

Tuesday November 19, 2019—Overview

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|-----------------|--|--|---|--|
| 7:30-8:00 | Networking / Coffee / Tea | | | |
| 8:00-9:45 | Plenary and Opening Remarks Location: Cherokee Ballroom <i>Jim Hubbard (USDA Under Secretary)</i> <i>Rob Doudrick (SRS Station Director)--Ken Arney (Regional Forester, Region 8)--David Arnold (State Forester, Tennessee)</i> <i>Alex Friend (Deputy Chief, USDA Forest Service)</i> | | | |
| 9:45-10:15 | <i>Break</i> | | | |
| | <i>Concurrent Sessions</i> | | | |
| Location | Cherokee Ballroom | Salon D & E | Sequoyah 3 | Hiwassee |
| 10:15-11:45 | Session 1a: FIA & Ecology Research <i>Moderator: Tom Brandeis</i> | Session 2a: Damage, Disease, Disturbance: Forest Health Research with FIA <i>Moderator: Mark Ambrose</i> | Session 3a: Pushing Timber Products Data in New Directions <i>Moderator: Consuelo Brandeis</i> | Session 4a: How do you do that, again? Exploring methods in inventory <i>Moderator: Chris Edgar</i> |
| 11:45-13:00 | <i>Lunch</i> | | | |
| 13:00-14:45 | <i>(Session 1a cont'd):</i> FIA & Ecology Research Session 1b: Forests of Interior Alaska <i>Moderator: Sean Cahoon</i> | Session 2b: Integration of Forest Health Data Sources <i>Moderator: Randy Morin</i> | Session 3b: Advances in Timber Products Monitoring <i>Moderator: John Coulston</i> | <i>(Session 4a cont'd)</i> How do you do that, again? Exploring methods in inventory <i>Moderator: KaDonna Randolph</i> |
| 14:45-15:15 | <i>Break</i> | | | |
| 15:15-17:00 | Session 1c: Advances in Modeling Distributions, Structure, and Sustainability <i>Moderator: Dr. English Burton</i> | Session 2c: Linking Forest Disturbance and Forest Dynamics to Water Quality <i>Moderator: Sara Goeking</i> | Session 3c: Development and Implementation of new volume/biomass/carbon models for FIA <i>Moderator: Jim Westfall</i> | Session 4b: Evolving Approaches for impact assessment to forests after hurricanes <i>Moderator: Steve Norman</i> |
| 17:00 | <i>Adjourn</i> | | | |
| 18:00-20:00 | Digital Engagement Session and Reception | | | |

Tuesday November 19, 2019 — Detailed Agenda

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|---|--|--|---|--|
| 7:30-8:00 | Networking / Coffee / Tea | | | |
| 8:00-9:45 | Plenary and Opening Remarks <i>Jim Hubbard (USDA Under Secretary)</i> <i>Rob Doudrick (SRS Station Director)--Ken Arney (Regional Forester, Region 8)--David Arnold (State Forester, Tennessee)</i> <i>Alex Friend (Deputy Chief, USDA Forest Service)</i> | | | |
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| 10:15 (15 min) | Assessing tree mortality probability in harvested hardwood stands using long-term forest inventory data <i>Presenter: Tom Brandeis</i> | Historical activity of major pests in the Lake States <i>Presenter: Laurel Haavik</i> | TPO-Plus: A Western Value-added Perspective <i>Presenter: Kate Marcille</i> | Re-visiting the Re-measurement Period <i>Presenter: Frank Roesch</i> |
| 10:30 (15 min) | Assessing long-term implications of forest management on wildlife habitat in Minnesota. <i>Presenter: John Zobel</i> | Lichen and Moss Metrics for Monitoring Air Quality in Wilderness and Urban Areas <i>Presenter: Sarah Jovan</i> | Pulpwood Production- An Analysis of Pulpmill Capacity and Feedstock Changes <i>Presenter: Consuelo Brandeis</i> | Interpreting effects of multiple, large-scale disturbances with different approaches to temporal aggregation of Forest Inventory and Analysis data <i>Presenter: Christopher Edgar</i> |
| 10:45 (15 min) | Updating the Forest Vegetation Simulator with climate response recorded in tree rings <i>Presenter: Courtney Giebink</i> | The rise and fall of individual and multifactor damage agents in forests of the United States: a retrospective look at FIA damage collection protocols <i>Presenter: KaDonna Randolph</i> | Mill Dynamics: Exploring mill entry and exit patterns in the Southern U.S. <i>Presenter: Nidia Pantí</i> | Real-time monitoring of downed dead wood moisture: Do micro-sensors hold promise for forest inventories? <i>Presenter: Christopher Woodall</i> |
| 11:00 (15 min) | Mangrove Inventory Comparisons, Findings from Multi-Agency Tests in Florida <i>Presenter: Mark Brown</i> | Using EVALIDator to Report on National Scale Mortality Trends for the Forest Health Monitoring Annual Report <i>Presenter: Mark Ambrose</i> | Wood Supply Assessment Using FIA Plot and Landowner Survey Data <i>Presenter: Brett Butler</i> | A new, biome-specific framework for distinguishing primary forests from other naturally-regenerated forests using remote sensing and design-based forest inventory <i>Presenter: Graham Stinson</i> |
| 11:15 (15 min) | Are current seedling demographics poised to regenerate northern US forests? <i>Presenter: Lance Vickers</i> | Using climate and biophysical attributes to predict the distribution of root disease across the U.S. Northern Rocky Mountains <i>Presenter: Zackary Holden</i> | Use of FIA datasets to analyze effects of wood-based bioenergy production <i>Presenter: Esther Parish</i> | Photogrammetric measurement of hardwood species at a stand level using RGB images from Unmanned aerial vehicle (UAV) <i>Presenter: Aishwarya Chandrasekaran</i> |
| 11:30 (15 min) | Leveraging the Forest Inventory and Analysis Design in a National, Spatially Explicit Assessment of Forest Tree Genetic Degradation Risk <i>Presenter: Kevin Potter</i> | The relationship of 19th century vegetation to 21st century oak decline and mortality in Missouri Ozark Highlands <i>Presenter: Sunil Nepal</i> | Assessment of Forest Biodiversity in Providing Non-Timber Forest Products and Effects of Environmental Factors on Tree Species in Deciduous Forests for Community Forest Management in Northern Thailand <i>Presenter: Siriluck Thammanu</i> | Using synthetic forest inventory plots to approximate k>1 nearest-neighbors mapping for accuracy and operational considerations <i>Presenter: Matthew Gregory</i> |
| 11:45-13:00 | Lunch | | | |
| <i>Tuesday November 19, Continued — Concurrent Sessions</i> | | | | |
| | Session 1a (continued): | Session 2b: | Session 3b: | Session 4a (continued): |

