

Podium Presentations

Organized Sessions	Abstract #	State (2-letter code), Country	Name, Affiliation	Student	Presentation Title
	97	FL	Nicole Cribbs; Faller, Davis & Associates, Inc.		Hot Spots Mapping: Creating a Resource for Transportation Planners to Identify Significant Panther-Vehicle
	10	FL	Nicole Monies, Florida Department of Transport		Wildlife Crossing Location Decision Making along the Interstate 4 Corridor
Aiding Recovery of the Endangered Florida Panther	114	FL	Daniel J. Smith, Department of Biology, Univer		Using Least Cost Path Modeling to Identify Potential Road Conflict Locations for the Florida Panther in Centr
	5	FL	Brent Setchell, Florida Department of Transport		Retrofitting Existing Bridge Crossings to Promote Wildlife Connectivity and Prevent Wildlife-Vehicle Collision
	96	FL	Elizabeth Fleming, Defenders of Wildlife		The Role of Transportation Planning and Mitigation in Florida Panther Recovery
Catalyst for Collaborative Mitigation in Colorado: State Highway 9	155	CO	Julia Kintsch, ECO-resolutions		State Highway 9 Wildlife Crossings and Wildlife-Vehicle Collision Reductions: Project Partnership and Five-Ye
	18	CO	Patricia Cramer		Strong Scientific Study Design Creates Solid Results: Colorado's SH 9 Research Delivered
	68	CO	Tony Cady- Colorado Department of Transport		The Colorado Wildlife and Transportation Alliance
	154	CO	Michelle Cowardin, Colorado Parks and Wildlife		Wildlife Crossing Mitigation Systems: Practical Applications of Lessons Learned in Colorado
	141	Canada	Andrew Chin, University of Toronto		Urban landscapes, biodiversity, and habitat connectivity
Conserving Habitat Connectivity within an Urban Context	187	Canada	Lyndsay Cartwright, Toronto and Region Conse		Wildlife-vehicle collisions on major roads in Peel and York Region: hot spots and seasonal movements
	28	Canada	Gerard Sullivan, York Region		York Region's road map to planning for successful road ecology projects
	94	Canada	David Lawrie, Toronto and Region Conservator		Making the connection: The role of technology and habitat use in making good wildlife connectivity decision
	142	Canada	Tys Theijsmeijer, Royal Botanical Gardens		Rare turtle recovery and wildlife corridor issues at Cootes Paradise Marsh
	51	WY	Jill Randall Wyoming Game and Fish Departme		Wyoming's Wildlife Crossing Prioritization Process
Decision-Support Systems for Wildlife-Vehicle Conflict Reduction	48	CA	Graham Porter, Road Ecology Center, UC Dav	Yes	The "Wildlife Crossing Calculator" -- Economic Analysis Decision-Support for Wildlife-Vehicle Collision Reduc
	149	CO	Tony Cady, Colorado Department of Transport		A Regional, Interagency Approach to Prioritizing and Implementing Wildlife Mitigation: Colorado's Western S
	13	VA	Bridget Donaldson, Virginia Transportation Res		Linking Research and Decision-Making: How Research is Influencing Wildlife Crash Reduction and Wildlife Cc
	162	FL	Daniel J. Smith, Department of Biology, Univer		Coordinated Efforts in Florida to Create Decision-making Tools to Identify and Prioritize Wildlife-Vehicle Con
Engineering Ecological Connectivity Through Placement, Design and Evaluation of Wildlife Crossings	78	CA	Sean McDowell, Road Ecology Center, UC Dav	Yes	Wildlife-Responsive Crossing Design
	171	WA	Kristina Ernest, Central Washington University		Ecological connectivity and multi-taxa wildlife movement across I-90
	168	CA	Andrew Runk - Contech Engineered Solutions		Cost Effective Long-term Wildlife Infrastructure
	101	CA	Brock Ortega, Dudek		Decision-support for evaluating and improving wildlife crossing of transportation corridors
	86	AZ	Norris L. Dodd, AZTEC Engineering		Effectiveness of wildlife crossing structures in the West – measuring success beyond the animals
	12	CA	Fraser Shilling, Road Ecology Center, Universi		Camera/video systems and AI-supported animal detection and classification
