Wrap-up
	1200	1245	<i>Lunch</i>
Rooms 101 - 107	1245	1445	Working Groups (<i>4 x 30 minute presentations</i>)
	1445	1500	<i>Break</i>
	1500	1700	Working Groups (<i>4 x 30 minute presentations</i>)
Wednesday - 21 October 2020			
Conference Hall	0900	0935	AORS 2019 Best Presentation
	0935	1015	Operational Analysis Presentation
	1015	1045	Wilbur B. Payne Presentation
	1045	1100	<i>Break</i>
	1100	1200	Panel Discussion
	1200	1245	<i>Lunch</i>
Rooms 101 - 107	1245	1445	Working Groups (<i>4 x 30 minute presentations</i>)
	1445	1500	<i>Break</i>
	1500	1700	Working Groups (<i>4 x 30 minute presentations</i>)
Thursday - 22 October 2020			
Rooms 101 - 107	0900	1000	Job Fair
	1000	1200	Working Groups (<i>4 x 30 minute presentations</i>)
	1200	1245	<i>Lunch</i>
	1245	1445	Working Groups (<i>4 x 30 minute presentations</i>)
	1445	1500	<i>Break</i>
	1500	1700	Working Groups (<i>4 x 30 minute presentations</i>)
Friday - 23 October 2020			
Rooms 101 - 107	0900	1000	Job Fair
	1000	1200	Working Groups (<i>4 x 30 minute presentations</i>)
	1200	1245	<i>Lunch</i>
	1245	1445	Working Groups (<i>4 x 30 minute presentations</i>)
	1445	1500	<i>Break</i>
	1500	1700	Working Groups (<i>4 x 30 minute presentations</i>)

All times are Eastern Daylight Time (EDT)

58th AORS 2020 Detailed Schedule for Working Groups

07 October 2020

Day	Presentation Time		Room 101	Room 102	Room 103	Room 104	Room 105	Room 106	Room 107	
	Start	End	Working Group 1	Working Group 2	Working Group 3	Working Group 4	Working Group 5	Working Group 6	Working Group 8	
Tuesday 20 Oct 2020	1245	1315	AP146 Is the War in Afghanistan over for good?	AP124 Effects of Weaponized Commercial Unmanned Aerial Vehicles (UAVs) on Structures, Experimental Testing Comparison to Numerical Models	AP015 Route Specific Fuel Consumption and Application to Vignettes within the Hybrid Military Vehicle Component Simulation (HMVCS) Model	AP080 Expanding Your Aperture to Explore and Leverage Emerging Technologies	AP116 The Impact of Two vs Three Soldier Crews in the Next Generation Combat Vehicle	AP036 Expanding Beyond Active Defense: Broadening the Effects of Program-level Capabilities in Force-on-force Level Modeling	AP156 Analog vs. Digital: Logistics Wargaming Lessons Learned from the JETS Experience	
	1315	1345	AP094 Distributed Low-Energy Wastewater Treatment	AP084 Development of the Next-Generation Off-Road Mobility Performance Models	AP045 Using Visualization and Statistics to Shape T&E	AP025 The Vision of the Future: Modern Data Science Techniques for Visualization	AP095 A Model for Optimising Personnel Allocation under Uncertainty	AP102 Rapid Development of New Model to Quickly Evaluate Air Defense Battery Effectiveness. (Air Defense Raid Analysis Tool (ADRAT) Development, Using Python, and Employment)	AP135 DAWN Rising: Distributed wargaming and analysis for Force Design	
