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MARCH 10-11, 2020 Omni Hotel at CNN Center Atlanta, Georgia

# BIOMASS to ENERGY

# Join us at booth # 214



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# **ENERGY COMES TO LIFE**

Pelcome to Atlanta's Omni Hotel at CNN Center and welcome to the sixth Wood Bioenergy Conference & Expo, again hosted by *Wood Bioenergy* magazine and Georgia Research Institute. We very much appreciate your participation and attendance, especially the 31 speakers and 50 exhibitor companies who are contributing their valuable resources, personnel and time.

If you're wondering about the state of the worldwide industrial wood pellets industry, then you're in the right place. Executives from the three leading industrial wood pellet producers—one based in the U.S., one in Canada, and one in Europe—will be speaking. Two consultants will address the future of worldwide industrial wood pellets production and markets.

The U.S. government has to some degree looked away from renewable energy and especially from biomass driven electricity. Yet the world's largest producer of industrial wood pellets is headquartered about 12 miles from Capitol Hill. Other continents and governments have been more receptive to biomass power. We often hear they provide subsidization for renewable energy. This is true to some degree, though it's getting less as the industry becomes increasingly cost-efficient. And then there's the counterpoint of so what if it's subsidized? Are we serious about reducing the impact of fossil fuels or aren't we? Maybe such a tremendous endeavor does take some amount of government assistance. It's not as if other industries haven't received government aid and grants for their various projects.

A few other parts of the conference program should be enlightening as well. One is called Working Forests and features speakers who will address how biomass is playing into forestland conditions and opportunities. One speaker will address the aftermath of Hurricane Michael and its impact on Florida and Georgia timberland and biomass volume.

Four experts will speak about the state of advanced pellets. Are steam explosion or black pellets really going to happen? Otherwise, as Red said in Shawshank Redemption, "Stop wasting my time!"

Finally, if you hear some noise outside of the Omni, it might be a preservationist group protesting this conference, because, well, we're not sure why, unless they're against renewable energy. The first several speakers on our program will touch on keeping environmentalists at bay and countering their misinformation campaigns.

Hey, this should be a lot of fun. Thanks for coming.

Rich Donnell Editor-in-Chief Wood Bioenergy Wood Bioenergy Conference Co-Chairman

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Fred Kurpiel President Georgia Research Institute Wood Bioenergy Conference Co-Chairman

# **GENERAL** INFORMATION

# **BROUGHT TO YOU BY...**

The sixth Wood Bioenergy Conference & Expo is co-produced by *Wood Bioenergy* magazine and Georgia Research Institute.

Wood Bioenergy is published six times per year and covers the domestic and international industrial wood pellets, biomass power, in-woods chipping and biomass procurement segments.

Wood Bioenergy is published by Hatton-Brown Publishers, Inc., which is headquartered in Montgomery, Ala., and



publishes *Timber Processing, Timber Harvesting* and *Southern Loggin' Times* magazines, and is affiliated with *Panel World* magazine.

In addition to co-producing the Wood Bioenergy conference, Georgia Research Institute serves many roles in the wood products industry, including research on products and technologies, and analyzing and deciphering market trends around the globe.

The co-chairmen of the Wood Bioenergy Conference & Expo are Rich Donnell and Fred Kurpiel. Donnell is the editorin-chief at Hatton-Brown Publishers, Inc. and editor-in-chief of *Wood Bioenergy*. He has been covering the wood products industries for 37 years. Kurpiel is president of Georgia Research Institute and has worked in the forest products industry for 42 years, including roles in export management, project development, marketing and machinery sales.

Dianne Sullivan, who is chief operating officer at Hatton-Brown Publishers, Inc., where she has worked for 54 years, serves as manager of the Wood Bioenergy Conference & Expo.

# WOOD BIOENERGY PROGRAM



The Wood Bioenergy Conference & Expo Program is the result of detailed efforts by production personnel Cindy Secrest, Shelley Smith, Brad Jackson, and Stephen Mock. It includes short biographies and presentation summaries of the 31 speakers from the wood energy industry who have graciously volunteered their time.

# **CASH PRIZE DRAWING: \$500**

Everyone is invited to tack their business cards to the bulletin board in the Grand Ballroom North exhibitor hall. Those cards will be placed in a tumbler at the end of the conference and a winning card will be drawn. The prize? \$500! The drawing will be held at 12:30 p.m. on Wednesday, March 11. YOU MUST BE PRESENT TO WIN! Repeat: YOU MUST BE PRESENT TO WIN!

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### TUESDAY, MARCH 10

EXHIBITORS/ATTENDEES BREAKFAST (Grand Ballroom North) 7:15-8:15 a.m

### LEADING OFF (Rooms B-C)

Keeping the Environmentalists at Bay: Presentations & Panel Discussion

### 8:20-8:25 a.m. *Moderator Remarks* — Jessica Johnson, Conference Promotions Director; Senior Associate Editor, *Wood Bioenergy*

### 8:30-8:50 a.m.

Combating Misinformation Against Renewable Energy —Brian Rogers, Spokesperson, Future Forests + Jobs

# 8:55-9:15 a.m.

Health of the Logging Ranks and Staying Ahead of Environmental Encroachment

—Danny Dructor, Executive Vice President, American Loggers Council

### 9:20-9:40 a.m.

Community, Environmental, Economic and Social Perceptions about Pellet Producers in the U.S. South

—Dr. Richard Vlosky, Director, Louisiana Forest Products Development Center, School of Natural Resources, Louisiana State University

# 9:45-10:05 a.m.

Wood Is the Most Carbon Friendly and Least Expensive Feedstock for Electricity Generation —Dr. Puneet Dwivedi, Associate Professor, Forest Sustainability, Warnell School of Forestry and Natural Resources, University of Georgia

TIME OUT WITH EXHIBITORS (Grand Ballroom North) 10:10-10:40 a.m

### **MORNING KEYNOTERS SESSION** (Rooms B-C)

10:40-10:45 a.m. Welcoming Remarks

-Rich Donnell, Conference Co-Chairman; Editor-in-Chief, *Wood Bioenergy* 

### 10:50-11:15 a.m.

How Renewable Wood Energy Can Help Solve the Climate Crisis —John Keppler, Chairman & CEO, Enviva

### 11:20-11:45 a.m.

Partnering for Growth —Scott Bax, Chief Operating Officer, Pinnacle Renewable Energy

EXHIBITORS/ATTENDEES LUNCH (Grand Ballroom North) 11:50 a.m. – 1:00 p.m.

