

2018 Winter Conference on Plasma Spectrochemistry



**Amelia Island, Florida
January 8 – 13, 2018
Omni Amelia Island Plantation Resort**

2018 Winter Conference on Plasma Spectrochemistry
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Dr. Ramon M. Barnes, Conference Chairman

2018 Winter Conference on Plasma Spectrochemistry

Amelia Island, Florida, January 8 – 13, 2018

Plasma Spectrochemistry for Trace Element, Stable Isotope, and Elemental Speciation Analyses

The 2018 Winter Conference on Plasma Spectrochemistry, twentieth in a series of biennial meetings sponsored by the *ICP Information Newsletter*, features developments in plasma spectrochemical analysis by inductively coupled plasma (ICP), dc plasma (DCP), microwave plasma (MIP), glow discharge (GDL), and laser sources. The meeting will be held Monday, January 8 through Saturday, January 13, 2018, on Amelia Island, Florida (www.ameliainland.com) at the Omni Amelia Island Plantation Resort (<http://www.omnihotels.com/FindAHotel/AmeliaIsland.aspx>). Continuing education short courses at introductory and advanced levels and manufacturers' seminars will be offered Friday through Monday, January 5-8. Spectroscopic instrumentation and accessories will be shown during a three-day exhibition from January 9 to 11, and workshops on New and Novel Plasma Instrumentation, Clinical ICP-MS, Elemental Speciation and Isotope methodology will be presented on Tuesday through Saturday afternoons. A golf tournament will be held on Sunday, January 7.

Objectives and Program

The continued growth in popularity of plasma sources for atomization and excitation in atomic spectroscopy and ionization in mass spectrometry and the need to discuss recent developments of these discharges in spectrochemical analysis stimulated the organization of this meeting. The Conference will bring together international scientists experienced in applications, instrumentation, and theory in an informal setting to examine recent progress in the field. Approximately 600 participants from 30 countries are expected to attend.

Over 300 papers describing applications, fundamentals, and instrumental developments with plasma sources will be presented in lecture and poster sessions by more than 200 authors. Symposia organized and chaired by recognized experts will include the following topics: 1) Sample introduction and transport phenomena; Flow processing spectrochemical analysis; 2) Nanomaterial analysis and characterization; 3) Elemental speciation, metallomics, and mass cytometry; 4) Plasma instrumentation, including advanced detectors, chemometrics, expert systems, on-line analysis, microplasmas, software, and remote-system automation; 5) Sample preparation, treatment and automation; 6) Excitation mechanisms, plasma phenomena and modeling; 7) Spectroscopic standards and reference materials, and high-purity materials; 8) Plasma source mass spectrometry; 9) Glow discharge atomic and mass spectrometry; 10) Stable isotope analyses; 11) Laser-assisted plasma spectrometry; 12) Advanced materials bulk and surface characterization, imaging, and 13) Novel plasma spectrochemical applications. Six plenary and 34 invited lectures will highlight advances in these areas. Four afternoon poster sessions will feature applications, automation, and new instrumentation. Six Heritage Lectures will be presented by distinguished scientists and investigators, who have contributed significantly to the development of plasma spectrochemistry and will address critical development areas in sample introduction, instrumentation, elemental speciation, plasma source mass spectrometry, and novel software and hardware. Plenary, invited, and submitted papers will be published in September 2018 after peer review as the official Conference proceedings.

Schedule of Activities

Call for Papers, Abstracts Due, Early Bird Registration	Friday, July 7, 2017
Exhibitor Booth Reservation and Pre-Registration Deadlines	Friday, September 22, 2017
Final Abstracts for All Papers Due	Friday, October 13, 2017
Exhibitor Reservation Deadline	Friday, October 13, 2017
Conference Pre-Registration Deadline	Friday, October 13, 2017
Hotel Reservation Deadline	Friday, December 8, 2017
Late Pre-Registration Deadline	Friday, December 15, 2017
2018 Winter Conference Short Courses	Friday - Monday, January 5 - 8, 2018
2018 Manufacturers' Seminars	Friday - Sunday, January 5 - 7, 2018
2018 Winter Conference on Plasma Spectrochemistry	Monday - Saturday, January 8 - 13, 2018
2018 Instrument Exhibition	Tuesday - Thursday, January 9 - 11, 2018
2018 Special Topic Workshops	Tuesday - Saturday, January 9 - 13, 2018
Conference Manuscripts Submission Deadline	February 16, 2018

Daily Schedule of Activities

Friday, January 5, 2018	7:00 am - 9:00 pm	Short Course Registration (Amelia Registration Desk)
	8:00 am - 11:00 pm	Short Courses (Breakout rooms)
		Session 1 1 pm - 5 pm Session 2 7 pm - 11 pm
Saturday, January 6	7 am - 6:30 pm	Short Course Registration (Amelia Registration Desk)
	8:00 am - 11:00 pm	Short Courses (Breakout rooms)
		Session 3 8 am - noon Session 4 1 pm - 5 pm Session 5 7 pm - 11 pm
Sunday, January 7	7:30 am - 10 pm	Registration (Amelia Conference Registration Desk)
	8:00 am - 11:00 pm	Short Courses (Breakout rooms)
		Session 6 8 am - noon Session 7 1 pm - 5 pm Session 8 7 pm - 11 pm
Monday, January 8	6:00 pm - 8:00 pm	Sponsored Welcome Social Mixer (Amelia Foyer)
	7:00 am - 9:00 pm	Registration (Amelia Conference Registration Desk)
	8:00 am - 5:30 pm	Conference Session (Amelia Ballroom)
Tuesday, January 9	5:30 pm - 6:30 pm	Heritage Lecture (Amelia Ballroom)
	6:30 pm - 8:30 pm	Exhibition Opening and Social Mixer (Magnolia Ballroom)
	7:00 pm - 11:00 pm	Session 9 Short Courses (Breakout rooms)
Wednesday, January 10	7:30 am - 8:00 pm	Registration (Amelia Conference Registration Desk)
	8:00 am - 6:30 pm	Conference Session (Amelia Ballroom)
	9:00 am - 6:30 pm	Exhibition (Magnolia Ballroom)
Thursday, January 11	3:00 pm - 6:30 pm	Poster Session (Magnolia Ballroom)
	3:10 pm - 5:30 pm	Workshop on New Plasma Instrumentation (Amelia Ballroom)
	5:30 pm - 6:30 pm	Heritage Lecture (Amelia Ballroom)
Friday, January 12	7:00 pm - 9:00 pm	Exhibitor Sponsored Events (Various, Magnolia Ballroom)
	7:30 am - noon	Registration (Amelia Conference Registration Desk)
	8:00 am - 6:30 pm	Conference Session (Amelia Ballroom)
Saturday, January 13	9:00 am - 6:30 pm	Exhibition (Magnolia Ballroom)
	3:00 pm - 6:00 pm	Poster Session (Magnolia Ballroom)
	3:10 pm - 5:30 pm	Workshop on Elemental Speciation (Amelia Ballroom)
	5:30 pm - 6:30 pm	Heritage Lecture (Amelia Ballroom)
	7:00 pm - 10:00 pm	Exhibitor Sponsored Conference Dinner (Sunrise Cafe)
	7:30 am - noon	Registration (Amelia Conference Registration Desk)
	8:00 am - 6:30 pm	Conference Session (Amelia Ballroom)
	3:00 pm - 5:30 pm	Poster Session (Amelia Ballroom Foyer)
	3:10 pm - 5:30 pm	Workshop on Isotope Methodology (Amelia Ballroom)
	5:30 pm - 6:30 pm	Heritage Lecture (Amelia Ballroom)
	6:30 pm - 8:00 pm	Exhibitor Sponsored Social Mixer (Amelia Ballroom Foyer)
	7:30 am - noon	Registration (Amelia Conference Registration Desk)
	8:00 am - 6:30 pm	Conference Session (Amelia Ballroom)
	8:00 - 9:00 am	Heritage Lecture (Amelia Ballroom)
	3:10 pm - 6:30 pm	Workshop on Novel Instrumentation (Amelia Ballroom)
	6:30 pm	Conference Closing (Amelia Ballroom)

2018 Winter Conference on Plasma Spectrochemistry

Amelia Island, Florida, January 8 – 13, 2018

Conference Background

The Meeting

The **Winter Conference on Plasma Spectrochemistry** is sponsored biennially by the ICP Information Newsletter, Inc., a nonprofit, philanthropic research organization located in Hadley, Massachusetts and Lehigh Acres, Florida, and organized by Dr. Ramon Barnes of the University Research Institute for Analytical Chemistry. Previous meetings were held in Arizona, California, Florida, Hawaii, and Puerto Rico (Table). Attendance has grown from 170 in 1980 to approximately 500 with world-wide scientific participation representing 30 countries. Technical sessions comprise lectures and posters describing application, fundamental, and instrumentation developments with popular electrical plasma sources. The inductively coupled plasma (ICP), glow discharge sources, microwave induced plasma, direct current plasma, and laser-assisted plasma spectrochemistry are featured. New spectrometric instrumentation, novel sample introduction systems, plasma system automation, sample preparation approaches, elemental speciation, spectroscopic standards, quality assurance, new diagnostic characteristics, and theoretical treatments are highlighted. Approximately 300 technical papers are presented, and selected papers have been published together as the Conference proceedings in *Spectrochimica Acta, Part B* (1981-1987), *Journal of Analytical Atomic Spectrometry* (1988-2016), and *Journal of Analytical Bioanalytical Chemistry* (1998-2006). The proceedings of the 2018 Winter Conference will appear in these major spectroscopy journals during Fall 2016. The 2020 Winter Conference will be held January 12 - 18, 2020, in Tucson, Arizona

Some in the field consider the Winter Conference one of the technically most significant meetings convened on these topics. Sixteen European Winter Conferences have been held as well (Table) with the next one planned for France in 2019. Six Asia-Pacific Winter Conferences have been held in China, Japan, Korea, and Thailand. The seventh will be held in Japan (2017).

The People

The Winter Conference attempts to bring together the major figures in the field of plasma spectrochemistry in a comfortable and informal setting to promote maximum information exchange and conversations. We accomplish this by inviting keynote speakers, employing principals to organize and chair sessions and discussions, and by offering technical short-courses taught by experts. Furthermore, experienced and novice analytical chemists seeking to share and expand their experiences in plasma spectrochemistry participate actively. Invited speakers include distinguished international experts. Heritage lecturers, workshops, and symposia will be arranged and chaired by many of the leaders in the field.

The Location

Warm-weather sites are selected for the Winter Conference to promote the relaxed atmosphere conducive to effective scientific information exchanges. The 2018 Winter Conference will be held at the Omni Amelia Island Plantation Resort (www.omnihotels.com/FindAHotel/Ameliainsland.aspx) located in near Fernandina Beach on Amelia Island, Florida (www.ameliainsland.com), only 29 miles (30-45 minutes) from the Jacksonville International Airport (JAX, www.flyjax.com). Amelia Island is 1.5 hours (69 mi/111 km) north of St. Augustine, 2 hours (127 mi/204 km) south of Savannah, Georgia, 3 and 4 hours northeast of Orlando (177 mi/285 km) and Tampa, (233 mi/375 km) Florida, respectively.