| | FIA & Ecology Research <i>Moderator: Tom Brandeis</i> | Integration of Forest Health Data Sources <i>Moderator: Randy Morin</i> | Advances in Timber Products Monitoring <i>Moderator: John Coulston</i> | How do you do that, again? Exploring methods in inventory <i>Moderator: KaDonna Randolph</i> |
|-----------------------------------|--|--|--|--|
| 13:00 <i>(15 min)</i> | Trees outside forests: where are they and what are they doing? <i>Presenter: Dacia Meneguzzo</i> | Combining Novel Remote Sensing Methods with FIA Data to Evaluate Effects of Drought and Gypsy Moth Defoliation on Tree Mortality at Landscape Scales <i>Presenter: Valerie Pasquarella</i> | Overview of timber products monitoring: recent changes and applications <i>Presenter: John Coulston</i> | Nickels and dimes: End-digit preference in forest inventory data <i>Presenter: KaDonna Randolph</i> |
| 13:15 <i>(15 min)</i> | Estimating wildfire effects with propensity score and spatial matching <i>Presenter: Vicente Monleon</i> | Estimating baseline mortality for white pine in the central Appalachians to assess the impact of a novel scale insect/pathogen complex <i>Presenter: Chris Asaro</i> | Change estimation techniques <i>Presenter: James Westfall</i> | Global Forest Monitoring: How Nordic countries perform their forest inventories <i>Presenter: Andrew Hartsell</i> |
| 13:30 <i>(15 min)</i> | SESSION CHANGE Session 1b: Forests of Interior Alaska—Insights from the Tanana Unit <i>Moderator: Sean Cahoon</i> | Rating FIA plots for southern pine beetle hazard and applications for the National Insect and Disease Risk Map' <i>Presenter: Erin Berryman</i> | Alternative measures of size and sampling with certainty thresholds <i>Presenters: Chris Edgar and John Young</i> | Small area estimation of post-fire regeneration using the Forest Inventory & Analysis plot network <i>Presenter: George Gaines</i> |
| 13:45 <i>(15 min)</i> | Use of high-resolution, multi-sensor airborne remote sensing to support forest inventory in interior Alaska. <i>Presenter: Hans Andersen</i> | Insect and disease threats to United States tree species and geographic patterns of their potential impacts: Combining FIA data with agent-specific distributions and severities <i>Presenter: Kevin Potter</i> | Western region TPO annual sampling- first year experience <i>Presenter: Erik Berg</i> | South Texas Non-response <i>Presenter: Joseph McCollum</i> |
| 14:00 <i>(15 min)</i> | Assessing potential chronology bias in the FIA increment core record with increment core data from densely sampled forest plots across North America <i>Presenter: Robert Jespersen</i> | Using forest inventories to assess long-term change in the structure and composition of the northeastern ash resource in relation to EAB <i>Presenter: Sue Crocker</i> | Improving residential fuelwood estimates <i>Presenter: Marcus Taylor</i> | Small area estimation of zero-inflated, spatially correlated forest variables using copula models <i>Presenter: Vicente Monleon</i> |
| 14:15 <i>(15 min)</i> | High-resolution data from NASA's G-LiHT Airborne Imager for remote inventory and science applications <i>Presenter: Bruce Cook</i> | Carbon losses resulting from insect and diseases invasions in USA forests <i>Presenter: Randall Morin</i> | Timber Products Output Field Data Collection Methods: Past, Present, and Future <i>Presenter: Brett Butler</i> | Uncertainty in Measurements of Standing Trees and Downed Coarse Woody Debris in the US Forest Service Forest Inventory and Analysis (FIA) Program <i>Presenter: Christopher Woodall</i> |
| 14:30 PM <i>(15min)</i> | Toward estimating litter and soil carbon stocks on forest land in Alaska <i>Presenter: Grant Domke</i> | Assessment of landscape-level microbial community diversity throughout FIA monitoring plots <i>Presenter: Bradley Lalande</i> | Southern Timber Supply Analysis: Forest Inventory Data for All <i>Presenter: Rebekah Zehnder</i> | Updating Annual State- and County-Level Forest Inventories with Data Assimilation and FIA Data <i>Presenter: Zhengyang Hou</i> |
| 14:45-15:15 | <i>Break</i> | | | |