	1345	1415	AP036 Expanding Beyond Active Defense: Broadening the Effects of Program-level Capabilities in Force-on-force Level Modeling	AP075 Tactical Vehicle Solar Recharging	AP049 Initial Provisioning Analysis / Selected Essential-Item Stock For Availability Method (SESAME)	AP136 Cost Comparison Analysis Tool for Stationing (CCATS)	AP069 Statistically-informed human capital planning in an Army R&D laboratory	AP118 Modeling Army Layered Air and Missile Defense (AMD)	AP018 Data Collection for a Distributed Capstone Wargame Series	
	1415	1445	AP011 Resilient Telecommunications Systems	AP001 How Accuracy Requirements Create Weapon Effectiveness	AP054 Army Supply Chain Readiness Posture for Readiness Objectives	AP059 Material Identification Research with Target Identification Applications Using Infrared Polarimetric Methods	AP113 The Future of Data Standardization and Repository: Squad Performance Model	AP037 Force-on-Force Modeling of High Energy Lasers	AP080 Expanding Your Aperture to Explore and Leverage Emerging Technologies	
	Break			Working Group 1	Working Group 2	Working Group 3	Working Group 4	Working Group 5	Working Group 6	
	1500	1530	AP144 Historical Force Employment	AP074 Using Machine Learning to Automate the Classification of Geospatial Data from Multi-Spectral Imagery	AP092 Incorporating a Fault Prediction Model into Maintenance Planning	AP124 Effects of Weaponized Commercial Unmanned Aerial Vehicles (UAVs) on Structures, Experimental Testing Comparison to Numerical Models	AP068 The Accountability Paradox Examined: Evaluating the Effects of Accountability on Improvement in U.S. Federal Agencies	AP073 Likelihood Ratio Test on V50 with Multiple Factors		
	1530	1600	AP046 An Investigation of the Appropriateness of the Bhattacharyya Distance in Detecting Data Bias	AP091 Operational Impacts of Modernization Decisions	AP075 Tactical Vehicle Solar Recharging	AP087 Recipe for Using R Products to Produce Ad-Hoc Tables/Reports from Ad-Hoc Data	AP127 Implementing a Data Science Capability in an Operational Command	AP035 Capabilities-Based Teaming Analysis		
	1600	1630	AP007 CCDC Command Climate Assessment Survey Text Analysis	AP081 Assessing Project Convergence: AFC's Integrated Data Analysis Effort of an Artificial Intelligence (AI)-enabled Battlespace	AP143 Unmanned Aerial Resupply at the Tactical Edge	AP022 Autonomous Systems Test Capability (ASTC) Verification and Validation (V&V)	AP033 Estimating Ground Vehicle Fuel Consumption during Training Events	AP021 Modernized Compartment Methodology - A Vulnerability/Analysis Tool for Early Concepts		
	1630	1700		AP126 Tactical Intelligence Targeting Access Node: Analysis of Alternatives	AP086 Combinatorics Approach using Predictive Intervals (CAPI) for Forecasting Demand Boundaries	AP026 Distinguishing Between User Generated and Automatic Network Flows	AP020 Developing New and Practical Skills through the Training With Industry (TWI) Fellowship Program	AP031 Uncertainty Quantification and Sensitivity Analysis Methodology for the Advanced Joint Effectiveness Model (AJEM)		
	End Day 1									

