

Abstract ID	Author Last Name	Author First Name	Scheduled	Abstract Title	Sheet	Assigned to Session
3993	Adams	Mark	1/7/2022, 04:15 PM - 05:15 PM	Classroom Tool for High Energy Physics Analysis: QuarkNet e-Lab		21st Century Physics in the Classroom II
4341	Adams	Wendy	1/8/2022, 01:15 PM - 02:15 PM	Increasing the Number and Diversity of Majors by Advertising Teaching		Get the Facts Out: Changing the Conversation Around Physics Teacher Recruitment
4025	Agu	Philomena	1/8/2022, 12:00 PM - 01:00 PM	Integrating Physics with Literature and Projects: Pedagogy for Nontraditional Students		Engage Students, Meet Standards, and Contemporary Physics being Incorporated into Classical Physics Classes in MS and HS
3748	Akhobadze	Kelevan	1/7/2022, 03:00 PM - 04:00 PM	Lederman Science Center at Fermilab		Lobby Physics and the Art of Demonstrations
3967	Antimirova	Tetyana	1/8/2022, 01:15 PM - 02:15 PM	Harnessing Visual Arts to Teach About The Light And Color		Physics and the Arts II
3931	Archibeque	Benjamin	1/8/2022, 01:15 PM - 02:15 PM	Identifying Tempered Radicals in the STEP UP Advocate Program		SPS/Teacher Training/Enhancement
3990	Assadi Samie	Bahereh	1/8/2022, 01:15 PM - 02:15 PM	Students' Understanding of Factors Related to Space Exploration		Astronomy Poster
3832	Bailey	Janelle	1/8/2022, 12:00 PM - 01:00 PM	Investigating the Impacts of a Cultural Cosmology Project		Astronomy Papers
4023	Behringer	Ernest	1/7/2022, 04:15 PM - 05:15 PM	Computational Modeling in the Introductory University Physics Lab		Integrating Computation in Labs at all Levels II
3811	Bellis	Matthew	1/7/2022, 04:15 PM - 05:15 PM	Quantum Party! Incorporating quantum mechanics rules into a board game		Quantum Mechanics II
3813	Bellis	Matthew	1/8/2022, 03:30 PM - 04:30 PM	Particle Physics Playground: engage with real data online using python		Lecture/Classroom Posters
3826	Belogradova	Ludmila	1/8/2022, 01:15 PM - 02:15 PM	National Online Physics Olympiads in Latvia		Physics and the Arts II
4022	Beverly	Nancy	1/8/2022, 12:00 PM - 01:00 PM	Biomechanics Lab Activities with Interactive Worksheets		Apparatus @Home
3847	Birriel	Jennifer	1/7/2022, 03:00 PM - 04:00 PM	Spreadsheets & Computation in the Lab: Introductory Courses and Beyond		Integrating Computation in Labs at all Levels I
4102	Boudreaux	Andrew	1/8/2022, 12:00 PM - 01:00 PM	The Challenge of Evaluating Consistency of Competing Lines of Thinking*		PER: Student Content Understanding, Problem-Solving and Reasoning
3817	Burns	Dan	1/8/2022, 01:15 PM - 02:15 PM	The Free AP Physics 1 Course on Kudu.com		Quantum Education at the K-12 Level/High School
3819	Burns	Dan	1/8/2022, 01:15 PM - 02:15 PM	Experimental Inquiries with the New PASCO Sonometer		Astronomy Poster
3824	Cannon	Brian	1/7/2022, 04:15 PM - 05:15 PM	Transitioning Students from Learning Biophysics to Doing Biophysics		Biophysics in the 21st Century Curriculum II
3602	Capece	Angela	1/8/2022, 01:15 PM - 02:15 PM	Summer Short Course on Astrodynamics for Incoming STEM Majors		Physics in Unexpected Places
3632	Carlsmith	Duncan	1/8/2022, 12:00 PM - 01:00 PM	Sums of arbitrary dice for physics students		Apparatus @Home
4122	Christman	Devon	1/8/2022, 12:00 PM - 01:00 PM	Floating and Falling: 3rd-grader's Depictions of Forces in Wind Columns		Other Papers
3901	Close	Robert	1/8/2022, 01:15 PM - 02:15 PM	Relativistic Wave Mechanics for Undergraduates		Upper Division Undergraduate
3900	Connolly Jr.	Harold	1/7/2022, 03:00 PM - 04:00 PM	The OSIRIS-REx Mission		Frontiers in Planetary Science I