| <i>Tuesday November 19, Continued — Concurrent Sessions</i> | | | | |
|---|--|--|--|--|
| | Session 1c: <i>Moderator:</i> Advances in modeling distributions, structure, and sustainability <i>Moderator: Burton English</i> | Session 2c: <i>Moderator:</i> Linking forest disturbance and forest dynamics to water quantity and quality <i>Moderator: Sara Goeking</i> | Session 3c: <i>Moderator:</i> Development and implementation of new volume/biomass/carbon models for the FIA program <i>Moderator: Jim Westfall</i> | Session 4b: <i>Moderator:</i> Evolving approaches for impact assessment to forests after hurricanes <i>Moderator: Steve Norman</i> |
| 15:15 <i>(15 min)</i> | FIA Use in Developing the Forest Sustainable and Economic Analysis Model (ForSEAM) <i>Presenter: Burton English</i> | Combining FIA and land cover data for assessing watershed conditions for cold water fish within Great Lakes basins. <i>Presenter: Bill Severud</i> | Data needs and data availability for national-scale biomass models. <i>Presenter: David Walker</i> | Monitoring post-disturbance forest recovery: improving capacity for large-area assessments <i>Presenter: Joanne White</i> |
| 15:30 <i>(15 min)</i> | Species distribution models predict shifting climatic suitability for important subsistence species in interior Alaskan forests <i>Presenter: Kathryn Baer</i> | Forests and Water Yield: A Review of Recent Disturbance Effects on Streamflow and Snowpack in Western Forests <i>Presenter: Sara Goeking</i> | Alternative modeling strategies for estimating tree biomass across a nationwide system of inventory plots. <i>Presenter: David Affleck</i> | Wood salvage efforts in Puerto Rico after hurricanes Irma and Maria <i>Presenter: Humfredo Marcano-Vega</i> |
| 15:45 <i>(15 min)</i> | Using forest inventory data to build demography-driven models of the geographic distribution: a case study of <i>Pinus edulis</i> (two-needle piñon) <i>Presenter: Margaret Evans</i> | An enhanced representation of forest cover for distributed hydrologic modeling based on forest inventory data <i>Presenter: Sara Goeking</i> | Evaluating Modeling systems for National-Scale Biomass Estimators: A Scorecard Approach with Preliminary Results <i>Presenter: Phil Radtke</i> | Rapid Projections of the Effects on the Forest Resource Impacted by a Major Hurricane <i>Presenter: Dennis Jacobs</i> |
| 16:00 <i>(15 min)</i> | Data solutions for large-scale modeling and planning: Using FIA-based SilviaTerra Data for resilience planning in the central Sierra Nevada <i>Presenter: Patricia Manley</i> | Flexible Model Approach to Modeling of Soluble and Total Nutrient Transport from Wildfires. <i>Presenter: Nicholas Shaw</i> | Functional, species-specific or hybrid groups for new tree models for FIA plots? <i>Presenter: David W. McFarlane</i> | Modernization and Standardization of Forest Disturbance Assessment and Valuation Methodologies for Southern State Forestry Agencies <i>Presenter: Brian Mitchell</i> |
| 16:15 <i>(15 min)</i> | An application of generalized joint attribute modeling for modeling forest structure and composition <i>Presenter: David Bell</i> | Modeling of Carbon, Nitrogen, and Phosphorus Fluxes from Wildfires. <i>Presenter: Nicholas Shaw</i> | Approaches to estimate individual tree aboveground biomass <i>Presenter: Krishna Poudel</i> | Assessing post-hurricane damage in mangrove forests of south Florida using repeat LiDAR, Landsat and U.S. Forest Inventory and Analysis (FIA) data <i>Presenter: Todd Schroeder</i> |
| 16:30 <i>(15 min)</i> | Combining FIA data with the LANDIS forest simulation model to improve projections <i>Presenter: Brian Miranda</i> | | National Scale Biomass Estimator (NSBE) Project: Next steps, implications, and future timeline <i>Presenter: Aaron Weiskittel</i> | A monitoring framework for tracking flood impacts to forests <i>Presenter: Bjorn Brooks</i> |
| 16:45 <i>(15min)</i> | | | | <i>Tracking immediate and secondary hurricane impacts to forests</i> <i>Presenter: Steve Norman</i> |
| 17:00 | <i>Adjourn</i> | | | |
| 18:00-20:00 | Digital Engagement Session and Reception | | | |