58th AORS 2020 Detailed Schedule for Working Groups

07 October 2020

Day	Presentation Time		Room 101	Room 102	Room 103	Room 104	Room 105	Room 106	Room 107	
	Start	End	Working Group 9	Working Group 2	Working Group 3	Working Group 4	Working Group 5	Working Group 6	Working Group 10	
Wednesday 21 Oct 2020	1245	1315	AP057 Resource and Risk Informed Modernization: Analysis to Create the 2028 AimPoint Force	AP123 Numerical Modeling of Vehicle Barriers to Develop Calculation Analysis Methods	AP062 Condition Assessment of Micro Nuclear Reactors Performance in Grid Disruption Scenarios	AP019 Applying a Reinforcement Learning Agent to a Combat Simulation	AP039 Distributed Gap Generation and Assessment	AP105 Component Error Representation of Sensor Target Location Errors (TLEs)	AP121 A Hybrid Approach to COVID-19 Prediction Using Machine Learning and Poisson Regression	
	1315	1345	AP097 Strategic Fires Study (SFS): Fast-track Toward Army Modernization	AP027 Assessing U.S. Army Formations Enabling Multi-Domain Operations (MDO)	AP093 Combating the Impact of Operating in Resource Constrained Environments with Data Analytics: A Fiscal Management Case Study	AP098 Continuous Autonomy Simulation Test Laboratory Environment (CASTLE) Verification and Validation (V&V)	AP002 Implementing Verification, Validation, and Accreditation	AP048 Dagger Mission Mapping & Modeling Tool (DM3T) Development for PM PNT	AP115 Analytical Support to the Commanding General's COVID Messaging	
	1345	1415	AP077 Using NLP to Improve Situational Awareness of Tactical Communications	AP098 Continuous Autonomy Simulation Test Laboratory Environment (CASTLE) Verification and Validation (V&V)	AP094 Distributed Low-Energy Wastewater Treatment	AP079 Cost Benefit Analysis and Linear Optimization for Army Modernization Analysis	AP090 Modeling, Simulating, and Assessing Competition and Penetration	AP082 RCS Averaged Values	AP029 Development and Deployment of the ERDC SEIR COVID-19 Model	
	1415	1445	AP068 The Accountability Paradox Examined: Evaluating the Effects of Accountability on Improvement in U.S. Federal Agencies	AP021 Modernized Compartment Methodology - A Vulnerability/Analysis Tool for Early Concepts	AP109 Closing the Gap Between Materiel, Information and Payment Flows	AP107 Analytic Application Development, Delivery, and Sustainment Considerations	AP060 Achieving the Multi-Domain Operations (MDO) Whiteboard: "Ideal" Force - A Cost Perspective	AP051 Analysis of the effect of Imaging Sensor configuration on urban Situational Awareness	AP050 COVID-19 Analyses within an Organic Industrial Base	
	Break			Working Group 9	Working Group 2	Working Group 3	Working Group 4	Working Group 5	Working Group 6	Working Group 10
	1500	1530	AP117 A Distributed Intelligence Framework for Cyber and Electromagnetic Technologies to Support Expeditionary Cyber as a Sociotechnical Challenge	AP057 Resource and Risk Informed Modernization: Analysis to Create the 2028 AimPoint Force	AP114 Air and Missile Defense Beyond 2035, Air and Missile Defense Concept Development and Assessment	AP038 FORGE: The Future of Army Experimentation	AP108 Using Data Science to Increase Recruitment at the Defense Language Institute	AP072 A Framework to Assess Detection and Defeat Capabilities Against UAS Intrusions	AP039 Distributed Gap Generation and Assessment	
	1530	1600	AP027 Assessing U.S. Army Formations Enabling Multi-Domain Operations (MDO)	AP072 A Framework to Assess Detection and Defeat Capabilities Against UAS Intrusions	AP128 Data Analytics to Improve Operationally Relevant Fuel Consumption Estimates	AP065 Self-equity as a Trustworthiness Measure: The Relationship Between Self-equity and Discharge Characterizations in U.S. Army Recruits	AP114 Air and Missile Defense Beyond 2035, Air and Missile Defense Concept Development and Assessment	AP124 Effects of Weaponized Commercial Unmanned Aerial Vehicles (UAVs) on Structures, Experimental Testing Comparison to Numerical Models	AP016 COVID-19 9th Hospital Analytic Support	
	1600	1630	AP126 Tactical Intelligence Targeting Access Node: Analysis of Alternatives	AP039 Distributed Gap Generation and Assessment	AP133 From the Crescent City to the Fertile Crescent: Contingency Engineering and Base Development	AP084 Development of the Next-Generation Off-Road Mobility Performance Models	AP077 Using NLP to Improve Situational Awareness of Tactical Communications	AP080 Expanding Your Aperture to Explore and Leverage Emerging Technologies	AP104 A Network Science approach to Contact Tracing	
	1630	1700	AP114 Air and Missile Defense Beyond 2035, Air and Missile Defense Concept Development and Assessment	AP012 The Four Generations Model of Innovation	AP145 Unraveling a Gordian Knot: When Your Boss Asks You to Solve the Impossible	AP042 Army Officer Assignment: Using a Mixed Integer Program to Maximize Suitability while Minimizing Assignment Cost	AP125 Retention and Recruiting Data Analysis	AP138 Sustainment Transportation Energy Assessment Model (STEAM)	AP103 Assessing Effectiveness of Command Messaging during a Pandemic	
	End Day 2									