3875	DiMenna	Christine	1/7/2022, 03:00 PM - 04:00 PM	Incorporating Coding into High School Physics and Astronomy		21st Century Physics in the Classroom I
3959	Dittrich	Toby	1/8/2022, 01:15 PM - 02:15 PM	Chaotic Pendulum in Free Fall		Chaotic Laboratories and Apparatus
3945	Douglass	Angela	1/8/2022, 12:00 PM - 01:00 PM	"Shedding Some Light" Spectroscopy Investigation		High School
3760	Eaton	Philip	1/8/2022, 12:00 PM - 01:00 PM	Force Concept Inventory: Factor structure measurement invariance across genders		PER: Assessment, Grading and Feedback
4339	Edwards	Emily	1/7/2022, 03:00 PM - 04:00 PM	Quantum Resources for K-12 and Beyond		Quantum Education at the K-12 Level I
4011	Falconer	Kathleen	1/8/2022, 01:15 PM - 02:15 PM	Incorporating an Initial Basic Competencies Video Creation Assignment into Courses		PER: Curriculum and Instruction
4045	Foster	R.	1/8/2022, 03:30 PM - 04:30 PM	Expansion of the Universe: an OER approach to Hubble's Constant		Introductory Courses II
3749	Fox	Michael	1/7/2022, 03:00 PM - 04:00 PM	UK Quantum Education and Skills Needed by the Quantum Industry		Quantum Mechanics I
3554	Franklin	Donald	1/8/2022, 03:30 PM - 04:30 PM	Science 100- Designed for smaller schools and adult education		Lecture/Classroom Posters
3555	Franklin	Donald	1/7/2022, 04:15 PM - 05:15 PM	Physics for the Modern World		Biophysics in the 21st Century Curriculum II
4038	Franklin	Diana	1/7/2022, 04:15 PM - 05:15 PM	Building Quantum Computing Intuition through Visuals, Activities, and Games		Quantum Education at the K-12 Level II
3923	Freericks	James	1/8/2022, 01:15 PM - 02:15 PM	Free expansion of a Gaussian via squeezed harmonic oscillator states		Upper Division Undergraduate
3580	Fulco	Charles	1/7/2022, 03:00 PM - 04:00 PM	Educating the Public for the 2023 and 2024 U.S. Eclipses		Inclusive Science Communication
3884	Garrett	Carlee	1/8/2022, 03:30 PM - 04:30 PM	Improving Out-Of-Field Preparation for High School Physics Teachers		PER: Student and Instructor Support & Professional Development, Program and Institutional Change
4109	Garvey	Dennis	1/8/2022, 01:15 PM - 02:15 PM	Using online whiteboards in physics Class		Upper Division Undergraduate
4101	Gasseller	Morewell	1/8/2022, 12:00 PM - 01:00 PM	Environmental Computing and Community Engagement in STEM education: Sustainable Relat		Other Papers
3707	Gavrin	Andy	1/8/2022, 12:00 PM - 01:00 PM	Smartphone applications as part of an introductory lab reform project		Engage Students, Meet Standards, and Contemporary Physics being Incorporated into Classical Physics Classes in MS and HS
3710	Ge	Richard	1/8/2022, 01:15 PM - 02:15 PM	Sharing Physics at a Bluegrass Festival		Physics in Unexpected Places
3709	Gelderman	Richard	1/8/2022, 12:00 PM - 01:00 PM	Deserving a Nobel? The Harvard Computers and other neglected pioneers		Astronomy Papers
3711	Gelderman	Richard	1/8/2022, 01:15 PM - 02:15 PM	Getting to Mars – Applied Astrodynamic Visualized		SPS/Teacher Training/Enhancement
4016	Guarino	Richard	1/8/2022, 12:00 PM - 01:00 PM	A Student Designed Lab to Test Newton's 2nd Law		Introductory Labs/Apparatus
3976	Gugliucci	Nicole	1/8/2022, 03:30 PM - 04:30 PM	Incorporating Mastery Grading into Astronomy 101		Introductory Courses II
3942	Gutmann	Brianne	1/8/2022, 12:00 PM - 01:00 PM	Investigating the Impact of HSIs on Physics and PER		PER: Diversity, Equity & Inclusion
3828	Hahn	Kelby	1/7/2022, 04:15 PM - 05:15 PM	Waving Arms and Skits in Quantum Mechanics		Quantum Mechanics II