Wednesday November 20, 2019—Overview

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|-----------------|--|--|--|--|
| 7:30-8:00 | Networking / Coffee / Tea | | | |
| 8:00-9:45 | Plenary and Opening Remarks Location: Cherokee Ballroom <i>Ann Bartuska (Senior Advisor, Resources for the Future)</i> <i>Andrew Hait (Economist, Census Bureau)</i> <i>Helge Eng (Deputy Director, CalFire)</i> | | | |
| 9:45-10:15 | <i>Break</i> | | | |
| | <i>Concurrent Sessions</i> | | | |
| Location | Cherokee Ballroom | Salon D & E | Sequoayah 3 | Hiwassee |
| 10:15-11:45 | Session 1a: Urban FIA Update and Latest Results <i>Moderator: Tonya Lister</i> | Session 2a: Large –scale Computing Applications in FIA <i>Moderator: Charles “Hobie” Perry</i> | Session 3a: Supporting the USFS WUI research agenda <i>Moderators: Rachel Reimann & Nancy Sonti</i> | Session 4a: Uncharted Outcomes: Delivering Geospatial Products With FIA <i>Moderator: Bruce Cook</i> |
| 11:45-13:00 | <i>Lunch</i> | | | |
| 13:00-14:45 | Session 1b: Urban Forest Research and Advances in Urban Inventory and Monitoring <i>Moderator: Tonya Lister</i> | Session 2b: Advances in Estimating Carbon Stocks and Fluxes on Forest Land, Woodlands, and Urban Trees Across Space and Through Time <i>Moderator: Grant Domke</i> | Session 3b: Understanding landscape change using FIA data <i>Moderator: Ryan Heaslip</i> | Session 4b: Marketing FIA - Engaging new tools for traditional and nontraditional users <i>Moderator: John Bertini</i> |
| 14:45-15:15 | <i>Break</i> | | | |
| 15:15-17:00 | Session 1c: Use of Photogrammetrically-Derived 3D Point Clouds to Support Large-Area Forest Inventory and Monitoring <i>Moderator: Hans Anderson</i> | Session 2c: Building Strong Partnerships: NFS and FIA <i>Moderator: Emrys Treasure</i> | <i>(Session 3b cont’d)</i> Understanding landscape change using FIA data <i>Moderator: Nicholas Nagle</i> | Session 4c: Spatial Dynamics of Forest Invasion <i>Moderator: Elizabeth LaRue</i> |
| 17:00 | <i>Adjourn</i> | | | |

Wednesday November 20, 2019—Detailed Agenda

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|---------------------------|--|--|---|---|
| 7:30-8:00 | Networking / Coffee / Tea | | | |
| 8:00-9:45 | Plenary and Opening Remarks <i>Ann Bartuska (Senior Advisor, Resources for the Future)</i> <i>Andrew Hait (Economist, Census Bureau)</i> <i>Helge Eng (Deputy Director, CalFire)</i> | | | |
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| 10:15 (15 min) | Urban FIA integrating all lands inventories into the overall national work flow <i>Presenter: Mark Majewsky</i> | Can I get fries with that? Successes and continued challenges for BIGMAP <i>Presenter: Charles Perry</i> | Framing the session: the USFS WUI research assessment <i>Presenter: Miranda Mockrin</i> | The 3D Elevation Program - useful for FIA? <i>Presenter: Jason Stoker</i> |
| 10:30 (15 min) | Advances in urban FIA processing, data availability, tools, and products <i>Presenter: Tonya Lister</i> | Development of BIGMAP: a cloud-based national scale modeling, mapping, and analysis environment using Esri Raster Analytics <i>Presenter: Barry Wilson</i> | Datasets related to urbanization and fragmentation of forest land <i>Presenter: Rachel Riemann</i> | High-resolution data from NASA’s G-LiHT Airborne Imager for remote inventory and science applications <i>Presenter: Bruce Cook</i> |
| 10:45 (15 min) | <i>My City’s Trees: Delivering Information from Urban FIA Data</i> <i>Presenter: Rebekah Zehender</i> | Cloud computing supporting land cover change mapping <i>Presenter Sean Healey</i> | Using the FIA plot data to characterize forest in the WUI <i>Presenter: Nancy Sonti</i> | Forest Service NLCD Tree Canopy Cover - Science for Future Products <i>Presenter: Karen Schlewweis</i> |
| 11:00 (15 min) | An Inventory of San Diego’s Forest Resources: Urban FIA in the Wild West <i>Presenter: Katie Baer</i> | Use of multi-objective machine learning and high performance computing to reduce prediction bias in forest maps <i>Presenter: Kasey Legaard</i> | Does the WUI predict invasive plant occurrence on FIA plots? <i>Presenters: Cassie Kurtz and Kurt Riitters</i> | Forest Service NLCD Tree Canopy Cover - 2016 Data and Future Tree Canopy Cover Products <i>Presenter: Stacie Bender</i> |
| 11:15 (15 min) | Going with the flow: tracking urban wood flows to test an Urban TPO approach <i>Presenter: Mike Galvin</i> | Utilizing cloud-computing for implementing a deep convolutional neural network based forest structure and classification model <i>Presenter: Tony Chang</i> | Family forest owners along the urban-rural spectrum <i>Presenter: Jacqueline Dias</i> | Mapping forest land use <i>Presenter: Mark Nelson</i> |
| 11:30 (15 min) | Implementing Urban FIA in the U.S. Virgin Islands <i>Presenter: Thomas Brandeis</i> | An integrated disturbance and vegetation mapping framework highlights landscape level changes in forest dynamics during a multiyear drought. <i>Presenter: David Bell</i> | Toward estimating carbon stocks and stock changes across the wildland urban interface <i>Presenter: Grant Domke</i> | Predictive Mapping of Trees Per Acre (TPA) Using a Non-parametric Approach <i>Presenter: Bharat Pokharel</i> |
| 11:45-13:00 | <i>Lunch</i> | | | |