### AFTERNOON KEYNOTERS SESSION (Rooms B-C)

**1:05-1:10 p.m.** General Remarks —Dan Shell, Senior Editor, Wood Bioenergy

### 1:15-1:40 p.m.

What Is the Future for Industrial Wood Pellets? —William Strauss, President, FutureMetrics

### 1:45-2:10 p.m.

Differences on How Biomass Is Produced and Delivered in Europe Versus the U.S. —Raul Kirjanen, CEO, Graanul Invest

TIME OUT WITH EXHIBITORS (Grand Ballroom North) 2:15-2:40 p.m

ADVANCED PELLET TECHNOLOGIES Presentations & Panel Discussion (Room B)

### 2:40-2:45 p.m.

Moderator Remarks: Is It Time to Move to Pellets 2.0? What is the Technical and Economic Status of Advanced Pellet Technologies? —Dr. William Strauss, President, FutureMetrics

### 2:50-3:10 p.m.

Advanced Pellet Fuel from a Proven Technology —Bjorn Halvard Knappskog, CEO, Arbaflame

### 3:15-3:35 p.m.

Current Status of Torrefaction Technology —Andrew Johnson, Vice President, TSI

### 3:40-4:00 p.m.

Realizing the Green Gold with BioTrac Continuous Steam Explosion System —Mats Arnberg, Director, Biomass Conversion Technology Unit, Valmet

# 4:05-4:25 p.m.

Chemo-Mechanical Cellulose Explosion —Tim Wagler, CEO, Trinity Green Derivative Products

### AIR EMISSIONS TREATMENT (Room C)

2:40-3:05 p.m. EPA's Final ACE Rule and Its Bioenergy Implications —Scott Osbourn, Principal, Trinity Consultants

### 3:10-3:35 p.m.

Catalytic Removal of VOCs and HAPs at Wood Pellet Plants —Dr. Grigorii Bunimovich, Owner and COO, Matros Technologies

### 3:40-4:05 p.m.

Advancement in WESP Design for Dryer Particulate Control —Rodney Schwartz, Vice President Sales & Business Development Americas, Dürr Systems

### 4:10-4:35 p.m.

The Quest for the BEST in Pellet Mill Air Emission Control —Rodney Pennington, Senior Director, NESTEC

### **DUST MANAGEMENT** (Pine Room)

### 2:40-3:05 p.m.

The Combustible Dust Hazard Analysis —Jeff Nichols, Managing Partner, Industrial Fire Prevention

### 3:10-3:35 p.m.

Total Dust Management—Production Done Safely —Greg Bierie, Sales & Technical Specialist, Benetech USA

### EXHIBITORS/ATTENDEES RECEPTION (Grand Ballroom North) 5:00-7:00 p.m.

### WEDNESDAY, MARCH 11

EXHIBITORS/ATTENDEES BREAKFAST (Grand Ballroom North) 7:15-8:15 a.m.

### **MORNING KEYNOTERS SESSION** (Rooms B-C)

### 8:20-8:25 a.m.

Welcoming Remarks —Fred Kurpiel, Conference Co-Chairman; President, Georgia Research Institute

### 8:30-8:50 a.m.

Dynamics of the Global Pellet Market and Impact to North American Supply —Jose Gonzalez, Senior Principal, ÄF Pöyry

### 8:55-9:15 a.m.

Executing Projects in the Digital Age —Bijan Shams, President, Cogent Industrial Technologies

### 9:20-9:40 a.m.

Non-Wood Bioenergy Crops + Wood for Sustainable Energy Production

—Wendy Owens, CEO, Hexas Biomass LLC

### 9:45-10:05 a.m.

Using Data Mining and Big Data to Assess Risk in the Biomass Supply Chain

—Dr. Timothy Young, Professor, The University of Tennessee, Center for Renewable Carbon

TIME OUT WITH EXHIBITORS 10:10-10:40 a.m.

# **BIOENERGY** EXHIBITORS

COMPANY	.BOOTH NUMBER
A-LERT Construction & Services	
AFRY Management Consulting	
AGRA Industries	
Andritz	
ASI Industrial	
Auburn University Forest Products	
Bandit Industries	
Benetech	
Biomass Engineering & Equipment	
Bruks Siwertell	
Brunette Machinery	
C.C. JENSEN	
Canadian Biomass Magazine	
Casey Industrial	
Civil & Environmental Consultants .	
Cogent Industrial Technologies	
Con-Vey	
Consolidated Mill Supplies	
Continental Conveyor	
CSE Bliss-Bengal Machine	
CV Technology	
Dürr Systems	
Fagus Grecon	
Flamex	
Forest Products Society	
Hexas Biomass	
Hurst Boiler & Welding	

# WORKING FORESTS

(Room B)

### 10:40-11:05 a.m.

North American Timberland and Forest Industry Capital Investment Trends —Andrew Copley, Project

Manager/Senior Analyst, Forisk Consulting

### 11:10-11:35 a.m.

Hurricane Michael's Impact on the Forest Resource —Devon Dartnell, Director, Market Analysis & Research, Georgia Forestry Commission

### 11:40-12:05 p.m.

Forest Utilization within a Circular Bioeconomy —Dick Baldwin, Managing Partner, Oak Creek Investments

### PROJECT IMPLEMENTATION

Presentations & Panel Discussion (Room C)

### 10:40-10:45 a.m.

Moderator Remarks —Harold Arnold, President, Fram Renewable Fuels

### 10:50-11:10 a.m.

Using Knowledge Management Initiatives to Achieve Successful Project Implementation —Justin Price, Principal, Evergreen Engineering

### 11:15-11:35 a.m.

Project Execution – Modern Tools and Classic Principles —Scott Stamey, Vice President/ Sr. Project Manager, Mid-South Engineering

### 11:40-Noon

We Know a Thing or Two Because We've Seen a Thing or Two —Tom Lepak, VP Business Development, Casey Industrial

### **PROCESS TECHNOLOGIES** (Pine Room)

### 10:40-11:05 a.m.

Smart Material Handling – Good Designs Are NOT More Expensive —Tim Brown, Business Development Manager, Biomass Engineering & Equipment

11:10-11:35 a.m.

The Lifeblood of Your Plant —Peter Smyth, Industry Sales Manager, C.C. Jensen

CASH DRAWING (Grand Ballroom North) (Must be present to win) 12:30 p.m.

LUNCH ON YOUR OWN

COMPANY	BOOTH NUMBER
KraftPowercon	
Laidig Systems	
LDX Solutions	
Louisiana State University	
Matros Technologies	
Mid-South Engineering	
MoistTech	
NESTEC	
Player Design	
Precision Husky	
Process Barron	
Process Sensors	
RUF Briquetting Systems	
Schaeffer Mfg	
SEMCO	
Sensortech Systems	
SHW Storage & Handling Solutions	
Sigma Thermal	
Tanguay	
Timber Automation	
Timber Products Inspection (TPI)	
Top Wood Jobs	
TSI	
University of Tennessee	
Veneer Services	
West Salem Machinery	
Wood Bioenergy Magazine	









# SIGMA THERMAL

PROCESS HEATING SYSTEMS AND SERVICES



## TUESDAY, MARCH 10, LEADING OFF SESSION (ROOMS B-C)

### KEEPING THE ENVIRONMENTALISTS AT BAY

# 8:20-8:25 a.m.

### **Moderator Remarks and Introductions**

Jessica Johnson, Conference Promotions Director; Senior Associate Editor, Wood Bioenergy

### 8:30-8:50 a.m. Combating Misinformation Against Renewable Biomass Energy

Brian Rogers, National Spokesperson, Future Forest + Jobs

The world's leading climate science authorities agree that renewable wood energy is a key component of any strategy to reduce carbon emissions and mitigate global climate change. Unfortunately, a small, well-funded and organized group of anti-forestry activists have launched a misinformation campaign attacking the biomass industry with distorted statistics and misleading claims. Future Forests + Jobs (FFJ), an initiative supported by the US Industrial Pellet Assn. (USIPA), uses facts and research to hold accountable those who spread misinformation about the industry.