Winter Conference on Plasma Spectrochemistry		
Year	City	State
1980	San Juan	Puerto Rico
1982	Orlando	Florida
1984	San Diego	California
1986	Kailua-Kona	Hawaii
1988	San Diego	California
1990	St. Petersburg	Florida
1992	San Diego	California
1994	San Diego	California
1996	Fort Lauderdale	Florida
1998	Scottsdale	Arizona
2000	Fort Lauderdale	Florida
2002	Scottsdale	Arizona
2004	Fort Lauderdale	Florida
2006	Tucson	Arizona
2008	Temecula	California
2010	Fort Myers	Florida
2012	Tucson	Arizona
2014	Amelia Island	Florida
2016	Tucson	Arizona
2018	Amelia Island	Florida
2020	Tucson	Arizona
European Winter Conference on Plasma Spectrochemistry		
Year	City	Country
1985	Leysin	Switzerland
1987	Lyon	France
1989	Reutte	Austria
1991	Dortmund	Germany
1993	Granada	Spain
1995	Cambridge	England
1997	Gent	Belgium
1999	Pau	France
2001	Harjell	Norway
2003	Garmisch-Partenkirchen	Germany
2005	Budapest	Hungary
2007	Taormina	Italy
2009	Graz	Austria
2011	Zaragoza	Spain
2013	Krakow	Poland
2015	Münster	Germany
2017	St Anton	Austria
2019	Pau	France
Asia-Pacific Winter Conference on Plasma Spectrochemistry		
2005	Chiang Mai	Thailand
2006	Bangkok	Thailand
2008	Tsukuba	Japan
2010	Chengdu	China
2012	Jeju	Korea
2015	Xiamen	China
2017	Mastue	Japan

The Schedule

The 2018 Winter Conference will include activities beginning on Sunday, January 7, and continue through Saturday, January 13. The Conference will be preceded on Friday, January 5, through Monday, January 8, by 50 fee-based, professional short-courses, each lasting four hours and presented by experts on specific topics. Simultaneously, exhibitors and other providers of plasma spectrochemical instruments, supplies, and related products will offer free seminars, training programs, or user's meetings. The Conference begins with a social mixer Sunday evening, January 7, and convenes daily at 8:00 am until 6:30 pm. Lectures, posters, and discussions will be presented. Social gatherings are planned for evenings, and a Conference dinner is scheduled for Thursday evening, January 11 at the Amelia Island Plantation.

Instrument Exhibition

The three-day exhibition will open on Monday evening, January 8, with a reception in the Magnolia Ballroom exhibition area. Spectroscopic instrumentation and chemicals, glassware, publications, and software supporting plasma spectroscopy will be displayed by approximately 40 companies and organizations. Typically, new plasma spectrochemical instrumentation is previewed.

Manufacturer's Seminar Program for Plasma Instrumentation

During the weekend Short Course program, Friday through Monday, January 5-8, exhibitors and/or producers or distributors of plasma spectrochemical instrument, supplies, and related products will present four-hour seminars, training/education programs, or user's meetings. This program is free, although registration will be required. New or advanced customer training, product introduction and/or demonstrations, product line descriptions, or user's group meetings and discussions are included. These seminars will be presented in parallel with the fee-based short courses.

Special Workshops

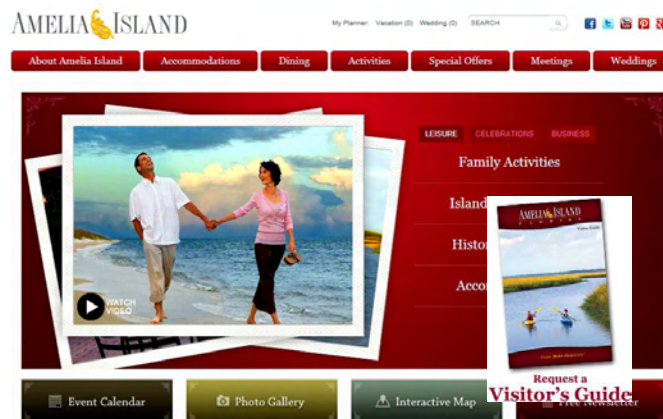
Special topic workshops on new and novel plasma instrumentation, clinical applications of ICP-MS, isotope methodology, and elemental speciation methodology will be held Tuesday through Saturday afternoons, January 8 - 13, from 3:15 to 5:15 pm, with presentations on applications, plasma instrumentation, accessories, novel methods, and sample preparation. Instrument manufacturers will describe new plasma source developments, and exhibitors will discuss sample introduction, alternative sources, and sample preparation. The afternoon program will parallel the exhibition and poster sessions. The workshop program includes plasma source (ICP) atomic emission spectroscopy, plasma source (ICP) mass spectrometry, and plasma accessories (e.g., chromatograph interface, electrothermal vaporizer, laser and spark ablation, special nebulizers, preconcentration and sample introduction equipment), standards and sample preparation. Representatives from companies and/or exhibitors will present brief technical descriptions and discussions of their new products and design philosophy.



Amelia Island and Omni Amelia Island Plantation

Amelia. The Island Behind the Resort. [www.ameliaisland.com, http://en.wikipedia.org/wiki/Amelia_Island]

Known for its beaches, native wildlife, pristine marshes, and scenic waterways, Amelia Island, located off the coast of northeast Florida, is rich in history and tradition and has long been a preferred tourist destination (www.ameliaisland.com). Amelia Island is one of the southernmost of the Sea Islands (http://en.wikipedia.org/wiki/Sea_Islands), a chain of barrier islands that stretches along the east coast of the United States from South Carolina to Florida. The island is 13 miles (21 km) long and approximately 4 miles (6 km) wide at its widest point. Amelia Island is situated off the coast in Nassau County, Florida, south of Cumberland Island, Georgia. Fernandina Beach and Amelia City are towns located on the island. This barrier island was voted #8 among Top 10 North American Islands by Conde Nast Traveler's Reader's Choice Awards in 2011. Sports enthusiasts and beach lovers enjoy an array of outdoor recreational activities and 13 miles of coastline, while history enthusiasts revel in a visit to the Amelia Island Museum of History, Fort Clinch, and Florida's oldest continuously operating bar, the Palace Saloon. More information and a free Visitor's Guide (www.ameliaisland.com/request-brochure/) is available at the Amelia Island Visitors'



Bureau (www.ameliaisland.com). The Amelia Islander magazine also provides (www.ameliainlander.com) local events, blogs, and Island information.

Pride In the Past. Named after Princess Amelia, daughter of England's King George II, and known as the "Isle of Eight Flags", Amelia Island is the only territory in the United States to have been ruled under eight flags of sovereignty (i.e., French, Spanish, British, Patriot, Green Cross, Mexican, Confederate, and United States). Once a haven for pirates, rumrunners, nobles and confederates, the picturesque community of Fernandina Beach features an eclectic and charming area of homes, buildings, galleries, antique shops and quaint eateries on the National Register of Historic Places.

Downtown Fernandina is what you get when you cross an intriguing past with charming Southern hospitality. Florida's first resort has a colorful past, but a seemingly bright future. It's a town that has successfully made history its business, with a 50-block area of historic homes and businesses that have been lovingly restored and are proudly on display. The once-vibrant, Victorian seaport village is now postcard perfect with rows of shops that house a treasure trove of antiques and collectibles, as well as an assortment of boutiques and restaurants.

Its Victorian homes and cottages are a throwback to Amelia's Golden Era. Adornments that make these 19th Century homes into masterpieces include opulent turrets, gables and gingerbread rick-rack trim. Some of these homes serve as bed and breakfast inns and some are listed on the National Register of Historic Places, but what all seem to have in common is an interesting background. These storied streets can be experienced through self-guided tours or those offered by the Amelia Island History Museum. Horse-drawn carriage tours are also available.

Sightseeing river cruises are another way to learn more about the area's history. In the early 20th Century, Amelia Island became the birthplace of the modern shrimping industry. Today Fernandina Beach has emerged as one of the most productive shrimping and fishing centers in the South. Nearly 80% of Florida's intake of sweet Atlantic white shrimp is harvested in Amelia's waters, and its downtown docks (Fernandina Harbor Marina) is still home to the shrimp fleet.

While the oldest structure on the island is the Amelia Island Lighthouse, other places of intrigue include the Palace Saloon, the oldest bar in the state of Florida, and the Florida House Inn, Florida's oldest surviving tourist hotel.

Accommodating the Present. Amelia Island has been successful at preserving its past, but is no stranger to progress and growth. The area has somehow managed to keep pace without destroying its history and natural habitats. Visitors to the island find many accommodation choices. Situated on the southern end of the island the Omni Amelia Island Plantation Resort, for example, offers oceanside accommodations with deluxe hotel rooms.

Visit Jacksonville

Nearby Jacksonville offers numerous attractions, dining and nightlife options, special events, sports and outdoor activities. Covering Jacksonville, the Beaches, St. Augustine and Amelia Island, a visitor's guide magazine provides an overview of area, how to get there and where to stay (www.visitjacksonville.com). Area maps and contact information for local companies are also included.

Jacksonville is the most populous city in Florida, and the eleventh most populous city in the United States. Jacksonville's location on the St. Johns River and the Atlantic Ocean, about 25 miles (40 km) south of the Georgia state line and about 340 miles (547 km) north of Miami, proved critical in the growth of the city and its industry. Jacksonville has the largest deepwater port in the South (as well as the second-largest port on the U.S. East coast) and is the leading transportation and distribution hub in the state. The Jacksonville Beaches communities are along the adjacent Atlantic coast. The area was originally inhabited by the Timucua people, and in 1564 was the site of the French colony of Fort Caroline, one of the earliest European settlements in what is now the continental United States. Under British rule, the settlement grew, and a town was established there in 1822, a year after the United States acquired the colony of Florida from Spain; it was named after Andrew Jackson, the first military governor of the Florida Territory and seventh President of the United States.



Omni Amelia Island Plantation Resort Luxurious Florida Spa and Golf Beach Resort Over- looking the Atlantic Ocean

Omni Amelia Island Plantation Resort, 39 Beach Lagoon Rd, Amelia Island, Florida 32034, Phone: 904-261-6161, Fax: 904-321-5046, E-mail www.omnihotels.com/FindAHotel/AmeliaIsland.aspx

The Omni Amelia Island Plantation Resort, located north of Jacksonville near Fernandina Beach, offers a unique opportunity to visit the splendor of the Atlantic Ocean and the beauty of a north Florida natural setting. With an \$85 million renovation completed in 2013, Omni Amelia Island Plantation Resort is the premiere North Florida destination for meetings and vacations for the whole family with luxury and ocean-side fun. This AAA Four Diamond Florida beach resort features luxurious accommodations, family-friendly activities, exceptional on-site meeting spaces, and the perfect backdrop for the 2018 Winter Conference. The hardest part of a Florida Winter Conference will be to leave!