The Emerging Ecosystem of Animal Detection Systems	17	AZ	Jeff Gagnon - Arizona Game and Fish Departm		Implementation and Accuracy of Thermal and Radar Technology for Animal Detection Systems
	60	TX	Ana Širović, Texas A&M University at Galvestor		Acoustics in Whale Safe: using whale call detections in a multi-faceted tool to mitigate ship strike risk
	117	VA	Andy Alden / Virginia Tech		Advanced vehicle systems for animal detection and conflict mitigation

Abstracts Grouped by Theme (1st Choice)	Abstract #	State (2-letter code), Country	Name, Affiliation	Student	Presentation Title
Climate change: adaptation, mitigation, resilience	87	MA	Scott Jackson, University of Massachusetts Amherst		Assessing the Passability of Road-Stream Crossings for Terrestrial Wildlife in the Northeastern United States
	144	GA	Ari Kaufman, Emory University	Yes	Emory - GDOT Bottomless Culvert Viability Study
OR	100	GA	Kimberly Andrews, University of Georgia		Measuring Rapid Shoreline Change Threatening Infrastructure
Global village: technology, policy, economics, and people	65	MA	Scott Jackson, University of Massachusetts Amherst		Assessing Barrier Effects of Road-Stream Crossings on Fish and other Aquatic Organisms in the Northeastern United States
	67	Colombia	WWF Colombia		Piloting the National Green road infrastructure guidelines in Colombian Amazon: an approach to climate and biodiversity
	130	Canada	Professor Nina-Marie Lister, Director School of Environment and Forestry		Animal Road Crossings: A Green Infrastructure Toolkit
	164	MA	Michael Callahan, President Beaver Institute, Inc.		Protecting Roads from Beavers
	40	Sweden	Jan Olof Helldin, SLU Swedish Biodiversity Center		Cumulative impacts of roads, railways and other human development on semi-domestic reindeer and indigenous communities in northern Sweden
Linear transportation beyond roadways (railroads, pipelines, transmission lines, etc.)	58	CA	Michael Schneider - Co-Founder of RoadkillApp		Advancing Roadkill Data Science
	127	SC	Sean Connolly, South Carolina DOT		South Carolina In-Lieu Fee Program for Culvert Replacement and Improvements to Aquatic Resources
	137	DC	Mike Ruth, Federal Highway Administration		Tidal Restrictions: Tools, Resources, Policies and Practices for Avoidance and Removal
OR	93	LA	Jason Morrell, Arcadis U.S., Inc.		Computer Vision Model for Wildlife Image Recognition
Advancing innovative technologies	128	Mexico	Dirección General de Servicios Técnicos. Secretaría de Transportación y Comunicaciones		MEXICO'S NEW HANDBOOK FOR PLANNING, DESIGN AND CONSTRUCTION OF WILDLIFE PASSAGES IN TRANSPORTATION
	95	MT	Elizabeth Fairbank - Center for Large Landscape Conservation		ROADS: Standardizing road mortality data collection across jurisdictions
OR	3	WA	Glen Kalisz - Washington State Department of Transportation		Wildlife Carcass Removal Reporting Protocol in Washington State
Enhancing infrastructure systems for net ecological gain	44	US	Anna McKee - United States Geologic Survey		Exploring eDNA Efficacy for Mollusk Sampling
	34	CA	Liz O'Donoghue, The Nature Conservancy		Mitigation Wizard – An innovative new tool for a coordinated approach to infrastructure development and nature conservation
	54	Costa Rica	Daniela Araya-Gamboa TWG-LAC, Panthera Americas		Improving Transport Infrastructure for Species and Ecosystems: Transport Working Group for Latin America
Vegetation management within transportation corridors (e.g., for pollinators)	120	AZ	Kris Gade - Arizona Department of Transportation		Planning for Monarch Butterfly Conservation on Roadsides: Development of a Statewide Milkweed Species List
	136	CA	Jason P. Whitney (jpwhitney@ucdavis.edu), UC Davis	Yes	An Analysis of Priority Vegetation Treatment Areas to Reduce Wildfire Risk in California's State Highway System