### 8:55-9:15 a.m.

### Health of the Logging Ranks and Staying Ahead of Environmental Encroachment

Danny Dructor, Executive Vice President, American Loggers Council Danny addresses loggers getting out in front of the environmentalists and presents findings from ALC's most recent survey, based on 580 responses, pertaining to the outlook for the near future for loggers across the United States as well as the need of markets to handle the small diameter timber that they are harvesting.

### 9:20-9:40 a.m.

### Community, Environmental, Economic, and Social Perceptions about Pellet Producers in the U.S. South

Dr. Richard Vlosky, Director, Louisiana Forest Products Development Center, School of Natural Resources, Louisiana State University

Rich provides insight into the wood pellet manufacturing industry from the perspective of residents in the U.S. South, focusing on environmental, social and economic issues. The region is the largest producer and exporter of wood pellets in the world. This study, based on a survey sent to randomly selected residents, rural and urban, who live near selected pellet mills, is the first of its kind to expand the research to investigate in-depth socio-economic dynamics and fill a general gap in knowledge of the relationship between the wood pellet industry and public supply-side issues in the region from the perspective of communities influenced by the pellet sector.

### 9:45-10:05 a.m.

### Wood Is the Most Carbon Friendly and the Least Expensive Feedstock for Electricity Generation

Dr. Puneet Dwivedi, Associate Professor Forest Sustainability, Warnell School of Forestry and Natural Resources, University of Georgia

In Georgia the coal-based electricity generation emitted 26% of the total greenhouse gas (GHG) emissions in 2016. Considering the availability of biomass resources in the state and advent of emerging technologies like torrefaction, biomass-based feedstocks could be directly used in existing coal-based power plants. Puneet examines economic and environmental analyses of electricity derived from nine feedstocks over 25 years relative to coalbased electricity in Georgia. Pine chips were the least expensive and the least GHG intensive option for generating electricity, with the lowest abatement cost. A carbon tax could make bioenergy feedstocks found in Georgia competitive against coal for reducing carbon emissions from the electricity sector.

### MORNING KEYNOTERS SESSION (ROOMS B-C)

10:40-10:45 a.m. Welcoming Remarks and Introductions Rich Donnell, Conference Co-Chairman; Editor-in-Chief, Wood Bioenergy

### 10:50-11:15 a.m. How Renewable Wood Energy Can Help Solve the Climate Crisis

John Keppler, Chairman & CEO, Enviva



There is no question that the greatest challenge facing us today is the growing climate crisis. As we turn to all the tools in our arsenal, the science is clear on the need for renewable energy to help meet our shared climate goals. In his remarks, John provides an overview of the role that Enviva and the renewable wood bioenergy industry play as a part of a broader, modern solution that addresses many of the country's most

pressing environmental and economic concerns.

### 11:20-11:45 a.m. Partnering for Growth

Scott Bax, Chief Operating Officer, Pinnacle Renewable Energy



People, safety and culture are at the heart of Pinnacle's growing wood pellet business. Over the past two decades, Pinnacle has partnered with some of the world's leading forestry companies to build safe, reliable and productive wood pellet plants. As of 2020, Pinnacle has partnered with five different forestry companies—Westervelt, Tolko, Canfor, West Fraser and Two Rivers Lumber—at six different pellet plants in both

Canada and the United States. Two of these facilities are currently under construction, one in High Level, Alberta, Canada and the other in Demopolis, Alabama. These partnerships have allowed Pinnacle to focus on using sawmill residuals in its pellet production, providing our partners with a reliable home for their residuals and providing our customers with quality pellets safely and on time.

### AFTERNOON KEYNOTERS SESSION (ROOMS B-C)

#### 1:05-1:10 p.m. General Remarks and Introductions Dan Shell, Senior Editor, Wood Bioenergy

#### 1:15-1:40 p.m. What Is the Future for Industrial Wood Pellets? Dr. William Strauss. President, FutureMetrics



The industrial wood pellet market grew from 5 million metric tons in 2010 to more than 22 million metric tons in 2019. Among the major producing and exporting nations, the U.S. is the largest exporter of wood pellets. Bill discusses the expected evolution of carbon emissions reduction policies around the world that will support current demand and will support future demand growth. He also talks about

where that demand for pellets will grow, by how much it could grow, and how, where and why new pellet factories will be built to match demand. The talk includes a discussion of sustainability and how that is necessary for the industry to credibly supply a low-carbon solid fuel alternative to coal.

### 1:45-2:10 p.m. Differences on How Biomass Is Produced and Delivered in Europe vs. the U.S.

Raul Kirjanen, CEO, Graanul Invest



Graanul Invest, with the acquisition of pellet production assets in Texas, is producing pellets now on both sides of the Atlantic Ocean. The founder and CEO elaborates on the differences the way biomass is sourced, processed and delivered on either side of the Atlantic Ocean. He also looks at what are the implications of these differences in the future and how they affect the business now and in the future.

## CONCURRENT SESSIONS ADVANCED PELLET TECHNOLOGIES (ROOM B)

#### 2:40-2:45 p.m.

### Moderator Remarks: Is It Time to Move to Pellets 2.0? What Is the Technical and Economic Status of Advanced Pellet Technologies?"

Dr. William Strauss, President, FutureMetrics Steam exploded or torrfied pellets produced by thermal treat-

ment have been promised for years as a better option to white pellets. They have higher energy per cubic meter, some exhibit hydrophobic characteristics, and in general they require less modifications to pulverized coal power plants that want to co-fire or fully switch from coal to pellet fuel. However, the promises have consistently failed to come true due to technological shortcomings, their inability to compete with white pellets on a dollars per delivered energy cost basis, and to some degree, market inertia in a sector where more than 25 million tonnes of white pellets will be used in power stations in 2020. The panel members discuss the latest in technology advances and how their product can breakthrough and compete in the global industrial pellet sector.

# **BIOENERGY** SESSIONS

### 2:50-3:10 p.m.

### Advanced Pellet Fuel from a Proven Technology

Bjorn Halvard Knappskog, CEO, Arbaflame

This presentation looks at the history of the development of Arbaflame steam exploded (SE) pellets; characteristics of Arbaflame advanced pellets; how biochemical production complements the SE pellet production process; and examines current and future production and demand for SE pellets.