A complete resort renovation and expansion project, called *The Re-Imagination of the Omni Amelia Island Plantation Resort!*, broke ground in November 2011 and was completed in 2013. This expansion marked a new chapter in the resort's 40-year heritage and now offers guests a destination experience unparalleled in Florida. Completed in the Spring of 2013, the new luxury resort offers 155 additional oceanfront rooms and suites just steps away from the Atlantic Ocean. Also part of the expansion the addition of 30,000 ft² of state-of-the-art flexible meeting space will increase the total meeting space at the resort to 80,000 ft². The new lobby with floor-to-ceiling ocean views provides quick and easy check-in for hotel guests, along with a relaxing new ocean view bar and outdoor deck. The jewel of this expansive renovation will feature a custom infinity edge adult pool just off the lobby cascading down to the splash-friendly family pool with two nearby hot tubs, a poolside bar and expanded new dining options — all with ocean views. Visit the resort website to find regarding *The Re-*



Imagination of the Omni Amelia Island Plantation Resort!

Resort Guest Services. The Omni Amelia Island Plantation is Florida's premier AAA-Four Diamond destination island resort matched in harmony with nature. Located on Amelia Island, just 29 miles north of Jacksonville International Airport (JAX), the 1350-acre property overlooks the blue water of the Atlantic Ocean on the east and the green marshland and Intracoastal Waterway on the west. A relaxing Florida adventure waits guests whether they fancy a family beach holiday, a weekend getaway, a spa resort, or a golf vacation before or after the Winter Conference.

There's a world of things to enjoy on this inspiring resort. From the awe-inspiring views of the Atlantic, the emerald salt marshes that sigh in the breeze, to the centuries-old Live Oaks in the maritime forest, the Omni Amelia Island Plantation sits nestled amidst this sea-side paradise. Guests can stroll along 3.5 miles of uncrowded beach while enjoying the beautiful sunrise over the Atlantic Ocean or sunsets overlooking the scenic marsh. And if swimming is first choice, play in the sparkling wave-filled Atlantic Ocean with new beachside amenities, or relax in the beautiful resort pools.

The three Audubon International Certified Sanctuary golf courses not only preserve the natural heritage of the game, but also the wildlife that thrives there. An avid tennis players can enjoy the 23 Har-Tru® tennis courts and instruction by tennis professionals while families can visit the Nature Center for an abundance of activities and kid's programs.

The weary traveler can rejuvenate mind and body at The Spa and Salon at Amelia Island Plantation, visit the shopping village, or experience a culinary delight at one of the many convenient dining locations.

Luxurious Oceanfront Resort Accommodations. The oceanfront Omni Amelia Island Plantation offers resort accommodations designed with guest comfort in mind. With 404 oceanfront hotel rooms, the resort complements everything that is Amelia Island. Private balconies and patios face the ocean and are a delightful place for an early morning breakfast while watching an energizing sunrise or sipping evening cocktails while enjoying the view.

Natural History Abounds at the Amelia Island Plantation Resort. The beauty of the Omni Amelia Island Plantation is a direct result of efforts to preserve the natural treasures of the island. Recognizing the importance of the environment, master developers set the standard for building a resort "In Harmony with Nature". From its conception in 1971, Charles Fraser and Ian McHarg set upon a mission to find the optimum balance between the luxury of a Florida beach vacation and the existing environment. The result was a master plan to protect tidal marshes, conserve oceanfront dunes, grassland and savannahs. Each building, courtyard terrace and boardwalk was carefully placed with the environmental impact in mind, ensuring the lasting beauty of this magnificent setting.

Guests are encouraged to take advantage of the natural environment. A variety of guided environmental tours with staff naturalists gives a hands-on experience for all ages. Throughout a stay, guests can enjoy all the amenities the Omni Amelia Island Plantation has to offer - including the bountiful nature of Florida's premier island.



Unique Florida Meetings with Resort Surroundings

State-of-the-Art Conference Center. The Omni Amelia Island Plantation Resort features more than 49,000 ft² of versatile function space in the onsite Conference Center to accommodate meetings, banquets, conferences, and theme parties of up to 1000 guests. The service and state-of-the-art communication equipment ensures the success of our meeting. In spring 2013 the resort opened 30,000 ft² of additional meeting space. This expansion featured the new 16,500 ft² Magnolia ballroom, which will host the Winter Conference exhibition and poster sessions, additional pre-function space, as well as a new event lawn that will take advantage of Amelia Island's beautiful outdoor scenery and weather. In order to accommodate guests and conference attendees, a parking structure was built creating 350 supplementary spaces, offering self-parking, as well as 70 additional valet spots.



The conference center provides advanced communications and computer technology, and a loading dock for ease of set-up. This expansion project gives the Omni Amelia Island Plantation nearly 80,000 ft² of flexible meeting space, the most on the island.

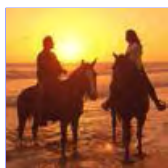
Amelia Island Weather

With abundant sunshine and mild temperatures year round, it's always a perfect time to visit Amelia Island. Winter on Amelia Island is characterized by dry, crisp air and comfortable weather that is just right for walks on the beach, a round

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Amelia Island, Florida, January 8 - 13, 2018



HOTEL RESERVATION FORM

Omni Amelia Island Plantation Resort

6800 First Coast Highway, Amelia Island, FL 32034

PLEASE RETURN THIS FORM BY MAIL/FAX/EMAIL TO:

**M&E Meeting Planners, %Steve Lepow, 18 Holbrook St, Palmer, MA 01069 USA
Telephone 860-885-4556, FAX 413-284-1901, E-mail memeeetingplanners@gmail.com**

ARRIVAL DATE _____ **CHECKOUT DATE** _____

The Omni Amelia Island Plantation Resort conference room rate is \$139 per night plus sales/occupancy tax (11%, \$15.29) for single or double occupancy. Triple occupancy is an additional \$15 per night and quad occupancy is an additional \$30 per night (plus tax). Reduced room rates are available to qualified students and government employees.

**CONFERENCE RATE AND ROOM AVAILABILITY CANNOT BE GUARANTEED
FOR RESERVATIONS RECEIVED AFTER DECEMBER 8, 2017.**

PLEASE PRINT CLEARLY AND COMPLETE ONE (1) RESERVATION FORM PER ROOM

ATTENDEE NAME: _____

COMPANY NAME: _____

ADDRESS: _____

CITY: _____ **STATE:** _____ **ZIP/POSTAL:** _____ **COUNTRY:** _____

WORK PHONE: _____ **CELL:** _____

FAX: _____ **EMAIL:** _____

SHARING WITH: _____

KING BED OR 2 QUEENS? _____

SPECIAL ROOM NEEDS (HANDICAPPED/OTHER): _____

CREDIT CARD TYPE (VISA, MASTERCARD, AMERICAN EXPRESS, DISCOVER, DINERS): _____

CREDIT CARD NUMBER: _____ **EXPIRATION DATE:** _____

NAME ON CREDIT CARD: _____ **SECURITY CODE:** _____

CARD HOLDER'S BILLING ADDRESS: _____

CITY: _____ **STATE:** _____ **ZIP/POSTAL:** _____ **COUNTRY** _____

SIGNATURE: _____ **DATE:** _____

Reservations will not be processed without a signature. Guest must have a credit card in their possession at check in. The credit card will not be charged by the hotel until the end of the stay. No charges will be processed in advance. Guests who fail to arrive on the scheduled arrival date will be considered "No-Shows". Any reservation not cancelled 10 days before arrival date, as well as "No-Shows", will be subject to a one-night room (and tax) cancellation fee. Reservation changes or cancellations must be submitted in writing (by email) to memeeetingplanners@gmail.com, and they must be received ten (10) days prior to arrival.

If you are interested in information on airport shuttle from/to JAX and the hotel, please contact memeeetingplanners@gmail.com.

Omni Amelia Island Plantation Resort

Rates

The special conference room rate (single or double) is \$139.00 plus room tax (11% = 7% State Occupancy tax + 4% County Occupancy tax = \$15.29). Additional charge for triple occupancy is \$15 (plus tax), and quad occupancy is \$30 per night (plus tax). Children under 18 may stay for free in their parent's room using existing bedding.

A limited number of government rate and student rooms are available to qualified government employees and students, respectively. The conference group rate is available three day before and after the meeting dates based on availability.

Taxes and Service Charges

Currently, rooms are taxed at a rate of 11% = 7% State Occupancy tax + 4% County Occupancy tax = \$15.29. All other resort purchases may be subject to sales tax. These taxes are subject to change under Florida State and local tax laws.

Cancellation

Guest must provide a credit card information at check in. No charges will be processed in advance; the credit card will be charged by the hotel at checkout. Guest who fail to check in on the scheduled arrival date will be considered "No-Shows", and the credit card will be charged for a one-night stay for failure to meet the reservation. Any reservation not cancelled 10 days before arrival date, as well as "No-Shows", will be subject to a one-night room (and tax) cancellation fee. Reservation changes or cancellations must be submitted in writing (by email) to memeetingplanners@gmail.com, and cancellations must be received ten (10) days prior to arrival date.

Check-In/Out Time

The check-in time is 4:00 pm; checkout time is 11:00 am. All guests arriving before 3:00 pm will be accommodated as rooms become available. The bell staff can arrange to check baggage for those arriving early when rooms are unavailable and for guests attending functions on departure day.

Early Departure Fee

In the event a guest who has requested a room checks out before the guest's reserved checkout date, the hotel will add an early checkout fee equivalent to one night room rate (plus tax) to the guest's individual account. Guests wishing to avoid an early checkout fee should advise the hotel at or before check-in of any change in planned length of stay.

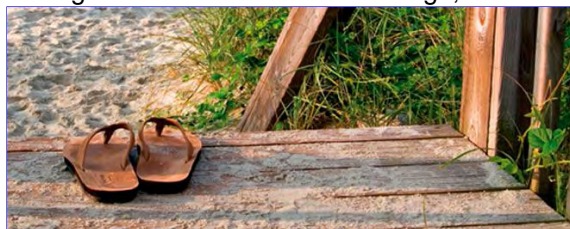
Gratuities (Optional)

Gratuities for portage and mail service are at the individual guest's discretion.

Resort Service

All of the following amenities and services are provided to conference guests without additional charge; the resort service fee is waived.

- ◆ Complimentary self parking
- ◆ Unlimited deluxe internet access in all accommodations
- ◆ On-property Resort transportation service
- ◆ Unlimited use of Health & Fitness Center
- ◆ In room coffee service
- ◆ Local and toll-free phone access
- ◆ Resort beach access
- ◆ Preferred Racquet club and golf course reservation access



Resort Parking

Self-parking is available without charge. Valet parking is available for a service fee.

Resort Restrictions

No fireworks or incendiary devices may be used indoors at the Resort.