	132	Sweden	Tommy Lennartsson, Swedish Biodiversity Center		How can road verges contribute to biodiversity conservation?
	118	AR	Kayti Ewing, Arkansas Department of Transportation		Arkansas Department of Transportation - Voluntary Prelisting Species Conservation Program
Wildlife movement: connectivity, safety, across eco-tones	46	WY	Marie-Pier Poulin (University of Wyoming)	Yes	A mechanistic understanding of how elk balance risks and rewards when crossing highways
	177	CA	Brock Ortega, Dudek		State Route 61/Morongo Pass Wildlife Connectivity and Recommendations
	70	CA	Autumn Iverson, Road Ecology Center, Department of Transportation	Yes	Habitat linkages do not predict occurrence for common California wildlife species
	66	CA	Celina Oliveri (Caltrans)		WILDLIFE PASSAGE MODIFICATIONS ON STATE ROUTE 118 IN LAS POSAS VALLEY (VENTURA COUNTY)
	56	OR	Martin Lafrenz, Portland State University		Connectivity for wildlife in a world without roads
	63	CA	Mari Galloway, Wildlands Network		Road Ecology in North-Eastern Sierras: Research and Collaboration to Enhance Restoration of Wildlife Connectivity
	89	MT	Christopher Harris - Pennsylvania State University	Yes	Exploratory Spatial Analysis for Safe Wildlife Passage in Southwestern Montana
	126	UT	Bronco Hollowell	Yes	Identifying Factors Contributing to Spatial Patterns of Mule Deer-Vehicle Collisions in Southwest Utah
	170	WY	Jerod A. Merkle, University of Wyoming		Connecting the dots: Compiling a global atlas of ungulate migrations
	69	United Kingdom	Darrelle Moffat, Animex International		Improving habitat connectivity: Developing best practice guidance and structural re-design of the Animex Wildlife Corridor
	62	AZ	Jessica A. Moreno, Coalition for Sonoran Desert Conservation		Crossing Through Your Neighborhood: The benefits of using community science to monitor wildlife movement
	92	UT	Makeda Hanson, Utah Division of Wildlife Resources		My Way or the Highway: Elk Use of a Box Culvert in Southeast Utah Documented Through Camera Traps and GPS
	108	DC	Daniel Buford, Federal Highway Administration		Review of ICOET Proceedings (2009-2019) for Aquatic Organism Passage and Wildlife Connectivity Presentations
	22	NC	Liz Hillard, Wildlands Network		Road ecology in southern Appalachia: Research to guide restoration of wildlife connectivity across I-40 near Asheville
	26	AZ	Todd Williams, Michael Baker International		Arizona's Statewide Assessment and Planning Study to Identify High Priority Wildlife-Vehicle Conflict Hotspot
	80	NM	Matt Haverland, NMDOT		New Mexico's Applied Wildlife Passage Research and Update on Wildlife Corridors Action Plan
	88	TX	Amanda Veals, Caesar Kleberg Wildlife Research Institute	Yes	Circuit Theory to Estimate Road Crossings for the Endangered Ocelot
	175	Costa Rica	Daniela Araya-Gamboa		Finding evidence of a 70 years old road effect on the wildlife of a Complex of Protected Areas
	20	Portugal	Ana Galantino (ab) (a) UBC - Conservation Biology	Yes	Road verges are valuable corridors for small mammals even in well-preserved habitats
31	Mexico	Mirna Manteca - Wildlands Network		Mexico Federal Highway 2: changing state legislation through science	
38	CA	Debra Hughson, National Park Service		Can a High-Speed Passenger Train Reconnect Wildlife Habitat in the Mojave Desert?	