Wednesday November 20, Continued—Concurrent Sessions

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| Session 1b: Urban Forest Research and Advances in | Session 2b: Advances in Estimating Carbon Stocks | Session 3b: Understanding landscape change using | Session 4b: Marketing FIA - Engaging new tools for |
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| | Urban Inventory and Monitoring <i>Moderator: Tonya Lister</i> | and Fluxes on Forest Land, Woodlands, and Urban Trees Across Space and Through Time <i>Moderator: Grant Domke</i> | FIA data <i>Moderator: Ryan Heaslip</i> | traditional and nontraditional users <i>Moderator: John Bertini</i> |
|-----------------------------------|--|--|--|---|
| 13:00 <i>(15 min)</i> | Urban National Landowner Survey: Results and Application from Pilot Cities <i>Presenter: Nancy Sonti</i> | Remote sensing-assisted multivariate hierarchical spatial models for simultaneous prediction of multiple forest carbon pools. <i>Presenter: Chad Babcock</i> | Land Use, Land Cover and Agent of Change Data for NFS <i>Presenter: Jack Triepke</i> | FIA 101: A training module for FIA staff and aspiring data users – The process, the product, and future developments. <i>Presenter: Sara Goeking</i> |
| 13:15 <i>(15 min)</i> | Urban tree specific gravity and ash content: a case study from Baltimore, Maryland USA <i>Presenter: Jim Westfall</i> | Effects of disturbances and land use change on carbon stocks in six US states. <i>Presenter: Lucia Fitts Vargas</i> | Using biannual change detection maps for prestratification of photointerpreted survey samples for area change estimation <i>Presenter: Andrew Lister</i> | Forestry web tools promote stakeholder access <i>Presenter: Robert Smith</i> |
| 13:30 <i>(15 min)</i> | New approaches and considerations for developing tree measurements and models for urban FIA plots <i>Presenter: Dave MacFarlane</i> | A User Protocol for Greenhouse Gas Inventories of Forests and Trees at Community Scale: Combining Forest Inventory and Remote Areas <i>Presenter: Richard Birdsey</i> | Land use: ICE vs. P2 <i>Presenter: Joseph McCollum</i> | New developments in the Design and Analysis Toolkit for Inventory and Monitoring (DATIM) <i>Presenter: John Bertini</i> |
| 13:45 <i>(15 min)</i> | Evaluation of simplified crown measures for Urban FIA <i>Presenter: Jason Henning</i> | Mapping global climate mitigation potential from reforestation. <i>Presenter: Nancy Harris</i> | Testing for temporal change in forest inventory and analysis program (FIA) data using the difference tester on the web. <i>Presenter: Scott Pugh</i> | rFIA: Unlocking the Potential of the FIADB in R <i>Presenter: Hunter Stanke</i> |
| 14:00 <i>(15 min)</i> | Crown width models for tree species growing in urban areas of the U.S. <i>Presenter: Jim Westfall</i> | U.S. West Coast Forest Carbon Stocks and Flux: Results from Recent Analysis Using FIA data as Basis Informing State-led Forest Carbon Emission Mitigation Policies. <i>Presenter: Glenn Christensen</i> | Proximate Causes of Forest Loss 2001-2011 in a Landscape Mosaic Context <i>Presenter: Karen Schleeweis</i> | i Forest Service Historical Film Scanning Project - Much More Than An Aerial Photo Historical Archive <i>Presenter: Gary Nebeker</i> |
| 14:15 <i>(15 min)</i> | The use of fractal dimension to study ecological traits of trees in US cities <i>Presenter: Georgios Arseniou</i> | Leveraging TPO data for HWP carbon storage in the PNW <i>Presenter: Todd Morgan</i> | Classification of satellite time series parameters instead of individual images supports temporally coherent model-assisted estimation at annual time steps <i>Presenter: Zhiqiang Yang</i> | Demonstrating a progressive FIA through FIESTA: a bridge between science and production <i>Presenter: Tracey Frescino</i> |
| 14:30 PM <i>(15min)</i> | i-Tree Wildlife: a tool for evaluating bird habitat potential in the urban forest <i>Presenter: Susannah Lerman</i> | Propensity Score Matching Analysis of FIA Remeasurement Across Diverse West Coast Forests Yields Insights on Drivers of In-forest Carbon Sequestration <i>Presenter: Jeremy Fried</i> | Monitoring Change in the Pacific Islands: Non-traditional Estimates of Change <i>Presenter: Olaf Kuegler</i> | Bugs, Features, or What? Some Potential Opportunities to Tidy Up Parts of FIADB (and be Kind to Our Users) <i>Presenter: John Shaw</i> |
| 14:45-15:15 | <i>Break</i> | | | |