3992	Hannum	Mark	1/8/2022, 12:00 PM - 01:00 PM	Preparing Students and Teachers for the "Second Quantum Revolution"		Engage Students, Meet Standards, and Contemporary Physics being Incorporated into Classical Physics Classes in MS and HS
4338	Hannum	Mark	1/7/2022, 03:00 PM - 04:00 PM	High School Teacher PD: Building Capacity to Next Quantum Workforce		Quantum Education at the K-12 Level I
3909	Harper	Kathleen	1/8/2022, 01:15 PM - 02:15 PM	The Scrambled Review Sheet		Introductory Courses I
4118	Hewagallage	Dona	1/8/2022, 12:00 PM - 01:00 PM	Academic and Non-cognitive Factors Affecting FMCE Pretest and Post-test Scores		PER: Student Content Understanding, Problem-Solving and Reasoning
3982	Hörst	Sarah	1/7/2022, 03:00 PM - 04:00 PM	Planets in a Bottle: Exploring Planetary Atmospheres in the Lab		Frontiers in Planetary Science I
3896	Hosetter	David	1/8/2022, 01:15 PM - 02:15 PM	Planetarium Potentials		SPS/Teacher Training/Enhancement
3810	Huffman	Abigail	1/8/2022, 03:30 PM - 04:30 PM	Graphic design for a physics-education board game		Physics Education Research Posters III
3898	Hughes	Ciaran	1/8/2022, 01:15 PM - 02:15 PM	Teaching Quantum Computing to High School Students		Quantum Education at the K-12 Level/High School
3921	Ismael	Safana	1/8/2022, 01:15 PM - 02:15 PM	Student Reasoning with Multi-variable Expressions		Introductory Courses I
3997	Ivie	Rachel	1/7/2022, 04:15 PM - 05:15 PM	Data to Improve Equity in Physics and Astronomy Classrooms		Assessing and Improving Equity in Physics Learning Environments II
4114	Jakkala	Pratheesh	1/8/2022, 01:15 PM - 02:15 PM	Physics Undergraduate Advanced Labs During Covid-19 Pandemic		Upper Division Undergraduate
3751	Jamkhedkar	Priya	1/7/2022, 03:00 PM - 04:00 PM	Integration of Biomedically Relevant Content in Introductory Physics Instruction		Biophysics in the 21st Century Curriculum I
3971	Jammula	Diane	1/8/2022, 03:30 PM - 04:30 PM	The New Normal: Three years into our ISLE-based reform		PER: Student and Instructor Support & Professional Development, Program and Institutional Change
4002	Janssen	Michel	1/8/2022, 12:00 PM - 01:00 PM	Putting Probabilities First in Teaching Quantum Mechanics		Misinterpretations of Quantum Mechanics in the Classroom
3908	Jiang	Yongjin	1/8/2022, 12:00 PM - 01:00 PM	Some Discussions on the Phase Invariance		Other Papers
3946	Johns	Patrick	1/8/2022, 01:15 PM - 02:15 PM	Investigating Open-Ended Responses to the PMQ using Natural Language Processing		Physics Education Research Posters I
3980	Johnson	Angela	1/7/2022, 04:15 PM - 05:15 PM	Graduation rates of women in the US and UK		Assessing and Improving Equity in Physics Learning Environments II
4147	Karunatilake	Suniti	1/7/2022, 04:15 PM - 05:15 PM	Mars, Lanka and Habitability: Serpentinization as a Thread of Life		Frontiers in Planetary Science II
4079	Keams	Donovan	1/8/2022, 12:00 PM - 01:00 PM	Jekyll and Hyde Behavior of the Orbital Velocity of Io		Astronomy Papers
3920	Kellar	Kristin	1/8/2022, 01:15 PM - 02:15 PM	Developing Question Sequences to Identify and Remedy Student Reasoning Inconsistencies		PER: Student and Instructor Support & Professional Development, Program and Institutional Change II
3994	Kelly	John	1/8/2022, 03:30 PM - 04:30 PM	Refining an Intervention to Prompt Reflective Thinking		Physics Education Research Posters III
3597	Kilde Löfgren	Sebastian	1/8/2022, 12:00 PM - 01:00 PM	The Mechanical Rotating Saddle Trap in High School Physics Education		Apparatus @Home
3870	Kim	Jee Woo	1/8/2022, 03:30 PM - 04:30 PM	Simulations of Shoulder and Arm		SPS Undergraduate Poster Session