Omni Select Guest Gold Level Benefits

Guests joining the Omni Select Guest Gold Level loyalty program will receive additional benefits including complimentary morning beverage delivery and express check-in and checkout. For information and to enroll, visit <http://www.omniselectguest.com>.

Airport Shuttle

Airport shuttle service between Jacksonville International Airport (JAX) and the hotel is available. For information or reservations, contact memeetingplanners@gmail.com.

2018 Winter Conference on Plasma Spectrochemistry

Amelia Island, Florida, January 8 – 13, 2018

CONFERENCE REGISTRATION FEE SUMMARY

Conference Registration Fees	Before — October 13, 2017 —	After	After December 8, 2017
Conference*	\$550	\$850	\$1100
Exhibitor**	\$130	\$425	\$730
Student***	\$ 75	\$130	\$290
Postdoctoral***	\$100	\$260	\$480
Single Day*** (2 days max) @ per day	\$210/day	\$365/day	\$480/day
Short Course Enrollment (each course)	\$120	\$240	\$365
Short Course Student Enrollment (per course)	\$25	\$30	\$50
Conference Dinner (includes taxes and gratuity), Thursday, January 11, 2018			
Conference Dinner (adult)	\$ 65	\$ 70	\$ 75
Conference Dinner (child under 12)	\$ 32	\$ 33	\$ 35

Additional or Duplicates

Souvenir T Shirt (Size ____)	\$ 18	\$ 20	\$ 23
Conference Abstracts (duplicate)	\$ 24	\$ 36	\$ 60

* Conference registration includes Conference abstracts, souvenirs and tee shirt, and one-year subscription to *ICP Information Newsletter*. Conference dinner is not included in the registration fee.

** Conference registration for personnel of organizations participating in Conference exhibition and includes Conference abstracts and souvenir shirt only. Exhibitors must be registered as employees of an exhibiting firm. Conference dinner is not included in the Exhibitor registration fee.

*** Conference registration includes Conference abstracts and souvenir shirt only. Only full-time students are eligible for student registration. Enclose a letter signed by the academic advisor.

No registration fees are charged for accompanying persons, family, or children.

CANCELLATION POLICY: Full refund is available if written request is postmarked before December 8, 2017; 50% refund if request postmarked no later than December 15, 2017. No refund for requests postmarked after December 15, except for medical reasons with doctor's verification.

New subscriptions to the *ICP Information Newsletter* for 2017 and 2018 are available at a special 10% discount [\$60.30 (US, Canada), \$82.80 (Europe, South America), \$91.80 (Asia, Pacific, etc.)].

Tax-deductible contributions are solicited to our Conference Travel and Registration Grant funds for students and overseas visitors. Do not overlook your corporate gift matching programs.

Please send payment with Registration form to **WINTER CONFERENCE**, %Ramon Barnes, ICP Information Newsletter, Inc., 18241 Beauty Berry Ct, Lehigh Acres, FL 33972-7525 USA.

Federal Employer Identification Number (EIN) is 04-3361420.

American Express, MasterCard or Visa may be employed to pay for your registration. Please enclose the following information with your registration form:

Paid by: ☐ Check or money order ☐ American Express ☐ Master Card ☐ VISA

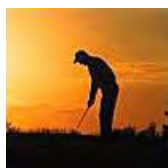
Cardholder's Name (as printed on card): _____

Credit Card Account No. (All digits) _____ **Expiration date** _____ **Security Code** _____

Card Holder's Billing Address: _____

Cardholder Signature: _____ **Date** _____

2018 Winter Conference on Plasma Spectrochemistry, %ICP Information Newsletter, Inc.,
18241 Beauty Berry Ct., Lehigh Acres, FL 33972-7525; P.O. Box 666, Hadley, MA 01035-0666 USA
Dr. Ramon Barnes, Conference Chairman, Telephone (239) 674-9430, Fax (239) 674-9431
email wc2018@chem.umass.edu, http://icpinformation.org



2018 Winter Conference on Plasma Spectrochemistry

Amelia Island, Florida, January 8 – 13, 2018



CONFERENCE REGISTRATION

A. Registration

Please Type or Print Clearly

FAMILY NAME

FIRST NAME

COMPANY

ADDRESS

CITY

STATE

ZIP/POSTAL CODE

COUNTRY

E-MAIL

Telephone (Business)

(Cell)

FAX

Please indicate:

☐ Author ☐ Co-author ☐ Attending (☐ Single day ☐ Short Course Only) ☐ Exhibitor ☐ Student* (☐ Predoctoral ☐ Postdoctoral)

*Only full-time students are eligible for student registration. Academic advisor must countersign registration.

Tee Shirt Size: ☐ Extra Extra Large ☐ Extra Large ☐ Large ☐ Medium ☐ Small

B. Accompanying Person(s), Transportation, Accommodations (Information purposes only)

Give names of accompanying person: Spouse or

Children (Names/Ages)

Other

Arrival Date/Time

Airline

Departure Date

Hotel: ☐ Omni Amelia Island Plantation ☐ Other

C. Conference Registration Fees

Before After After Enter Amount Subtotal

October 13, 2017 December 8, 2017

<input type="checkbox"/> Conference	\$550	\$850	\$1100	\$	
<input type="checkbox"/> Exhibitor	\$130	\$425	\$730	\$	
<input type="checkbox"/> Student	\$ 75	\$130	\$290	\$	
<input type="checkbox"/> Postdoctoral	\$100	\$260	\$480	\$	
<input type="checkbox"/> Single Day ___ days (2 days max)@	\$210	\$365	\$480 per day	\$	\$
D. Short Course Enrollment (each)	\$120	\$240	\$365 [indicate below]		
<input type="checkbox"/> Student	\$ 25	\$ 30	\$ 50 [indicate below]		

Mark Date, Time Fill-in Course Number (SX-00) and Name

<input type="checkbox"/> (1) Jan 5, 1 pm	S_ _	\$	
<input type="checkbox"/> (2) Jan 5, 7 pm	S_ _	\$	
<input type="checkbox"/> (3) Jan 6, 8 am	S_ _	\$	
<input type="checkbox"/> (4) Jan 6, 1 pm	S_ _	\$	
<input type="checkbox"/> (5) Jan 6, 7 pm	S_ _	\$	
<input type="checkbox"/> (6) Jan 7, 8 am	S_ _	\$	
<input type="checkbox"/> (7) Jan 7, 1 pm	S_ _	\$	
<input type="checkbox"/> (8) Jan 7, 7 pm	S_ _	\$	
<input type="checkbox"/> (9) Jan 8, 7 pm	S_ _	\$	\$

E. Conference Dinner (includes tax and gratuity)

<input type="checkbox"/> Conference Dinner (adult)	\$65	\$69	\$75	(x_ _)	\$	
<input type="checkbox"/> Conference Dinner (child under 12)	\$31	\$32	\$33	(x_ _)	\$	\$

F. Duplicate/Additional Shirts, Abstracts, Proceedings, Donations

<input type="checkbox"/> Souvenir T Shirt (Size _ _)	\$18	\$20	\$23	(x_ _)	\$	
<input type="checkbox"/> Conference Abstracts (duplicate)	\$24	\$36	\$60	(x_ _)	\$	\$
<input type="checkbox"/> Subscription to ICP Information Newsletter (January - December 2017, 2018)					\$	\$
<input type="checkbox"/> Tax-Deductible Contribution to Conference Travel-Registration Funds					\$	\$
TOTAL					\$	

Please send payment with this Registration form to **WINTER CONFERENCE**, %Dr. Ramon Barnes, ICP Information Newsletter, Inc., 18241 Beauty Berry Ct, Lehigh Acres, FL 33972-7525 or wc2018@chem.umass.edu.

Paid by: ☐ Check or money order ☐ American Express ☐ Master Card ☐ VISA. Cardholder Name: _____

Credit Card Account No. _____ Expiration Date _____ Security Code _____

Card Holder's Billing Address _____

Signature: _____

Date: _____

For Conference Use Only

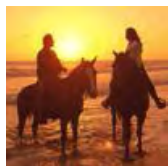
REGISTRATION NUMBER 2018__|_|_| - __|_|_|_|

Payment: \$ _____ Check No. _____

Date Received: _____

Refund: _____ Check Date _____

Acknowledgment: _____



2018 Winter Conference on Plasma Spectrochemistry Amelia Island, Florida 8 – 13, 2018



CONFERENCE REGISTRATION – Early Bird Special- July 7, 2018

A. Registration

Please Type or Print Clearly

FAMILY NAME

FIRST NAME

COMPANY

ADDRESS

CITY

STATE

ZIP/POSTAL CODE

COUNTRY

E-MAIL

Telephone (Business)

(Cell)

FAX

Please indicate:

☐ Author ☐ Coauthor ☐ Attending (☐ Single day ☐ Short Course Only) ☐ Exhibitor ☐ Student* (☐ Predoctoral ☐ Postdoctoral)

*Only full-time students are eligible for student registration. Academic advisor must countersign registration.

Tee Shirt Size: ☐ Extra Extra Large ☐ Extra Large ☐ Large ☐ Medium ☐ Small.

B. Accompanying Person(s), Transportation, Accommodations (Information purposes only)

Give names of accompanying person: Spouse or

Children (Names/Ages)

Arrival Date/Time

Departure Date

Other

Airline

Hotel: ☐ Omni Amelia Island Plantation ☐ Other

C. Conference Registration Fees Only Before

July 7, 2018

Enter Amount Subtotal

<input type="checkbox"/> Conference	\$510	\$ _____	
<input type="checkbox"/> Exhibitor	\$125	\$ _____	
<input type="checkbox"/> Student	\$ 70	\$ _____	
<input type="checkbox"/> Postdoctoral	\$ 92	\$ _____	
<input type="checkbox"/> Single Day ___ days (2 days max) @ \$175 per day		\$ _____	\$ _____

D. Short Course Enrollment (each) \$100 [indicate below]

☐ Student \$ 25 [indicate below]

Mark Date, Time Indicate Course Number (SX - 00) and Name

<input type="checkbox"/> (1) Jan 5, 1 pm	S_ -	\$ _____	
<input type="checkbox"/> (2) Jan 5, 7 pm	S_ -	\$ _____	
<input type="checkbox"/> (3) Jan 6, 8 am	S_ -	\$ _____	
<input type="checkbox"/> (4) Jan 6, 1 pm	S_ -	\$ _____	
<input type="checkbox"/> (5) Jan 6, 7 pm	S_ -	\$ _____	
<input type="checkbox"/> (6) Jan 7, 8 am	S_ -	\$ _____	
<input type="checkbox"/> (7) Jan 7, 1 pm	S_ -	\$ _____	
<input type="checkbox"/> (8) Jan 7, 7 pm	S_ -	\$ _____	
<input type="checkbox"/> (9) Jan 8, 7 pm	S_ -	\$ _____	\$ _____

E. Conference Dinner (includes tax and gratuity)

<input type="checkbox"/> Conference Dinner (adult)	\$62	Number Ordered (x_)	\$ _____	
<input type="checkbox"/> Conference Dinner (child under 12)	\$31	(x_)	\$ _____	\$ _____

F. Duplicate/Additional Shirts, Abstracts, Proceedings, Donations

<input type="checkbox"/> Souvenir T Shirt (Size _____)	\$15	Number Ordered (x_)	\$ _____	
<input type="checkbox"/> Conference Abstracts (duplicate)	\$21	(x_)	\$ _____	\$ _____
<input type="checkbox"/> Subscription to ICP Information Newsletter (January - December 2017, 2018)			\$ _____	\$ _____
<input type="checkbox"/> Tax-Deductible Contribution to Conference Travel-Registration Grant Funds			\$ _____	\$ _____
TOTAL			\$ _____	

Please send payment with this Registration form to **WINTER CONFERENCE**, %Dr. Ramon Barnes, ICP Information Newsletter, Inc., 18241 Beauty Berry Ct, Lehigh Acres, FL 33972-7525 or wc2018@chem.umass.edu.