### 3:15-3:35 p.m.

### **Current Status of Torrefaction Technology**

Andrew Johnson, Vice President, TSI

Andrew presents an overview of torrefaction technology based on ongoing projects in Europe, North America and Southeast Asia. He looks at feedstocks, process challenges, pellet attributes, markets for torrefaction and opportunities for advancing the process.

#### 3:40-4:00 p.m. Realizing the Green Gold with BioTrac Continuous Steam Explosion System

Mats Arnberg, Director, Biomass Conversion, Valmet

Pretreatment of biomass using, for example, steam explosion is a robust technology which has been further developed and refined by Valmet. Valmet is a global technology and service provider with a long experience of delivering large commercial projects worldwide. Currently Valmet is in the delivery phase of several commercial full-scale pretreatment systems using continuous steam explosion, Bio-Trac, and one of the commercial projects in Europe is aiming for black pellets. The presentation introduces you to Valmet's project capabilities and the pretreatment system BioTrac with references.

### 4:05-4:25

### Chemo-Mechanical Cellulose Explosion

Tim Wagler, CEO, Trinity Green Derivative Products

Steam explosion is a long existing technology used in the pulping process. Due to its high cost, high energy consumption and low throughput and batch production mode, the technology has not been widely used commercially. Members of Trinity Green Derivative Products have developed a breakthrough technology to overcome all the above mentioned shortcomings of traditional steam explosion. The process is called Chemo-Mechanical Cellulose Explosion (CMCE), which is a continuous, high efficient and low cost process to convert green wood chips and other lignocellulosic materials to a dried, entangled fiber that is ready for the next steps of producing value-added products. The technology behind this process is presented and discussed in detail. A demonstration plant will be built based on this technology and it will be presented as well.

### AIR EMISSIONS TREATMENT (ROOM C)

### 2:40-3:05 p.m.

#### **EPA's Final ACE Rule and Its Bioenergy Implications** Scott Osbourn, Principal, Trinity Consultants

Scott addresses EPA's Affordable Clean Energy (ACE) Rule, which replaces the Clean Power Plan (CPP), as well as the ACE Rule's considerations and implications with respect to biomass. An overview and potential impacts from the final ACE rule, issued by EPA on June 19, 2019, are presented, including comparisons of ACE to the CPP in certain key areas, as well as a discussion of the "best system of emission reduction" (BSER) and Section 111(d) implementation. Finally, consistent with EPA's proposed "inside-the-fence" interpretation of BSER under Section 111, the implications with respect to bioenergy carbon neutrality are discussed.

### 3:10-3:35 p.m.

### Catalytic Removal of VOCs and HAPs at Wood Pellet Plants Grigorii Bunimovich, owner and COO, Matros Technologies

The presentation overviews using catalysts in regenerative thermal oxidizers removing VOCs and HAPs emissions after hammermills, pellet presses and coolers. Using the catalyst reduces RTO operating temperatures and enables substantial savings in natural gas consumption. Additional benefits include reduction in NOx and CO2 emissions. Matros focuses mostly on application of base-metal catalysts composed of manganese and other transient metal oxides. The presentation covers case studies of base-metal catalyst in composite board and wood pellet industries, and describes catalyst performance monitoring and maintenance including laboratory testing of catalyst samples collected from RCOs and catalyst regeneration via bakeout.

### 3:40-4:05 p.m.

### Advancement in WESP Design for Dryer Particulate Control

Rodney Schwartz, Vice President Sales & Business Development Americas, Dürr Systems

Dürr went out and spoke to customers about what they liked and didn't like about current WESP designs and operation, brought the information back, and is now ready to introduce a new WESP product addressing the feedback it received. Rodney highlights specific design enhancements, and once again reinforces the power of utilizing a to-scale pilot unit to prove out the concepts and ideas before bringing them to the market.

### 4:10-35 p.m.

### The Quest for the BEST in Pellet Mill Air Emission Control Rodney Pennington, Senior Director, NESTEC

More than seven WESP and/or RTO/RCO systems have been installed and/or purchased in the pellet industry in the past year. The systems included upgrades and conversions to existing WESPs and RTOs as well as a unique new total system approach with an \$800,000 plus savings in capital equipment. Rodney provides details and photos for conversion to a simple poppet valve assembly; conversion to an upflow WESP eliminating high maintenance and reducing energy consumption; and installation of a total air emission control system approach, reducing capital and operating costs while providing a more simplified installation.

### DUST MANAGEMENT (PINE ROOM)

### 2:40-3:05 p.m.

### The Combustible Dust Hazard Analysis

Jeff Nichols, Managing Partner, Industrial Fire Prevention

NFPA standards state: "Where dusts are determined to be combustible or explosible, the hazards associated with the dusts shall be assessed and mitigated." Often, engineering controls are applied without first understanding the hazard and its implications. A detailed combustible dust hazard analysis is a systematic analytical study of a facility and its processes to identify combustible dust hazards to employees, property, and the public at large. It evaluates various scenarios that can potentially lead to dust or fire explosions, and provides a path forward to prevent and mitigate those consequences. The DHA is the first critical step in the mitigation of combustible dust hazards and provides a solid scientific basis for the implementation of other requirements such as engineering controls and standard operating procedures.

### 3:10-3:35 p.m.

### Total Dust Management - Production Done Safely

Greg Bierie, Sales & Technical Specialist, Benetech USA Benetech is recognized globally as a Total Dust Management (TDM) solutions provider. Its emphasis is dust, spillage, material flow, and safety. This presentation focuses on problems and solutions in the wood biomass industry with safety as the first priority. Biomass production includes the handling of wood chips, wood pellets and similar renewable wood product resources. The result of product degradation is increased combustible dust. The conveyors handling this product require special attention to the design of chutes and dust extraction systems. Benetech is a provider of engineered chutes throughout North America with more than 500 successful installations. Another part of the Benetech TDM tool box includes dust extraction systems, flow aids, pile management, protection and surface dust control.

## WEDNESDAY, MARCH 11 MORNING KEYNOTERS SESSION (ROOMS B-C)

### 8:20-8:25 a.m. Welcoming Remarks and Introductions

Fred Kurpiel, Conference Co-Chairman; President, Georgia Research Institute

#### 8:30-8:50 a.m. Dynamics of the Global Pellet Market and Impact to North American Supply

José González, Senior Principal, ÄF Pöyry



The demand for wood pellets globally is largely developing in two distinct regions, Europe and Asia-Pacific, but they also have some upcoming challenges. The European industrial pellet market offers stable and reliable off-take; however, with incentive schemes in the UK and the Netherlands set to end around 2027 demand in this market could be facing a decline, although with an upside as there is still need for flexible low-carbon

power generation and some countries have committed to exit coal, but whether biomass will take its place is still rather uncertain. As a result many producers are now looking toward Asia-Pacific, where demand in South Korea and Japan is expected to grow considerably in the coming years. Though there is still uncertainty as to the exact extent of the market, requirements for supply volumes are substantial, and in particular Japanese customers have shown that they value reliable supply sources, which puts North America on top of their shopping list. This demand is also expected to mainly develop before the likely contraction of the European market in 2027, leading to an important question for many North American pellet producers: Which market should they prioritize?