3899	Klunk	Dean	1/8/2022, 03:30 PM - 04:30 PM	Do Elementary Schools Ignore Physics?		Professional Skills for Students
3970	Koenig	Kathleen	1/8/2022, 01:15 PM - 02:15 PM	Teaching Problem Solving in One-Dimensional Kinematics: Using Interactive Video-enhanced		PER: Student and Instructor Support & Professional Development, Program and Institutional Change II
3845	Kordahl	David	1/8/2022, 01:15 PM - 02:15 PM	Beats, Overtones, and Musical Temperament		Physics and the Arts II
3966	Kozminski	Joseph	1/8/2022, 01:15 PM - 02:15 PM	Physics Teacher Recruitment Strategies: New Pathways and GFO Implementation		Get the Facts Out: Changing the Conversation Around Physics Teacher Recruitment
3932	Krishna	Sujata	1/8/2022, 03:30 PM - 04:30 PM	Inclusion and Training Needs in a Physics Learning Assistant Program		PER: Diverse Investigations
3897	Kuk	Hwa	1/8/2022, 01:15 PM - 02:15 PM	Observation brain activation when solving physics problems using fNIRS		PER: Student and Instructor Support & Professional Development, Program and Institutional Change II
4051	Lancaster	Jarrett	1/8/2022, 12:00 PM - 01:00 PM	Using IBM Quantum Computers to explore interpretations of quantum mechanics		Misinterpretations of Quantum Mechanics in the Classroom
3885	Lane	W. Brian	1/8/2022, 01:15 PM - 02:15 PM	Engaging Physics Students with The Wheel of Time		Physics in Unexpected Places
3903	Lathrop	Renee	1/8/2022, 01:15 PM - 02:15 PM	Building a Physical Science of the Arts Course		Physics and the Arts II
3836	Leak	Anne	1/8/2022, 12:00 PM - 01:00 PM	Shifting Culture to Support Physics Innovation and Entrepreneurship Curriculum Implementatio		21st Century Physics in the Classroom III
3724	Lee	Taeyoung	1/8/2022, 01:15 PM - 02:15 PM	Development of Science Class in a Blended Learning Environment		Introductory Courses I
3854	Liu	Dan	1/7/2022, 04:15 PM - 05:15 PM	Interactive Simulations of the Human Body		Physics of the Body and Sports
4061	Lock	Frank	1/7/2022, 03:00 PM - 04:00 PM	The Thermodynamic of Disasters of the Climate Crisis	Page 1	Inclusive Science Communication

3765	Long	Jeremy	1/8/2022, 03:30 PM - 04:30 PM	A Low-Cost Data Acquisition Solution for Undergraduate Physics Laboratories	SPS Undergraduate Poster Session
3821	Lowe	Mary	1/7/2022, 03:00 PM - 04:00 PM	Biomedical Physics for Undergraduate STEM Majors	Biophysics in the 21st Century Curriculum I
3712	MA	SHI-HONG	1/8/2022, 03:30 PM - 04:30 PM	Study on attainment of learning-objectives and practical-effects in introductory-physics course	SPS Undergraduate Poster Session
4001	MacDuff	Robert	1/8/2022, 12:00 PM - 01:00 PM	The Mathematics of Quantities (make math, make sense)	21st Century Physics in the Classroom III
4029	MacKenzie	Quinn	1/8/2022, 01:15 PM - 02:15 PM	Effectiveness of computational exercises in a general education astronomy course	PER: Curriculum and Instruction
3866	Marble	Daniel	1/8/2022, 01:15 PM - 02:15 PM	A Simple Nuclear Lab To Measure The Electron's Rest Mass	Upper Division Undergraduate
3564	Marshman	Emily	1/7/2022, 03:00 PM - 04:00 PM	Ecological Belonging Interventions to Improve Equity and Inclusion in Physics	Assessing and Improving Equity in Physics Learning Environments I
4093	Martins	Julian	1/8/2022, 12:00 PM - 01:00 PM	Student Attitudes When We Focus on Self-advocacy Through Disciplinary Practices	PER: Diversity, Equity & Inclusion
3777	Mason	Andrew	1/8/2022, 01:15 PM - 02:15 PM	PER outside Research Universities: A Solo PER Through	Physics Education Research Posters I
3973	Massie	Ryan	1/8/2022, 12:00 PM - 01:00 PM	Reducing the Gender Gap in Introductory Physics using Interactive Tutorials	PER: Diversity, Equity & Inclusion