Paidby: ☐ Check or money order ☐ American Express ☐ MasterCard ☐ VISA. Cardholder Name: _____

Credit Card Account No. _____ Expiration Date _____ Security Code _____

Card Holder's Billing Address _____

Signature: _____

Date: _____

For Conference Use Only

Payment: \$ _____ Check No. _____

Refund: _____ Check Date _____

REGISTRATION NUMBER 2018____-____-____

Date Received: _____

Acknowledgment: _____

2018 Winter Conference on Plasma Spectrochemistry

Call for Abstracts and Titles

Preliminary titles and abstracts (50 words) are solicited on original plasma spectrochemical research, methods and applications. A submission form is available on page 18. The title and abstract submission deadline is July 7, 2017. Accepted titles will be acknowledged in August and assigned program times, and final abstracts will be due October 13, 2017. An abstract processing fee (\$50) will be waived for on-time submissions, and a post-deadline processing fee penalty will be added for late submissions. Symposium topics include the following, and papers covering other plasma-related topics are encouraged:

Symposia on Trace Elements, Stable Isotope, and Elemental Speciation Analyses

- Biological Imaging and Speciation Analyses
- Certified Reference Materials, Quality Control
- Chemicals, Pure Reagents, Ultrapure Water
- Clinical Biomonitoring, Imaging, and Mass Cytometry
- Earth, Aquatic, Marine, and Geological Sciences
- Environmental, Agricultural, and Food Sciences
- Fundamental Processes, Basic Studies
- Petroleum Materials, Products, and Organic Solvents
- Pharmaceutical, Supplements, Nutraceutical Analysis
- Plasma Instrumentation, Sample Presentation
- Provenancing, Authentication, Source Origin, Forensics
- Radioisotopes and Nuclear Materials Analyses
- Semiconductor Materials Analyses
- Solids, Surfaces, Interfaces, and Nanomaterials

Symposium Topics

- Elemental speciation and speciation sample preparation
- Excitation mechanisms and plasma phenomena
- Flow injection and fractionation spectrochemical analysis
- Glow discharge atomic and mass spectrometry
- Inductively coupled plasma atomic and mass spectrometry
- Laser ablation and induced breakdown spectrometry
- Microwave atomic and mass spectrometry
- Micronebulization systems, microplasma systems
- Plasma chromatographic detectors, combined systems
- Plasma instrumentation, automation, detectors, spectrometers, and software innovations
- Sample introduction, transport phenomena, and modeling
- Sample preparation, treatment, and automation; high-purity materials, and quality assurance
- Spectrochemical chemometrics, and expert systems
- Spectroscopic standards, reference materials, and data bases
- Stable isotope analyses and applications

Abstracts and titles for the Workshop on New Plasma Instrumentation (January 9) from manufactures and vendors also will be accepted with the same guidelines as conference presentations. A \$250 registration fee is required for Workshop speakers.

Program Outline Example

Monday, January 8, 2018

- 8:00 Opening and Welcome
- 1. Sample Introduction and Transport Phenomena**
- 8:05 (PL1) Plenary Lecture
- 9:00 (IL1) Invited Lecture
- 9:30 (IL2) Invited Lecture
- 2. Nanomaterial Analysis and Characterization**
- 1:00 (IL3) Invited Lecture
- 1:30 (IL4) Invited Lecture
- 5:30 (HL1) Heritage Lecture
- 6:30 Exhibition Opening and Social Mixer

Tuesday, January 9, 2018

- 3. Laser Assisted Plasma Spectrochemistry**
- 8:00 (PL2) Plenary Lecture
- 9:00 (IL5) Invited Lecture
- 9:30 (IL6) Invited Lecture
- 4. Laser-Induced Breakdown Spectroscopy**
- 1:00 (IL7) Invited Lecture
- 1:30 (IL8) Invited Lecture
- 3 - 6:30 Poster Session
- 3:15 - 5:15 (WS1) Workshop New Plasma Instrumentation
- 5:30 (HL2) Heritage Lecture
- 6:30 Social Mixer

Wednesday, January 10, 2018

- 5. Fundamentals, Instrumentation, and Mechanisms**
- 8:00 (PL3) Plenary Lecture
- 9:00 (IL9) Invited Lecture
- 9:30 (IL10) Invited Lecture
- 6. Novel Plasma Instrumentation, Advanced Detectors, and Microplasma Systems**
- 1:00 (IL11) Invited Lecture
- 1:30 (IL12) Invited Lecture
- 3 - 6:30 Poster Session
- 3:15 - 5:15 (WS2) Workshop Clinical ICP-MS
- 5:30 (HL3) Heritage Lecture
- 6:30 Social Mixer

Thursday, January 11, 2018

- 7. Elemental Speciation, Metallomics**
- 8:00 (PL4) Plenary Lecture
- 9:00 (IL13) Invited Lecture
- 9:30 (IL14) Invited Lecture
- 8. Plasma Spectrochemistry Award Symposium**
- 1:00 (IL15) Invited Lecture
- 1:30 (IL16) Invited Lecture

3 - 6:30 *Poster Session*
3:15 - 5:15 (WS3) *Workshop Speciation Methodology*
4:30 (HL4) *Heritage Lecture*
6:30 *Conference Dinner (Amelia Island Plantation)*

Friday, January 12, 2018

9. Environmental and Bioecological Sciences

8:00 (PL5) *Plenary Lecture*
9:00 (IL17) *Invited Lecture*
9:30 (IL18) *Invited Lecture*

10. Stable Isotope and Forensics Analyses

1:00 (IL19) *Invited Lecture*
1:30 (IL20) *Invited Lecture*
3 - 6:30 *Poster Session*
3:15 - 5:15 (WS4) *Workshop Stable Isotope Methodology*
5:30 (HL5) *Heritage Lecture*
6:30 *Social Mixer*

Saturday, January 13, 2018

11. Marine and Geological Sciences

8:00 (PL6) *Plenary Lecture*
9:00 (IL21) *Invited Lecture*
9:30 (IL22) *Invited Lecture*

12. Advanced Materials, Surfaces, and Interfaces Petroleum and Semiconductor Materials

1:00 (HL6) *Heritage Lecture*
2:00 (IL23) *Invited Lecture*
2:30 (IL24) *Invited Lecture*
3:15 - 5:15 (WS5) *Workshop Novel Plasma Instrumentation*
6:30 *Conference Closing*

Conference Travel and Registration Grants

The Winter Conference sponsor, the ICP Information Newsletter Inc., is a tax-exempt philanthropic organization that will offer Conference Travel and Registration Grants to students and international scientists, who wish to present recent research results at the 2018 Winter Conference. This grant program is supported by fund raising and donations from individuals and corporate sponsors, and no Conference registration fees are used. Tax-deductible gifts for these grants are solicited, and donations can be made with registration (see Registration form) or directly at any time. Travel and Registration Grant rules and application forms can be obtained from the Conference chairman.

Book Travel and Hotel Early

Amelia Island is a very popular Winter holiday destination, and airline flights, hotels and other reservations often are booked well in advance. We recommend that you make your hotel, travel, and conference arrangements as early as possible to take advantage of early bird rates. For assistance with hotel and travel arrangements, contact Mr. Steve Lepow at memeetingplanners@gmail.com. He has obtained conference discounts for airport shuttles.

Heritage Lectures

Six Heritage Lectures will be presented by distinguished scientists and investigators, who have contributed significantly to the development of plasma spectrochemistry and will address critical development areas in sample introduction, instrumentation, elemental speciation, plasma source mass spectrometry, and novel software and hardware.

The Heritage Lecture series was initiated at the 2010 Winter Conference, and the following Heritage lectures have been presented:

2016 Winter Conference

Tools of the Trade — From Flow Injection to Laser Ablation, Alan G. Cox and Cameron McLeod, University of Sheffield

The Boundary Conditions for Scientific Research, Kay Niemax, Federal Institute for Materials Research and Testing
49 Years of Atomic Spectroscopy — From Nebulizers to Detectors — Time Marches On, M. Bonner Denton, University of Arizona

Innovative Research on Plasma Spectrochemical Methods for Solving Analytical Problems, José A.C. Broekaert, University of Hamburg

ICP-MS From the Eye of a Beholder Part II, Robert S. Houk, Iowa State University

2014 Winter Conference:

Back to the Future, Barry L. Sharp, Loughborough University
Lasers at Work in Atomic Spectroscopy: A Long Flaming and Sparking Combination of Diagnostic and Analytical Aspects, Nicoló Omenetto, University of Florida
High Power or Low Power; Reflections on a Plasma Spectrochemical Controversy and Some Professional Lessons Learnt, Les Ebdon, University of Bedfordshire
Make Big Plans - Aim High in Hope and Work, Michael J. Collins, CEM Corporation

Observations on Commercial Analytical Instrumentation Development, Andrew T. Zander, Torrance, California
Spectroscopic Imaging: A Spatial Odyssey, Freddy Adams, University of Antwerp

2012 Winter Conference:

The Paradigm Change of the Instrumental Revolution. Leo de Galan, Schiedam, The Netherlands

Scientific Research: Creativity and Discovery. Chris Enke, University of New Mexico

Paradigm Shifts in Analytical Plasma Spectrometry. Gary Horlick, University of Alberta

Inductively Coupled Plasma Mass Spectrometry: A Personal Odyssey, Trials, Tribulations, Problems, and Successes. Henry Longerich, Memorial University of Newfoundland

Flow Injection Analysis -- From Beaker to Microfluidics. Jaromir (Jarda) Ruzicka, University of Hawaii, Manoa
Spectrochromatography Elemental Speciation, Retrospect, Perspective and Prospects. Peter C. Uden, University of Massachusetts, Amherst

2010 Winter Conference:

From Academic Research to Real World Problems (and Vice Versa), Jean-Michel Mermet, Tramoyes, France
Over 50 Years of Atomic Spectroscopy, James D. Winefordner, University of Florida, Gainesville

Some Memories of 20 Years Development and Application of ICP Emission Spectrometry, Knut D. Ohls, Erding, Germany

Isotope Ratio Measurements: Highlights, Pitfalls, Frustrations — 40 Years of Experience in the Field, Klaus G. Heumann, Johannes Gutenberg University Mainz

Thirty-Seven Years of Plasma Spectrochemistry at FDA's Elemental Analysis Research/Forensic Chemistry Center, Fred L. Fricke, US Food and Drug Administration

The Glow Discharge: A Splendidly Versatile Source, Professor Willard W. Harrison, University of Florida, Gainesville

Winter Conference Award in Plasma Spectrochemistry

The 2018 Winter Conference Award in Plasma Spectrochemistry, sponsored by Thermo Fisher Scientific, recognizes achievements in conceptualization and development of novel instrumentation as well as the elucidation of fundamental events or processes involved in plasma spectrochemistry. The Award also acknowledges the authorship of significant research papers or books that have had an influential role in new advancements as well as outstanding applications that open new fields of use for plasma spectrochemistry.