Terrestrial wildlife (vertebrate and/or invertebrate) and ecosystem interactions	99	OH	Kristine Harman, Ohio University	Yes	Improving amphibian roadway mitigation structures to decrease mortality and increase connectivity: a comp
	29	AZ	Lucas Olson, Mule Deer Foundation and Arizor		Ungulate migration mapping focuses conservation planning
	57	VT	Caitlin E. Drasher, University of Vermont	Yes	How valuable is a transportation structure for wildlife connectivity? Using a new circuit theory approach to r
	143	TX	T. Miles Hopkins, University of Texas Rio Granc		Estimating the Performance And Permeability Of Wildlife Crossing Structures on a South Texas Highway
	145	CA	Cheryl Brehme, US Geological Survey		Effectiveness of Turnarounds in Changing the Trajectory of Reptiles, Amphibians, and Small Mammals
	179	TX	T. Miles Hopkins, University of Texas Rio Granc		Potential Use of Active Infrared External Tripwires (AIR) for Monitoring Wildlife Crossing Structures and Com
	129	California	AnnMarie Blackburn, Caltrans		Cats, cars, and crossings: the consequences of road networks for the conservation of an endangered felid
	6	UK	Steve Bega - Animex International		Re-developing a road kill reporting app to improve user experience and quality of data collected in the Unite
	27	US	Jason V. Lombardi1Affiliations: 1 Caesar Klebe		Road Crossing Patterns of Ocelots (Leopardus pardalis) Along A Urban-Wildland Gradient
	14	Georgia, US	Hannah Held, Georgia Department of Transport		Solar-Powered Science – Innovative Technology Leading to Multi-agency Benefits from a Newfound Underst
	111	Sri Lanka	Dishane Hewavithana, University of Miami	Yes	Linear infrastructures affect bird communities in a dry-mixed evergreen forest
	185	AU	Dr Vanessa Gorecki, Queensland University of	Yes	Roost selection, roost availability and gene flow among culvert roosts of a trawling bat, the large-footed my
	4	Tx	Adam Sanjar - School of Earth, Environmental,	Yes	Road mortality mitigation structure impacts on rodent community composition and activity in south Texas

Multi-Media Presentations

Abstracts Grouped by Theme (1st Choice)	Abstract #	State (2-letter code), Country	Name, Affiliation	Student	Presentation Title
Climate change: adaptation, mitigation, resilience	47	CA	Fraser Shilling, Road Ecology Center, UC Davi		Climate and Fiscal Impacts from Reduced Fuel Use during COVID-19 Mitigation
	83	CA	Francis Appiah, California Department of Trans		Wildlife Connectivity, Movement, and Migration Around 101 Freeway (US-101) at Liberty Canyon Road
	109	USA	Anne Burroughs		Can resilience planning to be used to improve habitat connectivity on the landscape scale?
	72	France	Adewole Adesiyun (Fehrl), Yannick Autret (MTI		Biodiversity and Infrastructure Synergies and Opportunities for European Transport Networks
	98	FL	Patricia Cramer, Wildlife Connectivity Institute		Climate Change, Transportation, and You 2021
Global village: technology, policy, economics, and people	24	Brazil	Arnaud Léonard Jean Desbiez - Institute for the		Anteaters & Highways II: Human, Political, and Institutional dimensions to reduce wildlife vehicle collisions
	21	01	Kate Newman - Vice President, Sustainable Inf		Building a Multisectoral Coalition for "Infrastructure and Nature"
Linear transportation beyond roadways (railroads, pipelines, transmission lines, etc.)	1	CA	Liz O'Donoghue, The Nature Conservancy		Mitigation Wizard – An innovative new tool for a coordinated approach to infrastructure development and n
	8	DE	Annette Krop-Benesch		Saving the night: How to reduce light emissions from streetlights
	64	PA	Michael R. Wright		Monorail in an Era of COVID and Climate Change
	84	PA	Michael R. Wright		Innovative Infrastructure Technologies for Electric Vehicles
Advancing innovative technologies	7	CA	David Waetjen, Road Ecology Center, UC Davi		Smart and automated web-services to analyze wildlife image data
	81	CA	Dannique Aalbu, Caltrans District 9 Biology Br		Experimental Crossing Structures to benefit the Yosemite Toad – A Case Study on California State Route 108