### 8:55-9:15 a.m. Executing Projects in the Digital Age

Bijan Shams, President, Cogent Industrial Technologies



The digital age is having a transformational impact enabling industrial operations with a competitive advantage. This presentation shows how deployment of digital platforms is significantly improving the management of projects and how these platforms are transitioned from project to operations to manage and improve operational performance. Bijan shares the complexity and challenges of delivering a project and managing

post-project operational performance issues and how digital platforms can significantly improve the outcome of both as well as provide a platform for Industry 4.0 initiatives.

### 9:20-9:40 a.m. Non-Wood Bioenergy Crops + Wood for Sustainable Energy Production

Wendy Owens, CEO, Hexas Biomass



Sustainable, closed-loop bioenergy crops can supplement or replace wood in a variety of bioenergy applications. One such crop is giant reed. It is perennial and fast growing, with high yields year-over-year. It is highly pest-resistant, grows in different climates and soil types, tolerates drought, is an EPA-approved bioenergy crop, and has low ecological demand. In direct combustion, testing has shown giant reed burns

at about 8,000 BTU/lb. and, when torrefied, giant reed burns at around 10,400 BTU/lb., a significantly higher energy density than other bioenergy crops. This presentation discusses the benefits of supplementing wood bioenergy material with a sustainable bioenergy crop to achieve equal energy production levels and potentially lower cost. Past initiatives to replace coal with torrefied giant reed for long-term energy production are discussed. An overview of raw material supply, logistics, and production that can support long-term contracts and ease wood bioenergy supply demands while having a carbon negative environmental impact are presented.

### 9:45-10:05 a.m. Using Data Mining and Big Data to Assess Risk in the Biomass Supply Chain

Dr. Timothy Young, Professor, The University of Tennessee, Center for Renewable Carbon



Predictive analytics, data mining and the use of big data are paramount to success for business endeavors of today. Data mining and big data are fundamental to the fourth industrial revolution known as Industry 4.0., i.e., where computers and automation come together in a new way, with remote connectivity to computer systems equipped with machine learning algorithms that are predictive. The bioenergy and sustainable biomaterials

industries exist in highly competitive commodity markets, where competitive advantage is sought by lowering the final costs of manufactured product. This presentation outlines the use of advanced data mining analytics using big data that are fused from a multitude of geospatial, climatology, demographic, and geophysical data sources to assess "cost-risk" in the biomass supply chain. Advanced data mining analytics is used to predict optimal locations for bioenergy plants in the Eastern United States.

# CONCURRENT SESSIONS WORKING FORESTS (ROOM B)

### 10:40-11:05 a.m.

### North American Timberland and Forest Industry Capital Investment Trends

Andrew Copley, Project Manager/Senior Analyst, Forisk Consulting This session explores both ownership and capital investment trends. It delves into the largest timberland owners and highlights how acres have shifted across ownership types and geographic regions over time. It also examines the changes to wood demand in specific forest product and bioenergy manufacturing sectors and how these actual and expected changes relate to fiber prices.

### 11:10-11:35 a.m.

#### Hurricane Michael's Impact on Timber Supplies Devon Dartnell, Director, Market Analysis & Research, Georgia Forestry Commission

Devon discusses the devastating effects of Category 5 Hurricane Michael on the timber and biomass supply systems in the path of the storm. He provides an assessment of damage caused by Hurricane Michael to timber resources in northwest Florida and southwest Georgia and reviews salvage and reforestation operations in the aftermath. He addresses what effect the storm will have on future biomass and timber supplies for area mills.

### 11:40-12:05 p.m.

### Forest Utilization Within a Circular Bioeconomy

Dick Baldwin, Managing Partner, Oak Creek Investment

The growing capability to use young small-diameter logs from a wide variety of species as raw material for wood products, pellets and fuel is expanding the environmental virtues of the working forest. These benefits are optimized by finding the highest and best applications for all biomass fiber. An analysis of the economic and environmental benefits is readily understood through the "Circular Bioeconomy" framework. This conceptual framework establishes the key role that wood products play in the forest lifecycle and provides suggestions on improving forest and forest product management. The model itemizes and advocates sustainable and balanced forest management through eliminating waste, adding economic value (or minimizing lower value products), and recycling/repurposing throughout the entire forest and wood fiber lifecycles. Researchers continue to refine this increasingly effective model with the purpose of better identifying and maximizing environmental and economic value from working forests.

## PROJECT IMPLEMENTATION (ROOM C)

#### 10:40-10:45 a.m. Moderator Remarks and Introductions Harold Arnold, President, Fram Renewable Fuels

#### 10:50-11:10 a.m. Using Knowledge Management Initiatives to Achieve Successful Project Implementation Justin Price, Principal, Evergreen Engineering

This presentation aims to analyze different influencing factors to knowledge management initiatives in the project companies choose to execute. It presents a model of critical factors, which have deep impacts for failure or success of projects. Based on literature and the survey-based research results, it presents the most significant barrier for successful initiatives in projects. It highlights key metrics for developing successful projects and how these metrics can be tracked through the lifecycle of the project.

### 11:15-11:35 a.m.

Project Execution - Modern Tools and Classic Principles

Scott Stamey, Vice President/Sr. Project Manager, Mid-South Engineering

Good project execution principles are rarely new, but the tools we use to plan and execute difficult projects have improved drastically over the years. This presentation gives a brief overview of some of the new technology being used to reduce risk, improve quality, and speed up project delivery. Scott looks at examples of how these modern tools and classic principles have been put to use on complex projects.

#### 11:40-Noon We Know a Thing or Two Because We've Seen a Thing or Two

Tom Lepak, VP Business Development, Casey Industrial

Ever wonder why some industrial projects flounder while others succeed? Lessons learned during Casey Industrial's 82-year history of industrial plant construction have identified project execution attributes which should be avoided and those which should be mandatory. Yes, it's good to be lucky, but implementing the right elements should help lessen and even eliminate speed bumps as you begin your next capital project.

## PROCESS TECHNOLOGIES (PINE ROOM)

### 10:40-11:05 a.m.

### Smart Material Handling – Good designs Are NOT More Expensive

Tim Brown, Business Development Manager, Biomass Engineering & Equipment

This presentation educates you about the latest improvements and how to apply them to your biomass material handling challenges. It looks at smart vs. dumb designs; shows that good designs are flexible, reliable, redundant and therefore more reliable; shows that when the total installed cost is considered, good designs are cheaper; shows why material handling "must" be a part of the integrated plant design rather than an afterthought; and looks at the long-term operational cost savings of good designs

### 11:10-11:35 a.m. The Lifeblood of Your Plant

Peter Smyth, Industry Sales Manager, C.C. Jensen

As much as 80% of all machine failures are caused by contamination in the oil. Pro-active methods for dealing with this can save considerable costs over time. Peter discusses the damage that can be done by oil contamination and ways to prevent it and how to remove it. Through several industry specific case studies Peter covers best practices in oil handling, storage and sampling as well as how to use oil analysis to your advantage. The most effective methods to keep contaminants out of your oil in the first place are explained. He also looks at the biggest contaminants and how to identify if you have problems and the latest techniques for dealing with issues if they arise, via the latest technology available in oil filtration. Oil is an asset, not a consumable. You should leave this presentation with the knowledge of how to best take care of that asset and save your company money.