At the 2018 Winter Conference two awards will be presented to scientists who have made noteworthy contributions to the field of plasma spectrochemistry as judged by an international selection committee. One award is for a senior scientist, and the second award will be for a young scientist, who will be no older than 45 years at the time the award is announced. Thermo Fisher Scientific invites scientists worldwide to submit their applications for these awards. For information and details, visit www.thermoscientific.com/wpcaward. Documentation can be submitted to wpc.award@thermofisher.com.

Thermo Fisher Scientific will present the awards at the 2018 Winter Conference. In addition to having his/her contributions to the field recognized by the scientific community and the industry, the selected scientists will also receive a \$5000 prize, a certificate, and trophy during the award ceremony.

The first award was presented during the 2010 Winter Conference. Awardees have included Nicoló Omenetto and Steven Ray (2016), Gary M. Hieftje (2014), J. Sabine Becker (2012), and Ramon M. Barnes (2010).

Professional Development Courses

Professional development short courses at introductory and advanced levels and manufacturers' seminars will be offered Friday through Monday, January 5 - 8, 2018.

These courses and seminars have been developed to meet the needs of today's plasma spectrochemistry professional and to offer creative solutions for solving industry challenges, generating cost savings, and expanding skillsets needed to advance personal and professional knowledge via the latest technology and best practices. Instructors for each course will share their extensive plasma spectro-

chemistry expertise in a small group setting.

Topics include plasma spectrochemistry analyses, instrumentation, techniques and sample introduction and preparation approaches as illustrated below.

Arsenic and Mercury Speciation in Biological Samples
Atmospheric Aerosol Analysis
Plasma Spectrochemical Interferences
Clean Microwave Digestions for Ultra-Trace Analysis
Clinical ICP-MS Analyses
Contamination Control for Trace Element Analysis
Direct Analysis with Ambient Mass Spectrometry
Elemental Impurities: USP <232> and <233>
Elemental Speciation Analysis and Metallomics
Elemental Testing in Toxicology
Elemental and Isotopic ICP-MS Analysis
Environmental Monitoring ICP-MS-Based Isotopic Methods
Environmental Sampling Techniques
Field Flow Fractionation – ICP-MS/OES
Flow Injection Analysis Techniques
Glow Discharge Techniques
High-Resolution ICP-MS
Human Body Fluids and Tissues Analyses
ICP-MS Biodistribution Studies of Nanoparticles
ICP-MS Introduction, Advanced Topics
Interferences Identification and Correction in ICP-MS
Interferences Identification and Correction in ICP-OES
Isotope Dilution ICP-MS of Elemental Traces and Species
Isotopic Analysis for Beginners
Laser Ablation Fundamentals, Applications, and Directions
Laser Ablation ICP Mass Spectrometry
Laser Ablation ICP-MS Isotopic Analysis of Natural Inorganic Samples
Laser-Induced Breakdown Spectroscopy (LIBS)
Matrix Effects in ICP Techniques
Metals Toxicology Fundamentals
Metrology in Chemistry: Creating an Uncertainty Budget
Microwave and Digital Plasma Sources
Microwave Sample Preparation for Bioanalytical, Speciation, and Accurate Analysis
Microwave-Assisted Sample Preparation for Spectrochemistry
Nebulizer Diagnostics and Characteristics
Nebulizers for Modern Sample Introduction
Petroleum and Petroleum Products Analyses
Pharmaceutical Applications of Atomic Spectrometry
Plasma Diagnostics: Fundamentals, Measurements, and Applications
Plasma Source Time-of-Flight Mass Spectrometry
Preparing Your Laboratory for Trace Analyses
Reaction and Collision Cells for ICP-MS
Sample Introduction for ICP Spectrochemistry
Sample Preparation Problem Solving for Atomic Mass Spectrometry
Speciation Analysis
Speciation Isotope Dilution Mass Spectrometry
Validation Assessment

Course details, instructors, and times will be announced shortly.



2018 Winter Conference on Plasma Spectrochemistry



Amelia Island, Florida, January 8 – 13, 2018

CONFERENCE PRESENTATION TITLE AND ABSTRACT SUBMISSION FORM

Submission Deadline: July 7, 2017

I (we) plan to submit a paper as a ☐ lecture (15 minutes), ☐ poster, ☐ workshop, ☐ either.
TITLE

AUTHOR NAME(S) [give full names of all authors, underline presenting author]:

COMPLETE POSTAL AND E-MAIL ADDRESS(ES) [give full address of all authors]:

Please type a 50-word descriptive abstract, sign below, and return this form by July 7, 2017, to 2016 Winter Conference, Attention: R. Barnes, ICP Information Newsletter, 18241 Beauty Berry Ct, Lehigh Acres, FL 33972-7525 or PO Box 666, Hadley, MA 01035-0666; fax (239) 674-9431, e-mail wc2018@chem.umass.edu

CLASSIFICATION. Which of the following best describes your paper?

A. Symposium:

☐ Sample introduction/transport phenomenon, ☐ Nanomaterial analysis, ☐ Elemental speciation, ☐ Chromatography and plasma detectors, ☐ Automation, plasma instrumentation, detector systems, ☐ Artificial intelligence, chemometrics, software, ☐ On-line and remote analysis, ☐ Sample preparation, treatment, ☐ Spectroscopic standards and reference materials, ☐ Excitation mechanisms and plasma phenomena, ☐ Laser-assisted plasma spectrochemistry, laser ablation, laser-induced breakdown spectroscopy, ☐ Glow discharge, ☐ Imaging mass spectroscopy, ☐ Plasma source mass spectrometry, ☐ Stable isotope analysis, forensics, ☐ Quality assurance, ☐ Mass cytometry

B. Application:

☐ Agriculture/Botany, ☐ Biology, ☐ Chemicals, ☐ Energy, ☐ Environment, ☐ Food, ☐ Geology, ☐ High-purity materials, ☐ Industrial products, ☐ Medicine/Clinical/Forensic, ☐ Metals, ☐ Nanomaterials, ☐ Petroleum, ☐ Semi/superconductor, ☐ Stable isotopes, ☐ Water, ☐ Other _____; ☐ Workshop on New Plasma Instrumentation

PUBLICATION. Which of the following best describes your intentions for publication of the proposed paper?

☐ submission to Conference proceeding journal:

☐ *Analytical and Bioanalytical Chemistry* or ☐ *Journal of Analytical Atomic Spectrometry*.

☐ submission to *ICP Information Newsletter*. ☐ submission to another journal. ☐ no plan to submit manuscript.

CERTIFICATION.

I (we) certify that the material to be presented represents original research or development, which at the time of the Conference will previously not have been published or presented in public.