	15	ES	Victor J. Colino-Rabanal. Department of Anima		Bringing science and technology together: Real-time road signs based on temporal AVC models
Vegetation management within transportation corridors (e.g., for pollinators)	123	NJ	Ellen Oettinger White, Rutgers University	Yes	Quantifying highway agency roadside tree removal using high-resolution satellite data
	125	US	Dr. Kaitlin Stack Whitney, Rochester Institute o		Life on the edge: insect conservation in highway roadside rights of way
	134	US	Allyson Salisbury, The Morton Arboretum		Factors influencing tree survival in a highway setting

Wildlife movement: connectivity, safety, across eco-tones	2	AZ	Kris Gade, Arizona Department of Transportation		Maintaining wildlife connectivity in an urbanized area: the South Mountain Freeway in Phoenix, Arizona
	102		Anna Mehner, School of Earth, Environmental, and Atmospheric Sciences	Yes	Traffic Influences on Wildlife Interactions at Wildlife Crossing Structures along FM106 in Cameron County, Texas
	174	MN	Tricia Markle, Minnesota Zoo		Mitigating Small Animal Road Mortality
	172	WA	Jordan Ryckman, Conservation Northwest (formerly Washington Department of Ecology)		Ecological and genetic connectivity of shrews (<i>Sorex</i> spp.) across Interstate-90 in the Washington Cascade Range
	77	MT	Matthew Bell, Western Transportation Institute		Progress to Implement the First Fiber-Reinforced Polymer Wildlife Overpass in North America
	37	JP	Yoichi Sonoda, Animal-pathway & Wildlife Association		Analysis of environmental factors affecting wildlife traffic accidents around Mt. Fuji, Japan
	131	TX	CAITLIN K. BRETT, University of Texas Rio Grande	Yes	EVALUATING WILDLIFE RESPONSES TO LOCALIZED MITIGATION FENCING STRUCTURES
	121	TX	Victoria Hanley, University of Texas Rio Grande	Yes	Wildlife Avoidance Behavior at Wildlife Crossing Structures in South Texas
	176	California	Morgan Robertson, California Department of Transportation		Improving Habitat Connectivity for the Endangered Santa Cruz Long-toed Salamander (<i>Ambystoma macrodactylum</i>)
	30	01	Rob Ament - Co-Chair, IUCN WCPA and SSC		The Asian Elephant Transport Working Group (AsETWG) Presents: Protecting Asian Elephants from Linear Transportation
35	MX	Cecilia Aguilar, Wildlands Network		Mitigation from project planning stages: a unique opportunity for connectivity in Northern Mexico	
39	AT	Hildegard Meyer, WWF Central and Eastern Europe		SaveGREEN – Safeguarding the functionality of transnationally important ecological corridors in the Danube Basin	
105	CA	Abigail Dziegiel, California State University, Fresno	Yes	Impacts of highways and fences on tule elk home range and movement	
169	WA	Megan LaFever, Washington State Department of Ecology		A Year of Wildlife Movement: Monitoring for Preconstruction of Fish Passage Barrier #994233 in Washington	
173	CA	Evan Greenspan (California Department of Fish and Wildlife)		Mapping ungulate migration corridors, stopovers, and winter ranges across California	
Aquatic species/ecosystem and wetland interactions	49	NC	Christina Kranz North Carolina State University	Yes	Compost Incorporation on Roadsides for Soil Improvement and as a Stormwater Control Measure
	115	NY	Sara Reynolds-Davis, Cornell University	Yes	Roadside ditches as a key tool to manage for stormwater and pollution: A case study of highway governance
	146	UA	Ostap Reshetylo, Ivan Franko National University		Herpetofauna roadkills in Transcarpathia (Ukraine): scale, consequences and protection
Stormwater and water quality management					
Lessons from policy applications	163	Costa Rica	Daniela Araya-Gamboa		Finding the way: Costa Rican Road Ecology 10 years time line
	161	GA	Melissa Rottenberg (Arcadis)		Streamlining Programmatic Consultation with Technology
OR	55	Australia	Rodney van der Ree, WSP Australia Pty Ltd		Introducing 'www.TransportEcology.info': An online, open access resource to globally share information, knowledge and best practices
Mainstreaming ecology in transportation planning and program delivery	52	CH	Yun Wang, China Academy of Transportation Sciences		Research Progress of Standards for Wildlife Crossing Structures in China's Linear Transportation Infrastructure
