

## CDC-ECC 2011 in Orlando, Florida

CELEBRATING 50 YEARS OF DECISION AND CONTROL

The Joint 50th IEEE Conference on Decision and Control (CDC) and European Control Conference (ECC) will be held on December 12–15, 2011, in Orlando, Florida. This CDC-ECC might well be the most unique conference of its kind in our lifetime:

- The CDC celebrates its 50th anniversary.
- The CDC is held jointly for only the second time with the ECC. The first joint conference was in 2005 in Seville, Spain.

To celebrate 50 years of the CDC and to accommodate the anticipated attendance, the conference will span four days, starting on a Monday. This means we will have more contributed and invited papers as well as more plenary and semiplenary sessions. In addition to the usual social program, this conference will feature a very special event—a party to celebrate our 50th birthday!

Putting together a conference like this depends on the hard work and dedication of many people, mostly serving behind the scenes. I am particularly grateful for the work of the CDC-ECC 2011 Operating Committee. I invite you to visit the Web site of the CDC-ECC 2011 [1], our main portal for information on the conference.

### A BRIEF HISTORY OF CDC

Seven years ago, in 2004, the IEEE Control Systems Society (CSS) celebrated its 50th anniversary. That year was filled with recollections of the history of our Society and discipline. Two timely articles in the December 2004 issue of *IEEE Control Systems Magazine* traced that history. One article described 50 years of the CSS [2] while a second focused solely on the CDC [3]. Here, I will provide only a brief historical note, referring the reader to [3] for a more complete historical treatise.

It was June 1962. The Third Joint Automatic Control Conference (JACC) was being held in New York City. In conjunction with this meeting, a symposium and panel discussion was held, called Discrete Adaptive Processes. Recognizing the success of this forum, the Symposium on Adaptive Processes (SAP) continued to be held every year for the rest of the 1960s. In 1970, the name “IEEE Confer-

ence on Decision and Control” was first adopted, still in conjunction with SAP. It was not until 1982 that SAP was dropped altogether, leaving IEEE CDC to persist through today. Interestingly, 1982 was also the first time the CDC was held in Orlando, Florida.

Contrary to what you might suspect, Orlando has not been anywhere near the most popular location for the CDC. In fact, since 1982, Orlando has hosted the CDC only one other time, in 2001. Attendance that year was challenged by the reverberations of 9/11, just three months earlier, a fact that I particularly remember since I was the registration chair. To those of you who have the impression that the 1994 CDC was held in Orlando, I will point out that, technically, the location was actually Lake Buena Vista, Florida. To be sure, Florida *is* indeed the most popular state to hold the CDC.

### ORLANDO

Why Orlando? First, being a joint conference, the location must be easily accessible to Europeans. Second, the weather in Orlando in December is pleasant, with daytime high temperatures around the 70–80 °F (mid 20s °C), so that visiting Orlando in December will be a welcome change for many. Third, CDC-ECC is likely to have a higher number of attendees than the average CDC. Orlando easily handles numbers far exceeding ours. A final reason is that Orlando is, simply put, a great destination. For attendees with families, Orlando is hard to beat. The week of CDC-ECC is actually an off-peak week; wait another week or two and the numbers at the theme parks jump significantly for the holiday season.

Before giving you details about the conference hotel, let me point out some highlights. The hotel is the Hilton Orlando Bonnet Creek. The property consists of two towers separated by a convention center where our technical program will take place. The first tower is the Hilton, where we have negotiated special room rates. The other tower is the Waldorf Astoria, the only hotel with that name outside of New York City. The entire facility was completed only about a year ago, so everything is still brand new.

Probably the most attractive feature of this hotel is that it is perfectly sized for our needs. We will have full

## CDC-ECC 2011 Operating Committee

- General Chair: Edwin K. P. Chong
- Program Chair: Marios M. Polycarpou
- CSS General Vice-Chair: Jay A. Farrell
- EUCA General Vice-Chair: Eduardo F. Camacho
- Program Vice Chairs: Venkataramanan Balakrishnan, Jakob Stoustrup, and Christos Panayiotou
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Alessandro Astolfi.



Hong Chen on Changbai Mountain.



Ann Rundell and Raghu Balakrishnan with their son Ashwin, at the Taj Mahal.



Raj Rajamani.



Sandra Hirche.



Christos Panayiotou with wife Maria, their daughters Danae and Daphne, and some Orlando celebrities.



Randy Beard with wife Andrea, and daughters Laurann, Kaitlyn, Aubrey, and Kelsey.





Jay Farrell and his wife Theresa.



Bahram Shafai and his wife Soheila.



Richard Hull and wife Mary on vacation at the Grand Canyon.



Chiara, Luca, and Lorenzo Zaccarian in summer 2009.



Laura Menini with her husband Antonio and sons Marco and Pietro, visiting Madrid.



Jakob Stoustrup riding a Segway.



Marios and Maria Polycarpou in Cavo Greco, Cyprus.



Eduardo F. Camacho and his wife Janet.