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### Mats Arnberg Director, Biomass Conversion Valmet



Mats has been working in the business of pulping since the late 80's and has a solid background both as a design engineer, project manager and sales manager within this field. In 2009 Mats changed focus to the renewable energy business and today he is responsible for one of Valmet's major future ventures in Biotechnology focusing on renewable transport fuels, renewable chemicals and black pellets, using Valmet's

key technology Valmet Pretreatment system BioTrac.

### Harold Arnold President Fram Renewable Fuels



Harold has been involved in the forest industry his entire working life. He joined Fram Renewable Fuels, LLC in 2005. His industry knowledge led to the development of Fram's first wood pellet facility in Baxley, Georgia. Appling County Pellets was constructed and began production in late 2007. Subsequently Harold played a pivotal role in the development of the Telfair Forest Products pellet operation as well as Hazlehurst Wood Pel-

lets, and in 2018 the company purchased its fourth pellet mill in Georgia.

### Dr. Richard (Dick) Baldwin Managing Partner Oak Creek Investment



A native of Lebanon, Oregon, Dick draws on six decades of experience across the forest products industry, including multiple ownership and managerial roles, as well as consulting assignments worldwide. Currently he is Managing Partner of Oak Creek Investments LLC, an investor in several wood and non-wood businesses. Dick has held public office as member of the Oregon State Board of Forestry through Gover-

nor appointment and Senate confirmation. Dick regularly presents at industry events and has authored many books and journal articles about manufacturing, maintenance, operations leadership, and forestry issues. Dick earned a B.S. in Operations Management from the University of Oregon, a M.S. in Forestry from Stephen F. Austin State U. and a Ph.D. in Public Affairs from the University of Texas at Dallas. He holds the Certified Forester designation from Society of American Foresters.

### Scott Bax Chief Operating Officer Pinnacle Renewable Energy



As Chief Operating Officer for Pinnacle Renewable Energy, Scott is responsible for the safe and productive operations of Pinnacle's nine pellet plants located throughout British Columbia, Alberta and Alabama. Pinnacle has two additional pellet plants under construction that will become operational in 2020 and 2021. Scott's passion is safe operational performance achieved through growing organizational culture by exem-

plary leadership, empowerment and empathy. Prior to joining Pinnacle in 2013, Scott acquired more than 20 years of forestry experience in various forestry and wood manufacturing operations throughout Canada and the U.S. as well as a number of years working as a performance improvement consultant specializing in the forest sector. Scott holds a Master of Business Administration and Master of Forestry from the University of Alberta as well as a Bachelor of Science in Environment from the University of Guelph.

### Greg Bierie Sales & Technical Marketing Specialist Benetech USA



As Sales & Technical Marketing Specialist for Benetech USA, Greg is focused on the development and application of advanced conveyor technologies into the bulk material handling industries. Greg has spent nearly 30 years serving mining, power generation and other industries with material handling systems, with responsibilities in project estimation, procurement, installation, project management, and system design.

He holds a B.S. from Colorado State University. When he is not traveling for Benetech, Greg resides in Missoula, Montana.

### Tim Brown Business Development Manager Biomass Engineering & Equipment



Tim Brown is the Business Development Manager for Biomass Engineering & Equipment. Tim has 15 years of experience in the forest product industries. He has a B.S. in Education and an A.S. in Engineering Technology. Tim leads the sales efforts to identify new clients, manage the company's trade show program, and leads the lunch & learn program designed to educate North American engineer-

ing firms and large forest product companies about company products. Parent company Veneer Services and Biomass Engineering and Equipment are supplying machinery to a wide range of biomass processing facilities as well as wood pellet mills, traditional lumber, panelboard, and veneer operations.

### Dr. Grigorii Bunimovich Owner and COO Matros Technologies, Inc.



Grigorii has been involved in reaction engineering research for more than 25 years. He was a key engineering specialist in Dr. Yurii Matros' team involved in pilot tests and commercialization of reversed flow reactors for sulfuric acid production and control of volatile organic compounds. Recently he has been developing a new catalytic system for hydrocarbon, CO and NOx removal after diesel engines

operated with natural gas or diesel fuels. Grigorii is a graduate of the Technical University of Tomsk and has a M.S. in Chemical Engineering. He obtained his Ph.D. in Chemical Engineering in Dr. Matros' department in Boreskov Institute of Catalysis at Novosibirsk, Russia. Since 1993 he has worked at Matros Technologies where he serves as the director of catalyst applications. Grigorii holds four U.S. and several foreign patents.

### Andrew Copley Project Manager/Senior Analyst Forisk Consulting



Andrew is a Project Manager and Senior Analyst with Forisk Consulting, which conducts applied research related to the forest industry and provides strategic guidance for clients. Prior to joining Forisk, Andrew served as a consultant with Green Circle Bio Energy and as a research assistant with Enviva. In addition, he provided research and analyzed forest industry prices for Timber-Mart South. Andrew has an undergradu-

ate degree in Economics and International Studies from the University of North Carolina at Chapel Hill and a Master of Science in Forest Resources from the University of Georgia.

### Devon Dartnell Director of Market Analysis and Research Georgia Forestry Commission



Devon is the Director of Market Analysis and Research for the Georgia Forestry Commission. He has also recently served as the director of operations for the Georgia Forestry Commission. Prior to working for GFC, Devon worked in the oilfield exploration and production industry in engineering and managerial positions in Alaska, Brazil, Canada, Venezuela, Nigeria, Texas and Louisiana. Devon is a timberland owner, growing

and producing pine timber in central and south Georgia. He is a graduate of the Georgia Institute of Technology with a B.S. in Electrical Engineering.

### Dr. Puneet Dwivedi Associate Professor Forest Sustainability Warnell School of Forestry and Natural Resources University of Georgia



Puneet is an Associate Professor of Forest Sustainability at the University of Georgia's Warnell School of Forestry and Natural Resources. He joined the University of Georgia in 2013 after finishing his doctoral studies at the University of Florida, the first postdoctoral research appointment at Yale University, and the second postdoctoral appointment at the University of Illinois. He has published

68 refereed articles analyzing the sustainability of wood-based bioenergy development, perceptions of family forest landowners, and modeling of forest-based ecosystem services. His research has been cited more than 1,500 times. He serves as an Associate Editor at Forest Policy and Economics. He currently supervises 11 graduate students as a major supervisor.