| <i>Wednesday November 20, Continued—Concurrent Sessions</i> | | | | |
|---|--|---|--|--|
| | Session 1c: Use of Photogrammetrically-Derived 3D Point Clouds to Support Large-Area Forest Inventory and Monitoring <i>Moderator: Hans Anderson</i> | Session 2c: Building Strong Partnerships: NFS and FIA <i>Moderator: Emrys Treasure</i> | Session 3b Continued: Understanding landscape change using FIA data <i>Moderator: Nicholas Nagle</i> | Session 4c Spatial Dynamics of Forest Invasion <i>Moderator: Elizabeth LaRue</i> |
| 15:15 (15 min) | Overview of Digital Aerial Photogrammetry <i>Presenter: Bob McGaughey</i> | Intensified FIA grid for BLM and NFS; partnership success in the Pacific Northwest <i>Presenter: Marin Palmer</i> | Costa Rica's Land Use, Land Cover, and Ecosystems Monitoring System (SIMOCUTE) <i>Presenter: Mauricio Vega-Araya</i> | Spatial dynamics of forest invasion <i>Presenter: Songlin Fei</i> |
| 15:30 (15 min) | The potential for augmenting statewide forest estimations with canopy height from remotely sensed <i>Presenter: Jim Ellenwood</i> | A New Source for FIA Data Suitable for Use in the Forest Vegetation Simulator <i>Presenter: John Shaw</i> | Developing county-level harvest and conversion rates for southeastern forests using Landsat time series and U.S. Forest Inventory and Analysis (FIA) plots <i>Presenter: Todd Schroeder</i> | Using FIA data to detect drivers of spatial heterogeneity in phylogenetic-invasion relationships <i>Presenter: Basil Iannone</i> |
| 15:45 (15 min) | Comparisons of the relationship between tree canopy height information from LiDAR, phodar, and forest inventory plot data <i>Presenter: Andy Lister</i> | Landscape Change Monitoring System - Delivery and Use For Forest Service (NFS) <i>Presenter: Kevin Megown</i> | Photo-based or Pixel-based Change Estimation? <i>Presenter: Paul Patterson</i> | Forest structural diversity and plant invasion dynamics across North America <i>Presenter: Elizabeth LaRue</i> |
| 16:00 (15 min) | Evaluating the potential of NAIP point clouds to support operational forest inventory applications in the southeastern U.S. <i>Presenter: Ben Branoff</i> | Innovations in addressing carbon in NEPA and National Forest Planning <i>Presenter: Alexa Dugan</i> | Developing FIA survey weights with high spatial and temporal resolution by calibration to Landsat time series <i>Presenter: Nicholas Nagle</i> | Understanding the impacts of emerald ash borer and forest structure on understory plant invasion <i>Presenter: Jessica Elliot</i> |
| 16:15 (15 min) | An Examination of DAP, Landsat, and Environmental Variables for Modeling Volume, Biomass, and Carbon on FIA Plots <i>Presenter: Jacob Strunk</i> | Collaborative Governance Leadership Competencies in Federal Natural Resource Management Partnerships <i>Presenter: Melissa Hamid</i> | Comparing and combining observation systems for land use and land cover change in Georgia <i>Presenter: Gretchen Moisen</i> | The Most Invaded State in the Nation: Applying FIA Data to Assess Forest Impacts of Nonnative Plants and Pathogens in Hawaii <i>Presenter: Kevin Potter</i> |
| 16:30 (15 min) | Estimation of Tree Diameter at Breast Height Using Close Range Stereo Photogrammetry <i>Presenter: Nick Eliopoulos</i> | Integrating FIA data into National Forest management through the Forest Plan Revision process: Work in progress on the Salmon-Challis National Forest <i>Presenter: Kristen Pelz</i> | Distributional shifts of regional forest communities in the eastern U.S. <i>Presenter: Jonathan Knott</i> | Tree diversity regulates forest pest invasion <i>Presenter: Qinfeng Guo</i> |
| 16:45 (15min) | Evaluating the utility of pushbroom photogrammetry-derived point clouds for estimating tree canopy cover <i>Presenter: Demetrios Gatziolis</i> | Evaluating Existing Longleaf Pine Ecosystem Condition with Forest Inventory and Analysis (FIA) <i>Presenter: Emrys Treasure</i> | Using non-forest conditions to identify forest fragments and quantify tree growth across a changing landscape <i>Presenter: Luca Morreale</i> | |
| 17:00 | <i>Adjourn</i> | | | |