3941	Mathis	Clausell	1/8/2022, 01:15 PM - 02:15 PM	How Perceived Objectivity in Physics Impacts Cultural Relevance in Teaching	Physics Education Research Posters I
3880	Matsler	Karen	1/7/2022, 04:15 PM - 05:15 PM	Re-engineering Physics Curriculum	Quantum Education at the K-12 Level II
3594	Mazzini	Jose	1/8/2022, 01:15 PM - 02:15 PM	An Intuitive Way to Understand Curved Spacetime	Physics in Unexpected Places
3596	Mazzini	Jose	1/8/2022, 03:30 PM - 04:30 PM	An Intuitive Way to Understand Curved Spacetime	SPS Undergraduate Poster Session
4086	McCaskey	Timothy	1/8/2022, 01:15 PM - 02:15 PM	Including art projects as part of physics courses	Physics and the Arts II
3759	McNeil	Laurie	1/7/2022, 04:15 PM - 05:15 PM	Phys21 in 2021: Progress in Implementation	Integrating Computation in Labs at all Levels II
3937	McSwain	M. Virginia	1/8/2022, 12:00 PM - 01:00 PM	New Astronomy Laboratory Simulations with Python	Introductory Labs/Apparatus
3925	Meltzer	David	1/8/2022, 01:15 PM - 02:15 PM	Pre-instruction math quiz may predict students' physics course performance	PER: Student and Instructor Support & Professional Development, Program and Institutional Change II
3883	Merrell	Duane	1/7/2022, 03:00 PM - 04:00 PM	Lobby and Hall Way Physics Engaging the walk through Crowds	Lobby Physics and the Art of Demonstrations
4003	Muller	Alexandria	1/8/2022, 03:30 PM - 04:30 PM	Beyond language: Students communication of ideas in physics-based engineering activities	Professional Skills for Students
3958	Myers	Carissa	1/8/2022, 03:30 PM - 04:30 PM	Investigating Students' Self-Efficacy Using Mixed Methods Research	PER: Diverse Investigations
3549	Nafria	Amritpal	1/8/2022, 01:15 PM - 02:15 PM	Modification of Newton's Second Law of Motion	Quantum Education at the K-12 Level/High School
3762	Nazarian	Robert	1/8/2022, 01:15 PM - 02:15 PM	A Revised Framework for Interactive Classroom Demonstrations	Introductory Courses I
4066	Nazarian	Robert	1/8/2022, 03:30 PM - 04:30 PM	Cultivating Communication Skills in a Senior Physics Capstone Course	Professional Skills for Students
4091	Nelson	Peter	1/7/2022, 04:15 PM - 05:15 PM	Biophysics in the Undergraduate Curriculum	Biophysics in the 21st Century Curriculum II
3940	Norris	Margaret	1/7/2022, 04:15 PM - 05:15 PM	The Search for Dark Matter	21st Century Physics in the Classroom II
3957	Oriade	AdeBanjo	1/8/2022, 01:15 PM - 02:15 PM	Paper Choreography Framing of Learning and Teaching Physics	Physics and the Arts II
3763	Orosz	Tamas	1/8/2022, 01:15 PM - 02:15 PM	Adaptive Problem-Solving for Contest Preparation	PER: Student and Instructor Support & Professional Development, Program and Institutional Change II
3802	Orosz	Tamas	1/8/2022, 01:15 PM - 02:15 PM	Online and In-Person Preparation Modes for Individual Physics Contest Preparation	Astronomy Poster
4094	Orosz	Tamas G.	1/8/2022, 03:30 PM - 04:30 PM	Learning Process Acceleration by Means of Supplementary Courses and Problems	Physics Education Research Posters III
3769	Oruganti	Sastri	1/8/2022, 01:15 PM - 02:15 PM	Model Based Simulation of Nonlinear Driven Pendulum using XCOS	Chaotic Laboratories and Apparatus
4006	Osborn	Timothy	1/8/2022, 12:00 PM - 01:00 PM	inequity in North Carolina High School Physics Learning Outcomes	PER: Diversity, Equity & Inclusion
3829	Pace	John	1/8/2022, 01:15 PM - 02:15 PM	Predicting At-Risk Students in Introductory Physics using Machine Learning	Physics Education Research Posters I