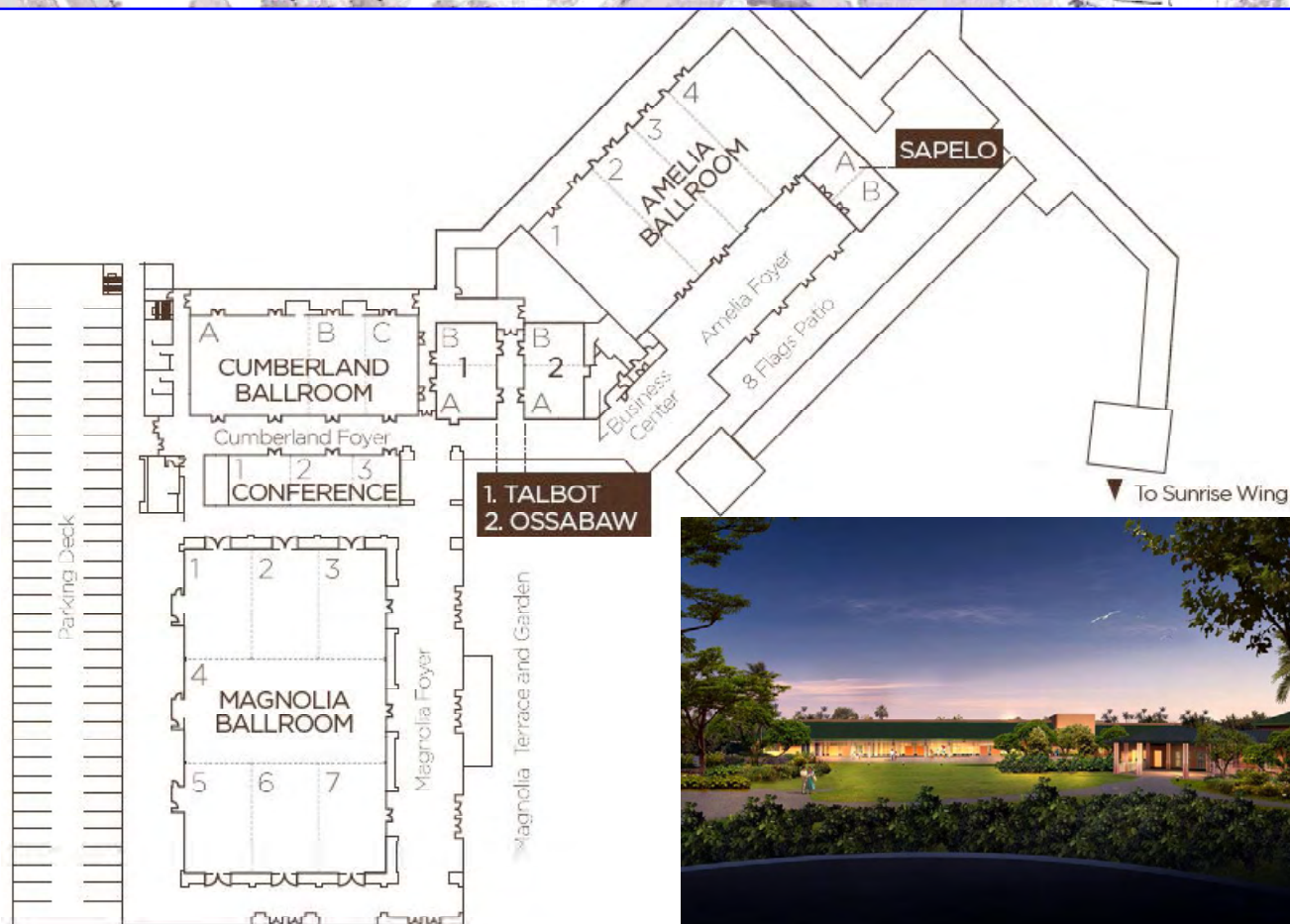
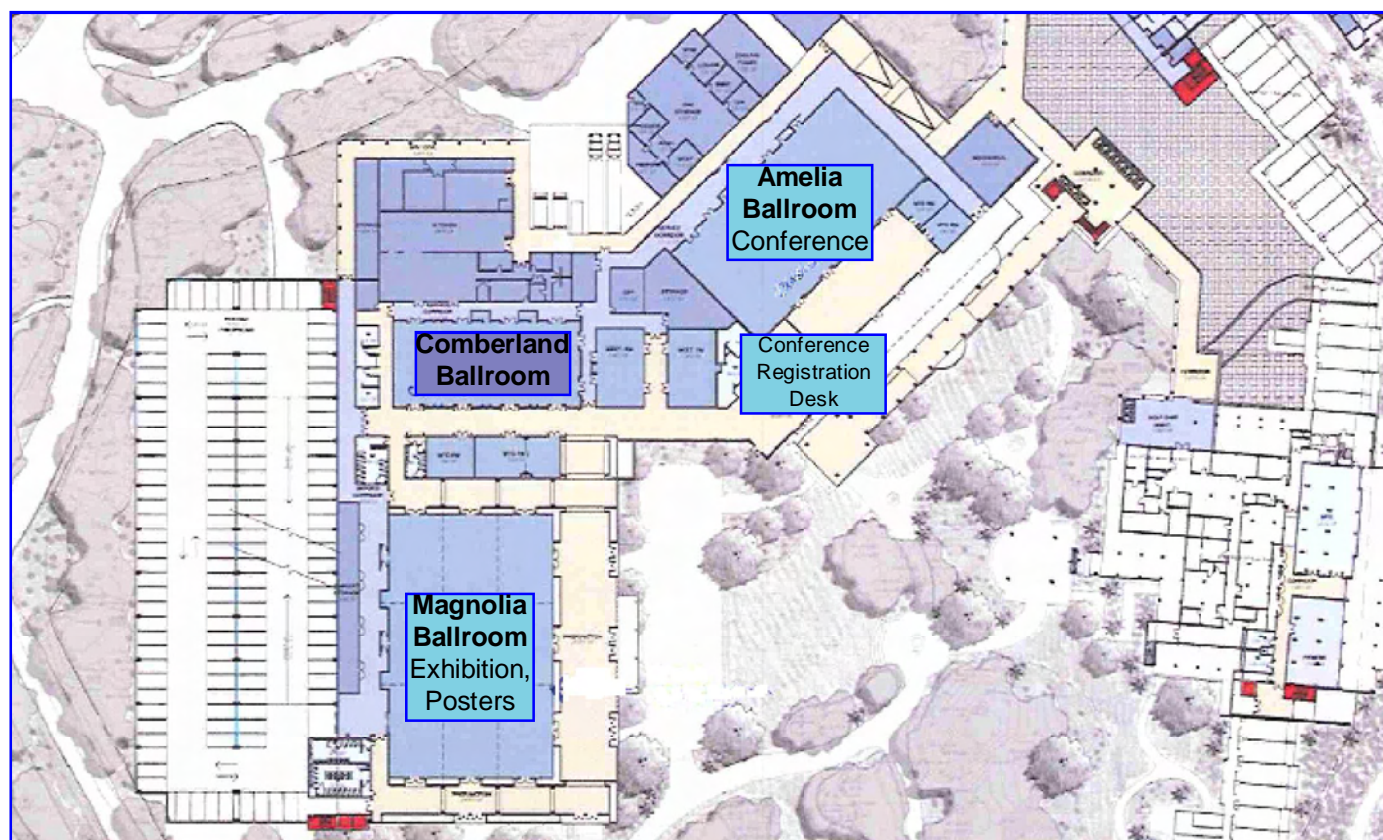
SIGNATURE _____ DATE _____

COMPLETE MAILING ADDRESS (if not included above):

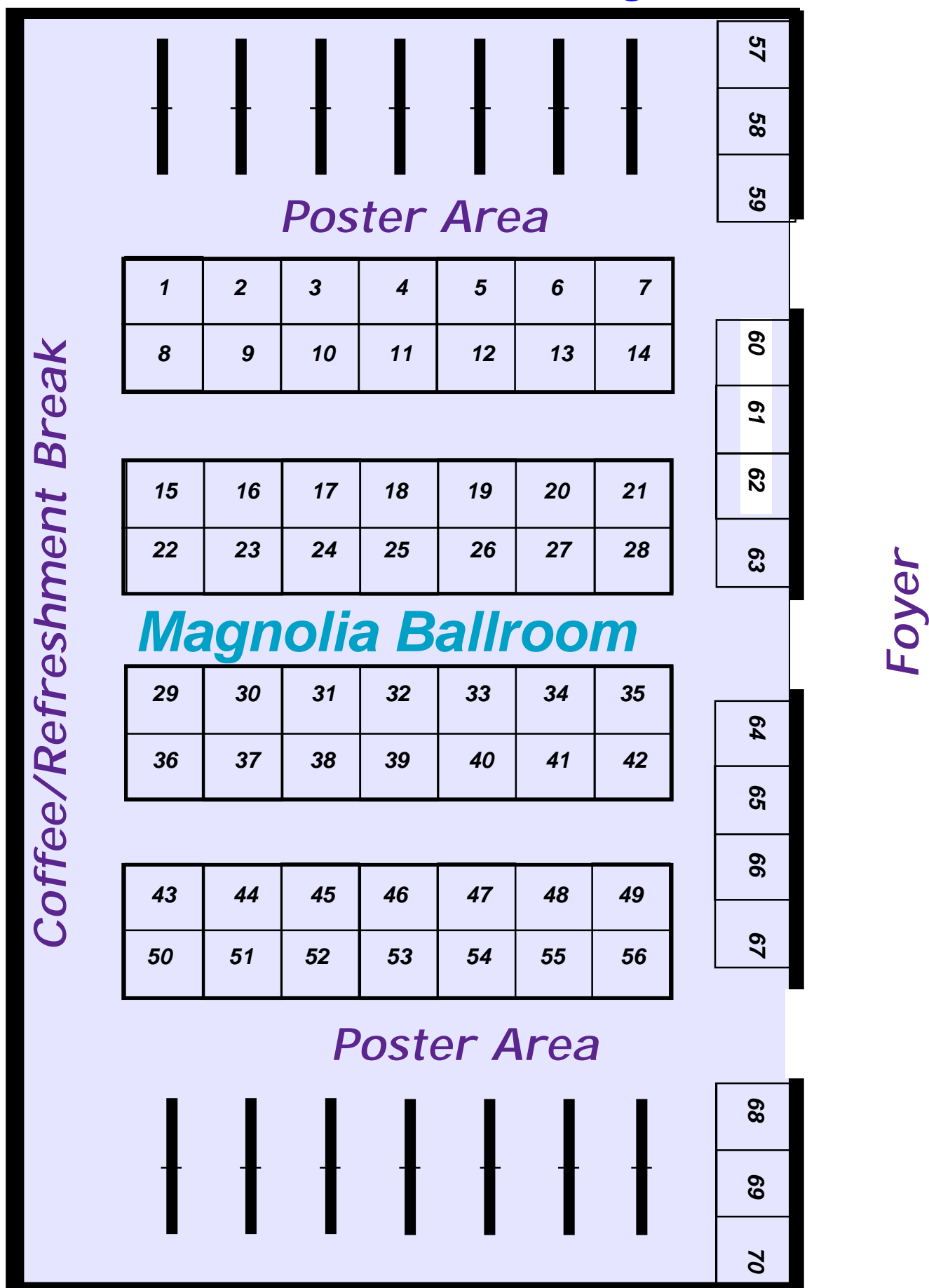
TELEPHONE/FAX/EMAIL:

Received: _____ Manuscript No. _____ Paper _____ Registration 2018-_____-_____

Amelia Island Plantation Resort Convention Center



Exhibition and Poster Area Magnolia Ballroom



Continued from page 8

or two of golf, or spotting wildlife or birds of almost innumerable varieties. Each spring, the island awakens to blue skies, breezy days and afternoon showers with highs in the 70s. Summer offers temperatures in the 90s during the day with winds to cool you down. In the evenings, the sun's setting brings even more pleasant temperatures and the opportunity to enjoy the outdoors well into the evening. A constant sea breeze in the autumn brings changes to the



island as rainfall decreases and average temperature decline. For a live look at Amelia Island beautiful beaches, check out local webcams (<http://www.ameliaisland.com/web-cam-5/>).

Conference Services and Travel Assistance

Conference services and travel assistance are provided by Mr. Steve Lepow of M&E Meeting Planners, who will process hotel and transportation reservations. Hotel reservation forms should be directed to Mr. Lepow at s_lepow@yahoo.com.

Transportation and Parking. Transportation from Jacksonville International Airport (JAX) to Amelia Island Plantation may be arranged by contacting Steve Lepow, M&E Meeting Planners, at memeetingplanners@gmail.com. The Resort offers complimentary self parking and valet parking for a fee. A guest tram system operates throughout the Resort.

Map and Directions

The Omni Amelia Island Plantation Resort is on Amelia Island in northeast Florida, across the St. Marys River from Georgia and adjacent to the historic city of Fernandina. The resort overlooks the Atlantic Ocean on the east and the Intracoastal Waterway on the west. Though private, secluded and protected by a gated entry, the Resort is a short 45 minute drive from downtown Jacksonville, and 29 miles from Jacksonville International Airport. Private and corporate aircraft charters can also fly directly to Fernandina Beach Municipal Airport, four miles north of the Resort.

Airports

Jacksonville International Airport (JAX) is 29 miles from the Omni Amelia Island Plantation. JAX is located 18 miles north of downtown Jacksonville, Florida, and conveniently served by major interstate highways (I-10, I-95, I-295), and is the gateway to northeast Florida and southeast Georgia. Jacksonville Airport is served by American, AirTran, Delta, JetBlue, Southwest, United, and US Airways, offering non-stop flights to major US cities, with connections around the world. Fernandina Beach Municipal Airport is located four miles from the Omni Amelia Island Plantation.

Travel by Air. Amelia Island is an easy 30-minute drive from Jacksonville International Airport (JAX), making the



airport a quick and convenient option for air travelers from all over the world. Shuttle service between the airport and Omni Amelia Island Plantation Resort is available for a fee. In addition, the Fernandina Beach Municipal Airport (FBO) offers corporate airplanes and jets the advantage of easy landings and departures. McGill Aviation offers the amenities expected for the private aircraft customer, including a Hertz Local Edition office on location.

Driving Directions

Travel by Car. An easy drive from Atlanta (5 1/2 hours), Savannah (2 hours), Orlando (3 hours), Tampa (4 hours), and other points north, south and west, arrival on Amelia Island is worth the trip. Two bridges connect the island with the mainland.