### Danny Dructor Executive Vice President American Loggers Council



Danny has spent the last 40 years working in the forest products industry. His early career included working for the U.S. Forest Service, forestry consultant work, Kirby Forest Industries, Duke City Lumber Co., and Louisiana-Pacific. Danny went into the timber harvesting business with a partner in the late eighties and eventually owned and managed BMP Logging, Inc. He shut down the logging

business in 2001 and was selected to become the Executive Vice President of the American Loggers Council in 2001, which he had become involved with in 1997 serving as the board representative from the Texas Logging Council. Danny has served as president of the Texas Logging Council, a board member of the Texas Forestry Assn., the Federal Forest Research Advisory Committee, Wood Supply Research Institute, and Resource Committee of the Sustainable Forestry Board. He continues to serve on the TFA Legislative Committee, the Team Safe Trucking Board of Directors and the Angelina/Sabine National Forests Resource Advisory Committee. His position with the American Loggers Council includes the day-to-day running of the council as well as representing the membership in Washington, DC and other venues where timber harvesting issues are being addressed. Danny graduated in 1979 from Stephen F. Austin State University with a Bachelor of Science in Forestry.

### Jose Gonzalez Senior Principal ÅF Pöyry



Jose has more than 20 years in the industry and has significant experience in business analysis and strategic direction. He has managed or worked on dozens of corporate strategy, due-diligence, investment analysis, bioenergy, competitive assessment and mill operations improvement engagements. Jose supervises strategic and operational excellence engagements in North America and

Latin America and advises CEO and Board level executives. Jose is the link between the management consulting and engineering practices for ÅF Pöyry. He received a B.S. as a Mechanical Administrator Engineer at the University of Nuevo Leon in Mexico, and a Master of Science at the Institute of Paper Science and Technology at Georgia Tech (now the Renewable Bioproducts Institute) in Atlanta. He holds a Certificate of Management Sciences from DuPree School of Management, Georgia Institute of Technology.

### Andrew Johnson Vice President TSI



Andrew has become a leading spokesman for the industrial wood pellet industry while leading the dry end technologies firm, TSI. He has worked in the woodworking machinery business for nearly 35 years, based originally in Europe and then in the U.S. and has done business in more than 30 countries. Since 2003 he has been Vice President for TSI, which produces dryer islands and torrefaction systems for the industrial

wood pellet industry and counts amongst its clients many of the largest producers in North America. Andrew studied Furniture Production and Wood Science at High Wycombe College in England.

### John Keppler Chairman & CEO Enviva



John is a co-founder and the Chairman and CEO of Enviva. John has been responsible for setting Enviva's strategic direction and leading the company's growth from a startup company to become the world's largest producer of woody biomass fuels with operations in Mississippi, Alabama, North Carolina, Virginia and Florida. The company's portfolio of facilities now comprises nearly 3 million metric tons of produc-

tion capacity, with additional capacity under construction. These facilities export to customers in the United Kingdom, the EU, Japan and South Korea through Enviva's wholly-owned wood pellet port facilities at Chesapeake, Va. and Wilmington, NC and also through deep water marine terminals in Panama City and Mobile. John led Enviva Partners to its initial public offering on the New York Stock Exchange in April 2015, making it the first publicly traded company in the industry. He serves on the Board of the Sustainable Biomass Program (SBP). John holds a Bachelor of Arts in political economy from the University of California, Berkeley, and a Master of Business Administration from the Darden Graduate School of Business Administration at the University of Virginia.

### Raul Kirjanen CEO Graanul Invest



Raul started Tallinn, Estonia-based Graanul Invest in 2003 in a small office, but growth came quickly and hasn't slowed. By 2005 the company had opened its first wood pellet mill in Imavere, Estonia. Many more followed and today Graanul Invest is Europe's largest manufacturer of wood pellets. It also operates its own bulk carrier shipping vessels. The company employs more than 600 through numerous subsidiary companies in

the Baltic States, including CHP plants and timberland ownership. In addition, last October Graanul Invest purchased the Texas Pellets wood pellets facility in Woodville and a port facility at Port Arthur. Raul was elected to the steering committee of the Forestry Development Plan as a commissioner of the Estonian Renewable Energy Assn. Raul has a Bachelor of Arts from the University of Tartu, and an M.B.A. through the TRIUM Global Executive MBA program.

### Bjørn Halvard Knappskog CEO Arbaflame

Bjørn has been head of business development of the bioenergy division at Pemco since 2017, which includes both white pellets production and district heating, and development of next generation wood pellets through Norway-based Arbaflame. He has held the role as CEO of Arbaflame since late 2019, with key focus on commercialization and preparation for large scale industrialization of the technology. He is a former

world champion in Monopoly, and is an active golfer and skier during his spare time. He was educated at the Norwegian School of Economics and Business Administration.

### Tom Lepak VP Business Development Casey Industrial



Tom Lepak has thoroughly enjoyed his 40year career in the industrial construction industry. Much of that time has been spent serving building products manufacturers on projects across the United States and sometimes internationally. He is a licensed civil engineer with a M.S.C.E. in Construction Management from Purdue University. Tom joined Casey Industrial in 1988 after eight years with USG Corp. He served

as Casey's estimating manager for eight years, worked in business development for 22 years, and now supports the company with market and project analysis.

### Jeffrey Nichols Managing Partner Industrial Fire Prevention



As Managing Partner at Industrial Fire Prevention, LLC Jeff has helped protect the process industries in North America for three decades. He started protecting dust collectors with spark detection & extinguishing systems when they were first introduced into the United States in the late 1970s, continued his studies, and has since added other hazard monitoring, fire, and explosion protection systems to help protect his

clients' process, production, people, and profits from deadly fires and explosions.

### Scott Osbourn Principal and Practice Leader Trinity Consultants



Scott is a Principal and Practice Leader with Trinity Consultants, focusing his efforts in the energy and power market sectors. He has 35 years of experience in multidisciplinary environmental projects, with an emphasis on air quality and energy issues. Prior to his past 20 years in consulting, Scott spent 10 years with the former Progress Energy, now Duke Energy. Scott is an Auburn University graduate with a B.S. in Civil

Engineering and is a Florida licensed professional engineer.

### Wendy Owens CEO Hexas Biomass



Wendy is the CEO of Hexas Biomass LLC, a producer and distributor of non-wood biomass. She is a serial entrepreneur with experience across multiple industries. Hexas is her latest venture and combines her background in materials engineering with her experience in biotechnology. Wendy has led an advanced composite materials company, been an advisor to startup and mid-stage companies on commercialization of new technologies, and spent 14 years as an advisor to the US Secretary of Commerce and US Trade Representative on international trade policy as a member of an International Trade

Advisory Committee. Wendy is a published author on a variety of subjects and has a Master of Art degree from Tufts University.

### Rodney Pennington Senior Director NESTEC



Rodney is a Registered Professional Engineer with more than 45 years of diverse experience in all phases of research, engineering, design, management, sales and marketing of air pollution control and energy conservation systems, including the past eight years at NESTEC. He has more than 20 patents, is a published author and speaker and has served as an expert witness in regenerative thermal oxidation (RTO) technology. He holds a bachelor's degree in Engineering Science with honors from Penn State University.