3723	Page	Alison	1/8/2022, 01:15 PM - 02:15 PM	Perceived Effectiveness of Peer Interaction in Physics Courses	SPS/Teacher Training/Enhancement
3693	Palmer	William	1/8/2022, 12:00 PM - 01:00 PM	Maria Mitchell (1818-1889), Astronomer and Pioneer of Women's Education	Astronomy Papers
3588	Pasero	Spencer	1/8/2022, 03:30 PM - 04:30 PM	SHIRE: A Skills-Focused Curriculum for New Researchers	Professional Skills for Students
3935	Patterson	Zac	1/8/2022, 01:15 PM - 02:15 PM	Scientific Argumentation in the Secondary Physics Classroom	PER: Curriculum and Instruction
4115	Pearson III	Richard	1/8/2022, 03:30 PM - 04:30 PM	Investigating relationships between SRL practices, FCI results, and CLASS attitudes	Introductory Courses II
4100	Penny	Sandra	1/8/2022, 03:30 PM - 04:30 PM	An optics bench for geometric optics experiments on a budget	Lecture/Classroom Posters
3846	Perron	Justin	1/7/2022, 04:15 PM - 05:15 PM	Bringing Quantum Information Science to Students at Predominately Undergraduate Institution	Quantum Mechanics II
3917	Pike	Ciana	1/8/2022, 12:00 PM - 01:00 PM	Analyzing Students' Discussions about Ethical Dilemmas in Physics	PER: Assessment, Grading and Feedback
3868	Poduska	Kristin	1/8/2022, 01:15 PM - 02:15 PM	Physics, Science Literacy, and Human Rights: You Can Get Involved!	Physics in Unexpected Places
4105	Porter	Christopher	1/8/2022, 01:15 PM - 02:15 PM	Graduate Physics Programs During COVID-19: Admissions, Resilience and Diversity	PER: Student and Instructor Support & Professional Development, Program and Institutional Change II
4124	Porter	Christopher	1/8/2022, 01:15 PM - 02:15 PM	QuSTEAM: A new curriculum development project in quantum information science	PER: Curriculum and Instruction
3886	Pruett	Abby	1/7/2022, 04:15 PM - 05:15 PM	Computation-Based Spins-First Quantum Mechanics for High School	21st Century Physics in the Classroom II
4113	Rabl	Gerald	1/8/2022, 01:15 PM - 02:15 PM	Space Weather - How The Sun Influences Our Technological Life	Astronomy Poster
3939	Rahmat	Rahmat	1/8/2022, 03:30 PM - 04:30 PM	Embedding Emotional Intelligence into Physics Education	Professional Skills for Students
4033	Ramos	Roberto	1/8/2022, 12:00 PM - 01:00 PM	Student Storytelling in Physics Courses to Promote Engagement and Diversity	PER: Diversity, Equity & Inclusion
4043	Ramos	Roberto	1/8/2022, 03:30 PM - 04:30 PM	Renewable Energy-based Physics Outreach Events during the Covid Pandemic	Physics Education Research Posters III
3804	Ramsey	Gordon	1/7/2022, 03:00 PM - 04:00 PM	Using music to teach waves	Physics and the Arts I
4117	Rao	Lishang	1/8/2022, 12:00 PM - 01:00 PM	An E&M theory for inertial mass in Newton's second law	Astronomy Papers
4120	Rao	Lishang	1/8/2022, 12:00 PM - 01:00 PM	Vacuum Field Fluctuations may cause differentiation of Charge Coupling Constants	Astronomy Papers
4005	Riley	Peter	1/8/2022, 03:30 PM - 04:30 PM	Artificial Intelligence laboratories for Medical Imaging	Lecture/Classroom Posters
3827	Rodriguez	Idaykis	1/7/2022, 03:00 PM - 04:00 PM	Identity Perspectives from a Latina Woman in Physics	Assessing and Improving Equity in Physics Learning Environments I
3892	Rogers	Ryan	1/8/2022, 12:00 PM - 01:00 PM	Investigating Entropy and Disorder with Hands-On Models	Introductory Labs/Apparatus
4107	Rosauer	Jeffrey	1/8/2022, 12:00 PM - 01:00 PM	Investigating Student Attitudes and Curricular Benefits from Two Instructional Interventions	PER: Student Content Understanding, Problem-Solving and Reasoning