58th AORS 2020 Detailed Schedule for Working Groups

07 October 2020

Day	Presentation Time		Room 101	Room 102	Room 103	Room 104	Room 105	Room 106	Room 107	
	Start	End	Working Group 9	Working Group 2		Working Group 4	Working Group 5	Working Group 6	Working Group 10	
Thursday 22 Oct 2020	1000	1030	AP120 Modeling Timing Error Impacts on Operational Capability	AP109 Closing the Gap Between Materiel, Information and Payment Flows		AP009 Using Microsoft 365 for Data Support to Contingency Operations: West Point's COVID-19 Response	AP042 Army Officer Assignment: Using a Mixed Integer Program to Maximize Suitability while Minimizing Assignment Cost	AP084 Development of the Next-Generation Off-Road Mobility Performance Models	AP034 The SEIR Model to Project the Spread of SARS-CoV-2	
	1030	1100	AP081 Assessing Project Convergence: AFC's Integrated Data Analysis Effort of an Artificial Intelligence (AI)-enabled Battlespace	AP114 Air and Missile Defense Beyond 2035, Air and Missile Defense Concept Development and Assessment		AP123 Numerical Modeling of Vehicle Barriers to Develop Calculation Analysis Methods	AP140 Total Army Analysis (TAA) Supporting Analysis	AP003 Tactical Internet SIMULATION (TISIM) for Rapid Performance Analysis of Heterogeneous Large-Scale Tactical Communication Networks	AP134 Challenges Executing Verification and Validation for COVID-19 Modeling	
	1100	1130	AP094 Distributed Low-Energy Wastewater Treatment	AP142 Theater Focused Forces (TFF) Analysis		AP131 Using Neural Networks to Compress Grenade Lethality Data in the Infantry Warrior Simulation (IWARS)	AP030 Data Development Process for Modeling, Simulating, and Assessing Competition and Penetration	AP006 Simplified SIGINT Performance Model	AP122 COVID Modeling at Center for Army Analysis and Estimating the Effective Basic Reproduction Rate (R0)	
	1130	1200		AP053 APNT CFT Modeling & Simulation Integrated Project Team		AP127 Implementing a Data Science Capability in an Operational Command	AP137 Emerging Growth Priority Analysis	AP017 Adding Communication Realism into One Semi-Automated Force (OneSAF)	AP129 Building Tools for a Flexible and Scalable COVID Model in R	
	Lunch			Working Group 2	Working Group 7	Working Group 4		Working Group 6	Working Group 10	
	1245	1315		AP113 The Future of Data Standardization and Repository: Squad Performance Model	AP028 Challenges and Insights from Developing an Analytical Baseline for Installation-Level Enterprise IT	AP083 An Interactive Visualisation Platform for Exploring Defence Workforce Transition Scheduling Solutions		AP101 Development of Geo-Typical Urban Terrain Templates for Network Analysis	AP076 Machine Learning Software Tools - The Importance of Getting Inside the Black Box	
	1315	1345		AP043 Assessing Emergency Telecommunication System Resiliency Using MATLAB: An Integrated Value Model Approach	AP052 Framework to Analyze Cyber Information Warfare Operations	AP078 DIY Dashboards		AP120 Modeling Timing Error Impacts on Operational Capability	AP055 Modeling with Noise in the Data – Examples, Effects, and Solutions	
	1345	1415		AP097 Strategic Fires Study (SFS): Fast-track Toward Army Modernization	AP118 Modeling Army Layered Air and Missile Defense (AMD)	AP008 Practical Applications of Topological Data Analysis		AP058 AiTR in Closed Form Simulations: a first look	AP063 Implementing Scrum Project Management Methodology to Manage COVID-19 Modeling	
	1415	1445		AP062 Condition Assessment of Micro Nuclear Reactors Performance in Grid Disruption Scenarios	AP114 Air and Missile Defense Beyond 2035, Air and Missile Defense Concept Development and Assessment	AP070 US Army Performance Analytics in a Deployed Environment		AP004 Limiting Runs for Computing Probability Estimates from Computationally Intense Models	AP112 Cognitive Simulation for understanding COVID-19 disease spread	
	Break			Working Group 6	Working Group 2	Working Group 7	Working Group 4		Working Group 6	Working Group 10
	1500	1530		AP014 Bayesian Network Modelling for Military Utility Assessment of Direct Energy Weapon within Future Tactical Land Warfare			AP068 The Accountability Paradox Examined: Evaluating the Effects of Accountability on Improvement in U.S. Federal Agencies		AP141 Blending Human-in-the-Loop and Constructive OneSAF Simulation Modeling to Support Maneuver Force Modernization During the COVID-19 Pandemic	AP151 The Army COVID-19 Model for Epidemics: A tool for medical treatment facility pandemic response
	1530	1600		AP143 Unmanned Aerial Resupply at the Tactical Edge			AP007 CCDC Command Climate Assessment Survey Text Analysis		AP047 Exercise VIRTUAL EAGLE: an Armoured Infantry Battlegroup Experiment	
1600	1630		AP071 A semi-qualitative Methodology for Optimising Wide Wet Gap Crossing Fleets			AP061 Developing Outside the Box: Balancing Trade-offs in a Constrained Operational Environment		AP140 Total Army Analysis (TAA) Supporting Analysis		
1630	1700		AP013 In Search of 10X: Hunting Unicorns and Innovation for Future Battlefields			AP064 - A Comparison of the Effectiveness of Deep Learning Models in Predicting Network Performance		AP142 Theater Focused Forces (TFF) Analysis		