Thursday November 21, 2019—Overview

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|-----------------|--|---|--|--|
| 7:30-8:00 | Networking / Coffee / Tea | | | |
| 8:00-9:45 | Plenary and Opening Remarks Location: Cherokee Ballroom <i>Songlin Fei (Professor, Purdue University)</i> <i>Rita Hite (Executive Vice President, American Forest Foundation)</i> <i>Healy Hamilton (Chief Scientist, NatureServe)</i> | | | |
| 9:45-10:15 | <i>Break</i> | | | |
| | <i>Concurrent Sessions</i> | | | |
| Location | Cherokee Ballroom | Salon D & E | Sequoyah 3 | Hiwassee |
| 10:15-11:45 | Session 1a: FIA Contributions to Monitoring Biological Diversity <i>Moderator: Mark Nelson</i> | Session 2a: Global View of National Forest Inventories (NFIs): How They Have Progressed, Ways They Have Utilized Partnerships, and Possibilities for the Future. <i>Moderator: Kerry Dooley</i> | Session 3a: Biomass and Carbon: New Techniques, Big Potential, and Novel Equations <i>Moderator: Andy Gray</i> | Session 4a: The Complex Dynamics of Collecting and Reporting Forest Ownership <i>Moderator: Brett Butler</i> |
| 11:45-13:00 | <i>Lunch</i> | | | |
| 13:00-14:45 | Session 1b: The Small Area Estimation Conundrum <i>Moderator: Gretchen Moisen</i> | Session 2a (continued): Global View of National Forest Inventories (NFIs) <i>Moderator: Kerry Dooley</i> | Session 3a (continued): Biomass and Carbon: <i>Moderator: Andy Gray</i> | Session 4a (continued): Forest Ownership <i>Moderator: Greg Frey</i> |
| 14:15-14:45 | <i>Break</i> | | | |
| 14:45-16:30 | Closing General Session | | | |
| 16:30 | <i>Adjourn</i> | | | |

Thursday November 21, 2019—Detailed Agenda

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|----------------------------|--|---|---|---|
| 7:30-8:00 | Networking / Coffee / Tea | | | |
| 8:00-9:45 | Plenary and Opening Remarks <i>Songlin Fei (Professor, Purdue University)</i> <i>Rita Hite (Executive Vice President, American Forest Foundation)</i> <i>Healy Hamilton (Chief Scientist, NatureServe)</i> | | | |
| 9:45-10:15 | <i>Break</i> | | | |
| <i>Concurrent Sessions</i> | | | | |
| 10:15-11:45 | Session 1a: FIA Contributions to Monitoring Biological Diversity <i>Moderator: Mark Nelson</i> | Session 2a: Global View of National Forest Inventories (NFIs): How They Have Progressed, Ways They Have Utilized Partnerships, and Possibilities for the Future. <i>Moderator: Kerry Dooley</i> | Session 3a: Biomass and Carbon: New Techniques, Big Potential, and Novel Equations <i>Moderator: Andy Gray</i> | Session 4a: The Complex Dynamics of Collecting and Reporting Forest Ownership <i>Moderator: Brett Butler</i> |
| 10:15 (15 min) | FIA contributions to Montréal Process Criteria & Indicators for monitoring biological diversity. <i>Presenter: Mark Nelson</i> | The importance of NFIs in the international context <i>Presenter: Rebecca Tavani</i> | Using FIA Volume and Biomass Equations through National Volume Estimator Library <i>Presenter: Yingfang Wang</i> | The Many Flavors of the FIA Landowner Surveys <i>Presenter: Brett Butler</i> |
| 10:30 (15 min) | Use of FIA to assess trends in habitat abundance for the Indiana Bat across forests of the Northern United States. <i>Presenter: Randall Morin</i> | Progress on National Forest Inventories A Panel of International Invited Speakers <i>Presenter: Andy Lister</i> | South Carolina Forests Potential to Contribute to the California Carbon Market <i>Presenter: Lucas Clay</i> | Encouraging Landowner Participation in the Inventory: Barriers and Possible Solutions <i>Presenter: Yuling Gao</i> |
| 10:45 (15 min) | Joining USGS GAP species-habitat relationships to FIA via USNVC Macrogroups and ancillary data. <i>Presenter: Alexa McKerrow</i> | Panel of International Invited Speakers cont. <i>Presenter: Andy Lister</i> | Developing new taper, volume and biomass model systems for FIA to meet the needs of diverse clients <i>Presenter: Dehai Zhao</i> | Results from the Corporate Forest Landowner Survey Pilot Study <i>Presenter: Emma Sass</i> |
| 11:00 (15 min) | Estimating potential abundance of wood duck nest cavities <i>Presenter: James Berdeen</i> | State of the National Forest Inventories in Cameroon: challenges and perspectives <i>Presenter: Kaffo Nzounwo Eric</i> | Development of downed woody debris diameter and length models for application in forest biomass and carbon estimation <i>Presenters: Matthew Russell</i> | Linking the Urban National Landowner Survey to Auxiliary Data: the case of Baltimore, MD <i>Presenter: Dexter Locke</i> |
| 11:15 (15 min) | The Impacts Of Varying Spatial Scale In Determining Predictors Of Tree Species Diversity Using Nested Watersheds And Forest Inventory Data In the Southeastern United States <i>Presenter: Andrew Hartsell</i> | Partnerships in national forest inventories: Benefits, challenges, and characteristics A Panel of International Invited Speakers <i>Presenter: Sara Goeking</i> | Disentangling direct disturbance impacts from other carbon fluxes on remeasured plots on the West Coast <i>Presenter: Andrew Gray</i> | Forest Ownership Dynamics in the U.S.: Accounting for recent, significant historical changes <i>Presenter: Marla Markowski-Lindsay</i> |
| 11:30 (15 min) | Variation in individual-tree growth across species mixtures provides evidence of complementarity effects in Interior West forests <i>Presenter: Christopher Looney</i> | Panel of International Invited Speakers cont. <i>Presenter: Sara Goeking</i> | Extending BioSum to optimize multi-decade forest restoration and evaluate biochar facility feasibility in the Upper Klamath Basin <i>Presenter: Jeremy Fried</i> | A Collaborative Approach to Develop a Tribal Forest Owner Survey <i>Presenter: John Schelhas</i> |
| 11:45-13:00 | <i>Lunch</i> | | | |