4009	Rosenblatt	Rebecca	1/8/2022, 03:30 PM - 04:30 PM	Inspiring Physics Education Researchers in Disability Education Research	Physics Education Research Posters III
3871	Ruggerio	Marianna	1/8/2022, 01:15 PM - 02:15 PM	Building Thriving Secondary Communities through University Partnership	SPS/Teacher Training/Enhancement
3876	Rutberg	Joshua	1/8/2022, 03:30 PM - 04:30 PM	Balancing consistency and authenticity: Lessons learned designing reformed curricular material	PER: Student and Instructor Support & Professional Development, Program and Institutional Change
3950	Ruzycski	Nancy	1/8/2022, 01:15 PM - 02:15 PM	Using Cell Phones to Develop Core Physics Models in Students	Introductory Courses I
4004	Sabella	Mel	1/8/2022, 03:30 PM - 04:30 PM	Leveraging a community of learners to envision engaging instructional spaces.	Lecture/Classroom Posters
4104	Sabella	Mel	1/8/2022, 01:15 PM - 02:15 PM	The 2021 Inclusive Curriculum in Physics Workshop Series	SPS/Teacher Training/Enhancement
3984	Sakari	Charli	1/7/2022, 04:15 PM - 05:15 PM	Incorporating Climate Change Consequences and Solutions into Introductory Physics Classes	21st Century Physics in the Classroom II
4112	Salgado	Roberto	1/8/2022, 03:30 PM - 04:30 PM	Using Desmos to Visualize Fermat's Principle of Least Time	Lecture/Classroom Posters
4028	Schmelzenbach	Paul	1/8/2022, 12:00 PM - 01:00 PM	Determining density with water, a ruler, floss, and some nickels	Apparatus @Home
3630	Schneider	Dorotya	1/8/2022, 03:30 PM - 04:30 PM	Exoplanet research: Student experimentation in high school	Physics Education Research Posters II
3741	Schneider	Dorotya	1/8/2022, 03:30 PM - 04:30 PM	The role of Arduino-supported Physics projects in competence-development	PER: Diverse Investigations
3979	Schwarz	Cindy	1/8/2022, 12:00 PM - 01:00 PM	Experiences/Results of Bringing Undergraduates to AAPT Meetings	Other Papers
3969	Schwipper	Chadrick	1/8/2022, 01:15 PM - 02:15 PM	The Growth of a Physics Learning Assistant over Four Semesters	Physics Education Research Posters I
4340	Sealfon	Carolyn	1/7/2022, 03:00 PM - 04:00 PM	Whose Idea is it Anyway?	Physics and the Arts I
3910	Sedita	Paul	1/7/2022, 03:00 PM - 04:00 PM	QuarkNet Masterclasses: Students Become Particle Physicists for a Day	21st Century Physics in the Classroom I
3895	Shaaban	Lori	1/8/2022, 01:15 PM - 02:15 PM	3D Collision Tracking and Analysis	Astronomy Poster
4030	Shafer	Devyn	1/8/2022, 12:00 PM - 01:00 PM	Case Studies: High School Seniors Applying to College Engineering Programs	High School
3906	Sierra	Amber	1/7/2022, 04:15 PM - 05:15 PM	Conservation of Energy with a Looping Hot Wheels® Track	Lobby Physics and the Art of Demonstrations II
3565	Singh	Chandralekha	1/8/2022, 03:30 PM - 04:30 PM	Quantum Interactive Learning Tutorial on Larmor Precession of Spin	Physics Education Research Posters II
3568	Singh	Chandralekha	1/8/2022, 03:30 PM - 04:30 PM	Just-in-Time Teaching and Peer Instruction in quantum mechanics	Physics Education Research Posters II
3569	Singh	Chandralekha	1/8/2022, 03:30 PM - 04:30 PM	Quantum Interactive Learning Tutorial on Quantum Key Distribution	Physics Education Research Posters II
3570	Singh	Chandralekha	1/8/2022, 03:30 PM - 04:30 PM	Improving student understanding of quantum mechanical observables and operators	Physics Education Research Posters II
3915	Smith	Donald	1/7/2022, 04:15 PM - 05:15 PM	Physics Teachers Should Teach Machine Learning	Integrating Computation in Labs at all Levels II
3947	Smith	Carlton	1/8/2022, 01:15 PM - 02:15 PM	Creating Connections	Physics Education Research Posters I