End Day 3

58th AORS 2020 Detailed Schedule for Working Groups

07 October 2020

Day	Presentation Time		Room 101	Room 102	Room 103	Room 104	Room 105	Room 106	Room 107
	Start	End	Working Group 6	Working Group 2		Working Group 4		Working Group 6	
Friday 23 Oct 2020	1000	1030	AP132 Measuring and Predicting Soldier Performance, Lethality, and Resilience Through Soldier-Systems Modeling	AP145 Unraveling a Gordian Knot: When Your Boss Asks You to Solve the Impossible		AP077 Using NLP to Improve Situational Awareness of Tactical Communications		AP030 Data Development Process for Modeling, Simulating, and Assessing Competition and Penetration	
	1030	1100	AP016 COVID-19 9th Hospital Analytic Support	AP022 Autonomous Systems Test Capability (ASTC) Verification and Validation (V&V)		AP106 Insider Threat Anomaly Detection on Network Traffic		AP090 Modeling, Simulating, and Assessing Competition and Penetration	
	1100	1130	AP002 Implementing Verification, Validation, and Accreditation	AP069 Statistically-informed human capital planning in an Army R&D laboratory		AP074 Using Machine Learning to Automate the Classification of Geospatial Data from Multi-Spectral Imagery		AP128 Data Analytics to Improve Operationally Relevant Fuel Consumption Estimates	
	1130	1200	AP022 Autonomous Systems Test Capability (ASTC) Verification and Validation (V&V)	AP127 Implementing a Data Science Capability in an Operational Command		AP018 Data Collection for a Distributed Capstone Wargame Series		AP015 Route Specific Fuel Consumption and Application to Vignettes within the Hybrid Military Vehicle Component Simulation (HMVCS) Model	
	Lunch		Working Group 6	Working Group 2		Working Group 4		Working Group 6	
	1245	1315	AP099 Simulation System Requirements and Assessment Tools for Software in Loop Testing of Autonomous Systems	AP068 The Accountability Paradox Examined: Evaluating the Effects of Accountability on Improvement in U.S. Federal Agencies				AP067 Human Anatomy Representations for US Army M&S	
	1315	1345	AP098 Continuous Autonomy Simulation Test Laboratory Environment (CASTLE) Verification and Validation (V&V)	AP141 Blending Human-in-the-Loop and Constructive OneSAF Simulation Modeling to Support Maneuver Force Modernization During the COVID-19 Pandemic				AP100 Human Dynamics Analysis: Using modeling to build resilience in planning and operations	
	1345	1415	AP123 Numerical Modeling of Vehicle Barriers to Develop Calculation Analysis Methods	AP133 From the Crescent City to the Fertile Crescent: Contingency Engineering and Base Development				AP152 Common Pitfalls in the Design and Analysis of Simulation Experiments	
	1415	1445	AP110 Introduction to Artificial Intelligence	-				AP153 Australian Simulation Study Process for Exploring Future Military Concepts and Capabilities	
	58th AORS 2020 Concludes								

GUIDANCE FOR ATTENDING

The Center for Army Analysis (CAA) will be hosting the 58th AORS 2020 Symposium, using GoToMeeting and GoToWebinar as the virtual platform.

Using GoToMeeting, we will run seven rooms, AORS Room 101 through AORS Room 107 for the Working Groups, Tuesday – Friday 20-23 October 2020, as shown on the General Schedule. (These will be seven open-meetings, in GoToMeeting, running concurrently throughout each day.) All times scheduled are Eastern Daylight Time (EDT).

We will also be using GoToWebinar to run the larger conference sessions on Tuesday and Wednesday mornings, in the virtual space shown on the General Schedule as the Conference Hall. There is a registration requirement for each of the two conference sessions, but the process is quick and easy through a GoToWebinar registration invitation.

REGISTRATION:

You must first register for the AORS event in the Joint Event Management Information System (JEMIS) through the AORS Website at aors.army.mil. To all guests registered in JEMIS, we will be sending out registration invitations for the two conference sessions, shown in green on the General Schedule. If you wish to attend, simply follow the link in the invitation, provide your name, email, and organization, and you're done. You will receive a confirmation with simple instructions for attending the conference session.

So please be sure to register, and encourage your fellow analysts who wish to attend to register, in JEMIS through the AORS website.

We will continue to add more scheduling details to this document as they develop; so please check back for updates.