### Justin Price Principal Evergreen Engineering



Justin is a driving force behind Evergreen. He has vast experience in engineering for the wood products industry and an innovative approach to engineering solutions. Justin's responsibilities include construction management; developing new or modified plant layouts; designing mechanical conveying systems, process equipment, and piping layouts; and preparing equipment specifications. Some of his major projects have been in the chemical, pulp & paper, and wood products industries. He is proficient in executing projects to satisfy client specifications and expectations and in meeting defined schedules, as well as cost and quality pa-

rameters. When not busy thinking of new engineering ideas, Justin can be found on his bicycle anywhere around the country or spending time with his family.

### Brian Rogers National Spokesperson Future Forests + Jobs



Brian leads Future Forests + Jobs, an initiative by the U.S. Industrial Pellet Assn., to advance a fact-based conversation around renewable wood energy. Brian previously served U.S. Senator John McCain for nearly a decade, including five years as McCain's communications director in the U.S. Senate, and as deputy communications director on McCain's 2008 presidential campaign. In 2009-2010, Rogers worked on former Vice President Al Gore's Repower America campaign for clean energy and climate legislation. Rogers has held senior roles on campaigns across the country, including for former

California Governor Arnold Schwarzenegger, the Republican National Committee, and the National Republican Senatorial Committee. Rogers is a graduate of Washington & Lee University in Lexington, Va.





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### Rodney Schwartz Vice President Sales & Business Development - Americas Dürr Systems, Inc.



Rodney is Vice President of Sales of Environmental Products for Dürr MEGTEC, a leading manufacturer of air pollution control and industrial drying equipment. Rod has more than 15 years of experience in engineering and engineering management, and 20 years of experience in sales and business development of air pollution control equipment, capture technology, and heat recovery systems. In his current position, Rod

has overall responsibility for sales and business development for the Americas Region of Dürr's Clean Technology Systems business segment, and global responsibility specific to the wood panelboard industry. Rod has authored and presented numerous technical articles associated with air pollution control and energy recovery technologies. He received his B.S. in Agricultural Engineering from the University of Wisconsin at River Falls.

### Bijan Shams President Cogent Industrial Technologies



Bijan is the founder and President of Cogent Industrial Technologies. From greenfield to modernization projects, industrial operations and facilities around the world leverage Cogent's Operational Technology solutions and project management services to achieve a safe, reliable and efficient operation. Bijan has nearly 25 years of extensive experience in the execution of technically large projects in the wood industry. He has

a bachelor's degree in Electrical Engineering and a Master of Science in Instrumentation & Analytical Science from the University of Manchester in England.

### Peter Smyth Industry Sales Manager C.C. Jensen



Peter has been Industry Sales Manager for C.C. Jensen off-line filtration for more than four years. C.C. Jensen is a Danish company and world leader in the field of off-line filtration of lubricating and hydraulic oils as well as diesel fuel. Peter primarily focuses on the pulp and paper, bioenergy, panel and lumber, and hydraulic press industries. Peter has also spent several years in lubricant sales and consulting. He is a graduate

of the University of Alabama and is MLA I certified.

### Scott Stamey Vice President/Sr. Project Manager Mid-South Engineering



Scott has been with Mid-South Engineering for 10 years, currently serving as a Vice President and working out of their office in Cary, North Carolina. He has more than 20 years of experience in the wood products industry, primarily focused on engineered wood and pellet production. In that time he has worked in plant engineering, construction management, and consulting engineering roles. He obtained his bachelor's and mas-

ter's degrees from NC State University in Mechanical Engineering and Forest Biomaterials, respectively.

### Dr. William Strauss President and Founder FutureMetrics



As president and founder of FutureMetrics, LLC, Bill is globally recognized as a leading expert in the wood pellet sector and has published numerous papers. He is also a co-founder and a Director of Maine Energy Systems, a large manufacturer of European style automatic pellet fueled central heating systems in North America. Bill has been named as one of the most influential leaders in the biomass sector in 2016 and again

in 2017 by Argus Media, and is the 2012 recipient of the International Excellence in Bioenergy award. He has more than 40 years of strategic and policy planning, project management, data analysis, operations, and modeling experience in the renewable energy sector including 10 years operating large waste-to-energy plants in the 1980s. He has an M.B.A. specializing in finance and a Ph.D. in economics and earth systems science.

### Dr. Richard Vlosky Director & Professor Louisiana Forest Products Development Center (LSU)



Rich is Director of the Louisiana Forest Products Development Center and Crosby Land and Resources Endowed Professor in Forest Sector Business Development at the Louisiana State University Agricultural Center in Baton Rouge. He received his Ph.D. in Wood Products Marketing at Penn State University, an M.S. in International Forest Products Trade from the University of Washington and a B.S. in Natural Resources and

Forest Management from Colorado State University. His areas of research include mass timber, wood-based bioenergy, domestic and international forest products marketing and business development, certification & green marketing, eBusiness and eCommerce. Results from his research have been published in hundreds of literature. In addition, he has made more than 450 presentations in the U.S. and worldwide. Rich was previously product line marketing and planning manager, Plum Creek Timber Co.; and database manager for the Center for International Trade in Forest Products at the University of Washington.

### Tim Wagler CEO Trinity Green Derivative Products



Tim is an Electro-Optical Applied Scientist by training and an entrepreneur in life. He has spent his career leading both Federal Government and private sector teams and companies focusing on the reduction-to-practice phase of technology commercialization. He was led to the lignocellulosic material innovation space due to his interest in producing graphene from sustainable sources. The challenge as it turned out was elim-

inating the enormous recurring and nonrecurring cost associated with feedstock conditioning (fractionation and drying). The breakthroughs have followed that focus. Tim and his wife, Stacey, reside in West Lafayette, Indiana.

### Dr. Timothy Young Full Professor – Data Scientist Center for Renewable Carbon University of Tennessee



Tim is a Full Professor in the Center for Renewable Carbon at the University of Tennessee. He has taught highly successful industry courses in Advanced Analytics and Data Mining, Process Analytics, Statistical Process Control/Lean Methods, and Design of Experiments to more than 1,000 industry personnel since 2000. His current focus areas in the data sciences are advanced analytical modeling of processes; elementary Al

applications; data fusion and data quality management, statistical visualization; real-time predictive analytics, and real-time statistical process control. Tim has produced 294 scientific publications and given more than 400 professional presentations. Tim has had extensive invited international speaking engagements. Tim was awarded the University of Wisconsin Outstanding Alumni of the Year in 2018 and Fellow of the International Academy of Wood Science in 2019. He is current Head of the Industrial Engineering Unit and Director of the Center for Data Science (CDS) of the Athens Institute for Education and Research (ATINER), Greece. He has a Ph.D. in Statistics and M.S. in Statistics from the University of Tennessee. He also holds M.S. and B.S. degrees from the University of Wisconsin, Madison.





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