	76	Sweden	Marcus Elfström, EnviroPlanning AB		Same but different: contradictory use by different deer species at faunapassages at grade
	43	US	Robert Stanley - California Department of Fish and Wildlife		Light Source Output Analysis Methods
	16	CA	Newton Wong Associate Biologist, Caltrans, Los Angeles		Fire and Storm damages to roadways, best practices for emergency projects while protecting ecological resources
	166	AU	Jayden Engert, Centre for Tropical Environment and Conservation	Yes	Re-routing a major Indonesian mining road to spare nature and reduce development costs: an application of
167	CA	Christopher Pincetich (Caltrans)	Yes	Caltrans Wildlife Connectivity Assessment Tool - WildCAT - to Support Planners and Biologists in Identifying	
Global pandemics / COVID-19 / zoonotic disease	36	CA	David Waetjen, Road Ecology Center, UC Davis		Impact of COVID-19 on Traffic, Crashes, and Wildlife-Vehicle Collisions
	73	ES	Victor Colino Rabanal, Department of Animal Biology		Differences in the response of ACV with wildlife and livestock species during the COVID-19 lockdown in Spain
Mitigation / restoration	156	CA	Greg Tatarian - Wildlife Research Associates		Are We There Yet? Reaching New Destinations with Bats in Transportation Projects
	11	OH	Margaret Minzner, OKI Regional Council of Governments		The OKI Region Environmental Mitigation Model
	32	WA	Glen Kalisz - Washington State Department of Ecology		The Evidenced-based Case for Restricting Human Use of Wildlife Crossing Structures
	71	BR	Bibiana Terra Dasoler 1 - Graduate Program in Ecology	Yes	WILDCROSSDATA: a dataset on the use of crossing structures in Latin America
	53	TX	Victoria Hanley - University of Texas Rio Grande	Yes	COMPARISON OF METHODS FOR IDENTIFYING BOBCATS TO INDIVIDUAL AT ROAD MITIGATION STRUCTURE
	150	TX	Daniel G. Scognamillo, Caesar Kleberg Wildlife Research Institute		Preliminary Results from Monitoring of a New Wildlife Crossing in Willacy County, Texas
	45	Canada	Marta Brocki, ARC Solutions		The Wonderful World of Wildlife Crossings
	140	New York	Tom Langen, Clarkson University		Emerging Best Practices to reduce road mortality and increase habitat connectivity for turtles in the northeast
	183	TX	Zachary M. Wardle, Caesar Kleberg Wildlife Research Institute	Yes	Monitoring Wildlife Road Mortalities during Construction of Wildlife Crossings Structures in Cameron County
	157	CA	Francis Appiah, California Department of Transportation		Mountain Yellow-Legged Frog Critical Habitat Mitigation and Restoration on State Route 2
42	Czechia	Michal Bíl & CDV - Transport Research Centre		Are olfactory repellents reasonable alternatives to fencing along secondary roads in prevention of ungulate-	

Terrestrial wildlife (vertebrate and/or invertebrate) and ecosystem interactions	178	TX	Thomas J Yamashita, School of Earth Environr	Yes	Temporal Partitioning as a Means for Wildlife to Persist Around a Road in South Texas	
	33	WA	Vedant Srinivas, Eastlake High School, WA	Yes	Ora - A Non-habituating, low cost, audiovisual animal warning system to mitigate roadkill	
	90	MO	Bethany K. Kunz, U.S. Geological Survey, Col		Response of roadside soil communities to application of unpaved road chemical treatments	
	85	WA	Sarah Croston- Washington Department of Tra	Yes	Roads and Raptors, a Spatial Analysis of Raptor Collisions on The Washington State Highway System	
	104	Tx	Adam Sanjar - School of Earth, Environmental,	Yes	Road mortality mitigation structure impacts on rodent community composition and activity in south Texas	
	181	AZ	Brian Blais, Southwest Zoologists' League		Rural road usage by herpetofauna of the southern Sonoran Desert ecoregion	
	186	WA	Jenna Chapman, Central Washington Universit	Yes	Activity patterns of bat species at interstate highway sites with and without wildlife underpasses	
	180	TX	Thomas J Yamashita, Caesar Kleberg Wildlife	Yes	Comparison of Mammal Use of a Highway Before and During Construction of Wildlife Crossing Structures in	