From the North. Take I-95 South to Exit 373, (Route A1A East). Go East 11.2 miles to Amelia Island Parkway, (turn right at first traffic light, just over Intracoastal Waterway Bridge). Go 3.4 miles to traffic light and turn right. Go 0.7 miles to the round-about and follow Route A1A South. Go 2.7 miles to resort entrance on the left, (third round-about on left). Follow signs to "Check-In".

From The West. Take I-10 East to I-95 North to Exit 373 (Route A1A East). Go East 11.2 miles to Amelia Island Parkway, (turn right at 1st traffic light, just over Intracoastal Waterway Bridge). Go 3.4 miles to traffic light and turn right. Go 0.7 miles to the round-about and follow Route A1A South. Go 2.7 miles to resort entrance on the left, (third round-about on left). Follow signs to "Check-In".

From The South. Take I-95 North to Exit 373 (Route A1A East). Go East 11.2 miles to Amelia Island Parkway, (turn right at 1st traffic light, just over Intracoastal Waterway Bridge). Go 3.4 miles to traffic light and turn right. Go 0.7 miles to the round-about and follow Route A1A South. Go 2.7 miles to resort entrance on the left, (third round-about on left). Follow signs to "Check-In".

From Jacksonville International Airport. Take I-95 North to Exit 373 (Route A1A East). Go East 11.2 miles to Amelia Island Parkway, (turn right at 1st traffic light, just over Intracoastal Waterway Bridge). Go 3.4 miles to traffic light and turn right. Go 0.7 miles to the round-about and follow Route A1A South. Go 2.7 miles to resort entrance





on the left, (third round-about on left). Follow signs to "Check-In".

Scenic Route. Take I-95 to Exit 358A. Go East on Route 105-(North Heckscher Drive) and follow the signs to Amelia Island.

Travel by Boat. The Fernandina Harbor Marina, located directly on the Intracoastal Waterway at mile 716 on the Georgia/Florida border, is the base for those traveling to Amelia Island by boat. The Marina offers 1,000 linear feet of side-tie dockage, 25-foot depth, and concrete floating docks.

Florida Activities and Attractions

Golf -- Plan A Florida Golf Vacation

The Omni Amelia Island Plantation provides guests with a first class golf experience. Named a Top 121 Golf Resorts in the World by Condé Nast Traveler, the resort boasts championship courses. Amelia Links, designed by Pete Dye and Bobby Weed, is a 36-hole configuration that includes two signature courses, Oak Marsh and Ocean Links. The natural beauty of tidal marshes, intercoastal waters, the Atlantic Ocean, and mature live oak trees that surround these courses provide stunning and breathtaking views that challenge the novice and professional alike. The members course, Long Point, is a Tom Fazio creation with an 18-hole layout designed distinctly among primal marshlands and the towering sand dunes of the Atlantic. Resort guests may reserve tee times for this course one day in advance, based upon availability. Amelia Links and Long Point golf pro shops offer private instruction, equipment rentals, customized gifts and an extensive collection of golf accessories and sports wear.

The 2018 Winter Conference golf tournament on Sunday, January 7, will be organized; contact our staff for details and reservations.

To extend a Florida golf vacation, find comprehensive information on more than 1000 golf courses and visitor services in Florida, explore Florida's top golf destinations, discover golf deals, browse golf articles, videos, and blog at www.visitflorida.com/golfing/.

Tennis

At the Omni Amelia Island Plantation a world-renowned award winning tennis facility managed by Cliff Drysdale Tennis professionals caters to every tennis skill set from beginner to pro. Avid tennis players can enjoy the 23 Har-

Tru® tennis courts and instruction by Cliff Drysdale tennis professionals.

Florida [www.visitflorida.com/Amelia_Island]

Visit Florida magazine provides travel, attractions and activity information for regions and cities in Florida. The user-friendly website is the official source for travel planning (www.visitflorida.com/Amelia_Island).

The official Florida state park website provides park descriptions, events, and maps (www.floridastateparks.org/).

Where First Coast magazine highlights Jacksonville and Amelia Island activities (www.wheretraveler.com/classic/us/fl/jacksonville).

Arbus Magazine's *Scene* is Jacksonville's and North-east Florida's art and business publication that contains material with a cultural twist and arts education emphasis (<http://arbus.com/>).

A1A Scenic & Historic Coastal Byway (www.scenica1a.org) is an officially designated American Byway®. The 72 miles of mostly two-lane roadway navigate nature's beauty, history, and true serenity. From the northern boundary of St. John's County, the Byway bisects the seaside luxury and golf mecca known as Ponte Vedra Beach, and weaves through America's oldest city, St. Augustine. Finally ending at the terminus of Flagler County at a seaside park named for a folk hero, the Gamble Rogers Memorial Park on Flagler Beach, the A1A Scenic & Historic Coastal Byway connects state parks, national monuments, stunning beaches, nature trails, boating, fishing, preserves, estuaries and all of America's diverse people. The land and waters on either side of the Byway have been part of the sweep of American history, nature, archaeology and recreation for nearly 500 years. For details, contact Flagler County (www.flaglerchamber.org), St. Augustine (www.oldcity.com, <http://floridashistoric-coast.com>), St. Johns County, and Ponte Verda Beach (www.getaway4florida.com).



Exploring Amelia Island

Take the time to explore the tiny barrier island's history and ecology. Tours can take visitors back in time or put them face-to-face with Mother Nature. So whether you're interested in learning about pirates, fishing, hiking or creating your own adventure, discover a past rich in history or nature in all its glory. Explore Amelia Island to see for what makes



it unique.

History. From ancient forests to pirate lore, Amelia Island has amassed a history unlike anywhere else in the world. Delve into it in a wealth of museums and historical attractions scattered throughout the island.

Nature. While you're on Amelia Island, take the time to meet our most famous residents – manatees, sea turtles, whales and dozens of bird species. Several state parks, trails and undeveloped nature areas provide the perfect opportunity to catch a glimpse these Floridian creatures.

Outdoor. Amelia Island is a paradise for outdoor recreation enthusiasts. Whether you're a novice or experienced fisherman, scuba diver, kayaker, hiker or adventurer of another kind, you'll feel right at home on our island.

Parks. Amelia Island is home to several parks for visitors and residents to enjoy including Amelia Island State Park, Fort Clinch State Park, Fort George Island State Park, and Little Talbot State Park.

Tours. Guided tours are the best way to learn the stories behind the island. With everything from carriage rides to Segway tours, there's no shortage of ways to take in all the island has to offer.

Charters & Cruises. From parasailing to deep-sea fishing, SCUBA diving to dolphin watching, there's so much to see and do, and plenty of experts are available to help find the activities that are right for you (www.ameliainland.com/area-services/entertainment/excursions-charters-cruises/).

Omni Amelia Island Plantation Resort Activities

Experience a true Amelia Island resort destination. The Resort offers daily activities throughout the property for the entire family.

Youth and Family Recreation. Catering to all ages, Omni Amelia Island Plantation offers fun, supervised activities to keep everyone entertained. From trips and dinner parties to bonfires, the fun never ends.

Explore the Real Amelia Island. Engage with the property's Teen Concierge (a local market expert) for an insider's perspective of activities, restaurants and attractions. Teens can also text, email or chat *via* Twitter with the Teen Concierge.

Amelia's Wheels. Guests can rent bicycles, Island Hoppers (golf carts), tag-along bikes, baby trailers and jogging strollers. Guests can also sign up for one of the daily Segway tours.

Beach and Pools. Guests have access to the Beach



Club and hotel pool, the heated Dunes Club pool, and indoor pool at the Health & Fitness Center.

Nature Center. Join one of our naturalists and explore Amelia Island's natural wonders. With daily tours offered, Build-A-Turtle and wildlife abound, the Nature Center is perfect for your little explorer.

Fishing and Boating. If you're tired of the beach, spend time or a full day fishing. Contact our Nature Center for on-property fishing and pole rentals or contact the Recreation Department for off-property charters.

Shopping. For some retail therapy, the Omni Amelia Island Plantation has many shopping opportunities.

Tennis. Our world-renowned award winning tennis facility caters to every tennis skill set from beginner to pro.

Spa. Relax in our spa focused on soothing the mind and body all while being "one with nature".

Fitness. To kick your vacation into high gear, check out our fitness center with various classes and machines to keep up your fitness routine.

Horseback Riding, Kayaking and Surfing. Contact the resort Recreation Department for more information about various activities available nearby.

Arts & Culture.

The Plantation Artists' Guild & Gallery – on property
Amelia Community Theater - 10 miles
Amelia Island Museum of History – 10 miles

Attractions

The Nature Center of Omni Amelia Island Plantation – on property
Fort Clinch State Park – 9 miles
Amelia Island River & Cruises – 10 miles
Island Falls Miniature Golf – 7 miles
Party and Play – 7 miles
Jacksonville Zoo – 28 miles
Timucaun Ecological and Historical Preserve – 30 mile
Jacksonville Museum of Science & History – 36 miles

Shopping

The Spa & Shops of Omni Amelia Island Plantation – on property
Palmetto Walk Shopping Village – 2.5 miles
Talbots – 6 miles
SteinMart – 6 miles
Downtown Fernandina Beach – 10 miles
St. John's Town Center – 35 miles
St. Augustine Outlets – 64 miles



Omni Amelia Island Plantation

Views



Outdoor Recreation

The Nature Center (kayaking, nature tours, hiking) – on property
Amelia's Wheels - on property
Kelly's Seahorse Ranch - 3 miles
Kayak Amelia – 8 miles
Amelia Island State Park – 3 miles
Little Talbot Island State Park – 10 miles
Fort George Island – 25 miles
St. Mary's Ferry to Cumberland Island – 38 miles

Sports

Amelia Links Golf Course - on property
Amelia's Mark fishing charters – 10 miles
The Amelia Angler fishing charters – 10 miles
Everbank Field (Jacksonville Jaguars) - 34 miles
Baseball Grounds of Jacksonville (Jacksonville Suns) - 34 miles

Universities

Jacksonville University - 30 miles
University of North Florida – 35 miles
University of Florida – 36 miles
Florida State University - 200 miles

Dining & Entertainment

29 South Eats - 10 miles
Brett's Waterway Café - 10 miles
Cafe Karibo - 10 miles
Ciao Bistro - 10 miles
Espana Restaurant - 19 miles
Falcon's Nest - on property
Marsh View Bar & Grill - on property
Marché Burette - on property
Natural Slice - on property
Oceanside - on property
Seaglass Lounge - on property
Sunrise Café - on property
Verandah - on property



NORTHEAST FLORIDA



2018 Winter Conference on Plasma Spectrochemistry



Amelia Island, Florida
January 8 - 13, 2018



2020 Winter Conference on Plasma Spectrochemistry

January 12 – 18, 2020, Tucson, Arizona



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<http://icpinformation.org>

<http://www.hiltonelconquistador.com>,

<http://www.visitTucson.org>