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| <i>Thursday, November 21 Continued—Concurrent Sessions</i> | | | | |
| | Session 1b: | Session 2a: | Session 3a continued: | Session 4a Continued: |

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|---------------------------------|---|---|--|--|
| | The Small Area Estimation Conundrum <i>Moderator: Gretchen Moisen</i> | Global View of National Forest Inventories (NFIs): How They Have Progressed, Ways They Have Utilized Partnerships, and Possibilities for the Future <i>Moderator: Kerry Dooley</i> | Biomass and Carbon: New Techniques, Big Potential, and Novel Equations <i>Moderator: Andy Gray</i> | The Complex Dynamics of Collecting and Reporting Forest Ownership <i>Moderator: Greg Frey</i> |
| 13:00 <i>(15 min)</i> | Stage Setting <i>Presenters: John Coulston and Gretchen Moisen</i> | Forest Resources of the United States, 2017: Informing the Nation, the Continent, and the Globe <i>Presenter: Sonja Oswald</i> | Evaluation of Estimates of Biomass from Initial On-orbit Data of the Global Ecosystem Dynamics Investigation Lidar Mission <i>Presenters: Paul Patterson</i> | Surveying Minority Family Forest Owners <i>Presenter: Amanda Robillard</i> |
| 13:15 <i>(15 min)</i> | Panel: NFS/Industry Perspective <i>Presenters: Jamie Barbour and Steve Prisley</i> | Possibilities for national forest inventories A Panel of International Invited Speakers <i>Presenter: Kerry Dooley</i> | Evaluating forest biomass inventory models based on integration of fixed-radius and variable-radius plot data with different modes of LiDAR and Photogrammetric metrics <i>Presenter: Ram Deo</i> | Item Nonresponse Assessment and Imputation for the National Woodland Owner Survey <i>Presenter: Brett Butler</i> |
| 13:30 <i>(15 min)</i> | Panel: State Perspective <i>Presenters: Aaron Stottlemeyer and Burl Carraway</i> | Panel of International Invited Speakers cont. <i>Presenter: Kerry Dooley</i> | | Relationships among Size of Forest Holdings and Private Forest Ownership Attitudes and Behaviors <i>Presenter: Brett Butler</i> |
| 13:45 <i>(15 min)</i> | Panel: Academic/International Perspective <i>Presenters: Randy Wynne and Rich Guldin</i> | The challenge of the Peruvian State in leading the conservation of relict forests of Polylepis through the National Forestry and Wildlife Inventory: Challenges and Opportunities <i>Presenter: Aurea Erica Aponte</i> | | Expanding the National Woodland Owner Survey to the U.S. Territories and Protectorates: Challenges and Opportunities <i>Presenter: Kathleen McGinley</i> |
| 14:00 <i>(15 min)</i> | Small Area Estimation Session Discussion and Wrap-up | <i>International Session Wrap-up</i> | | Use of the National Woodland Owners' Survey to explore factors associated with enrollment in state preferential forest property tax programs <i>Presenter: Gregory Frey</i> |
| 14:15-14:45 | <i>Break</i> | | | |
| 14:45 <i>(90 min)</i> | Closing General Session | | | |
| 16:15 <i>(15 min)</i> | <i>Final Remarks</i> | | | |
| | <i>Adjourn</i> | | | |