3775	Soosaleon	Antony	1/7/2022, 04:15 PM - 05:15 PM	Physics of Auroral Emission	Frontiers in Planetary Science II
3584	Stadermann	Kirsten	1/7/2022, 03:00 PM - 04:00 PM	Innovative Learning in Quantum Physics; Objectives, Content and Methods	Quantum Mechanics I
3977	Stanley	Bryan	1/8/2022, 12:00 PM - 01:00 PM	Supporting graduate students through opportunities in physics public engagement activities	Other Papers
3858	Stewart	John	1/8/2022, 03:30 PM - 04:30 PM	Factors Related to Rural and First-Generation Persistence in Engineering	PER: Diverse Investigations

4074	Sundstrom	Meagan	1/8/2022, 03:30 PM - 04:30 PM	Characterizing the interaction networks of physics students during remote teaching	PER: Diverse Investigations
3771	Sunil	Harshini	1/8/2022, 03:30 PM - 04:30 PM	Trends Seen In an Introductory Astronomy Course Graded on Participation	SPS Undergraduate Poster Session
3974	Teeling-Smith	Richelle	1/7/2022, 04:15 PM - 05:15 PM	A STEMcoding Data Science Curriculum	Integrating Computation in Labs at all Levels II
4007	Thacker	Beth	1/8/2022, 12:00 PM - 01:00 PM	Development of a Likert-style assessment to assess learning assistants PCK-Q	PER: Assessment, Grading and Feedback
4008	Tucker	Laura	1/8/2022, 12:00 PM - 01:00 PM	Scalable, written homework with metacognitive student outcomes	PER: Assessment, Grading and Feedback
3986	Unterman	Nathan	1/7/2022, 04:15 PM - 05:15 PM	Curated Cosmic Ray Files for High School Laboratories	21st Century Physics in the Classroom II
3919	Valadez	Nathan	1/8/2022, 03:30 PM - 04:30 PM	Impact of supplemental resources on student outcomes in introductory E&M.	Physics Education Research Posters II
4014	van Zee	Emily	1/8/2022, 03:30 PM - 04:30 PM	Incorporating Open-Source Materials in Learning and Teaching about Climate Change	SPS Undergraduate Poster Session
3912	Vasquez	Alexander	1/8/2022, 12:00 PM - 01:00 PM	Students' reflections about an ethical dilemma in physics	PER: Assessment, Grading and Feedback
3816	Vesenka	James	1/8/2022, 12:00 PM - 01:00 PM	The Simple Slinky Wave Speed	Apparatus @Home
3825	Villegas Rueda	Veronica	1/8/2022, 12:00 PM - 01:00 PM	Easy didactic method to measure irradiance values of optic rays	Apparatus @Home
3840	Walecki	Wojciech	1/8/2022, 12:00 PM - 01:00 PM	The Impact Shock of Falling Packages with Finite Cushioning Layer	Introductory Labs/Apparatus
3844	Walecki	Wojciech	1/8/2022, 01:15 PM - 02:15 PM	The Approximate Formula for Solar Declination and Its Experimental Validation	Astronomy Poster
4096	Wang	Jay	1/8/2022, 12:00 PM - 01:00 PM	Perturbation: Analytical vs Numerical Treatment	PER: Student Content Understanding, Problem-Solving and Reasoning
3879	Willoughby	Shannon	1/7/2022, 03:00 PM - 04:00 PM	Assessing an Oral Communication Course for STEM Graduate Students	Inclusive Science Communication
3694	Witkov	Carey	1/8/2022, 12:00 PM - 01:00 PM	Curve-fitting with Model Testing using Chi-Square Minimization in Excel	Introductory Labs/Apparatus
3902	Wolf	Steven	1/7/2022, 03:00 PM - 04:00 PM	Computation in introductory physics labs using Argument Driven Inquiry	Integrating Computation in Labs at all Levels I
3770	Wood	Monika	1/7/2022, 04:15 PM - 05:15 PM	Physics Demonstrations - From the classroom to the remote landscape	Lobby Physics and the Art of Demonstrations II
4017	Zhang	Xiangqun	1/8/2022, 01:15 PM - 02:15 PM	Instruction to Improve Student Understanding of Gravity and Weight	PER: Curriculum and Instruction
3918	Zich	Raymond	1/8/2022, 12:00 PM - 01:00 PM	Teaching online courses with active learning techniques	PER: Assessment, Grading and Feedback