Edwin Chong with his wife Yat-Yee and their children Maddy and Isaac in Colorado.



Warren and Lisa Dixon and sons Ethan and Isaac.





The Hilton Orlando Bonnet Creek and Waldorf Astoria Orlando.

rein of the convention center. The Hilton has about 1000 rooms, so we will be virtually the only people occupying the hotel. An outsider crashing one of our parties would be easy to detect. If you think Lyapunov is a mixed drink, you're out!

A hotel just for our conference is indeed very appealing.

### A HOTEL JUST FOR US

Imagine walking into our conference hotel, where *everything* is catered to our unique community. You are greeted by the Hamilton-Jacobi Bellman, who helps you with your luggage. He invites you to dine at the newly transformed *La Place* restaurant. You request to be seated at an interior point, quiet but not a dead zone. You like just watching people, as an observer, catching every discreet event. You immediately order your favorite aperitif, gin and monotonic. It's very good, you are overcome by uncontrollable delight.

What should you have for dinner? You decide to start with the usual garden salad with vinegar and olive Euler dressing. Next, some steaming miso soup. For the main dish, there are many choices, it's almost undecidable. How about a simple Luen burger? Or Wiener schnitzel with a side of angel Hurwitz pasta? Perhaps baked ragazzini with riccati cheese? You decide you'll have fish instead (poisson, say the French). Some Skorok cod sounds good, with a side of beetroot locus.

Wine with your meal? Some backstepping is in order—instead of the usual robust red, you decide to do something different. Yes, some Nelder mead. Simple yet complex; the right word is simple.

You've left some phase margin for desert; the meal wouldn't be NP-complete without it. The choice is obvious: Popov tart à la (unstable) mode with some piping hot Kalman filtered coffee. No cream and sugar, just black. You savor your desert piecewise continuously.

For the digestif, some Kolmogorov-Smirnoff vodka (absolut intelligence), or perhaps Johnnie Yule-Walker Blue? You ponder, and the optimal choice comes to you: Pontrya gin straight up.

This whole night has seemed perfectly orchestrated, like a Nyquist plot. You decide you'll leave a generous tip—positive feedback for the excellent servo. Good waiters deserve their due (lead-lag) compensation.

You leave the restaurant asking yourself, did the night bode well for the rest of the visit? You answer, positive definitely!

### HILTON ORLANDO BONNET CREEK

This overview of the hotel is courtesy of the hotel's media department ([http://www.bonnetcreekmedia.com/h\\_fs.html](http://www.bonnetcreekmedia.com/h_fs.html)).

The Hilton Orlando Bonnet Creek is comprised of 1,001 elegantly appointed rooms and suites and features 122,000 square feet of flexible meeting space and prefunction area, access to the 7108-yard Rees Jones designed 18-hole championship golf course at the Waldorf Astoria Golf Club, six restaurants and lounges, a two-acre lagoon-style and zero-entry resort pool, retail space, and access to the Waldorf Astoria Spa by Guerlain. Adjacent, the Waldorf Astoria Orlando transcends the resort experience with exclusive signature dining opportunities available for the first time outside New York City.

Surrounded on three sides by the Walt Disney World Resort, the Hilton Orlando Bonnet Creek is minutes away from most Orlando sites with convenient access to Epcot Drive, Interstate 4, and Osceola Parkway through Buena Vista Drive. The property is 20 min from Orlando International Airport (MCO) and 5 mi from private jet preferred Kissimmee Gateway Airport (granted, unlikely to be the preferred airport for CDC-ECC attendees). Orlando attractions and venues including the Orange County Convention Center, Universal Studios, and Sea World are within 15 min of the property.

An outdoor family fun area features a lazy river pool and waterslide. Families have access to the WA Kids children's program, which offers a variety of creative and educational activities.

Complimentary private direct transportation to the Magic Kingdom, EPCOT, Hollywood Studios, Animal Kingdom, and Downtown Disney is available during park operating hours. Downtown Disney offers a variety of restaurants outside of the hotel premises.

The property features 125 acres of state protected waterways and wetlands that are home to turkeys, foxes, pigs, and more than 100 migratory birds.

## **BEFORE THE THEME PARKS: ORLANDO CELEBRATES PROUD ROOTS IN CATTLE, CITRUS, AND SPACE**

Most people know Orlando by its theme parks: Magic Kingdom, EPCOT, Disney's Hollywood Studio, and Disney's Animal Kingdom at Walt Disney World Resort; Islands of Adventure, and Universal Studios Florida at Universal Orlando Resort, and SeaWorld Orlando. But few know the historical roots of Orlando. This account of Orlando's origins is from the Orlando Conventions and Visitors Bureau (<http://www.orlandoinfo.com/media/presskit/history.cfm>).

### **WELCOME TO JERNIGAN?**

The city of Orlando came into existence in 1857, but its origins can be traced to the Armed Occupation Act of 1842. Fort Gatlin was established during the Second Seminole War in 1838, and when the war ended in 1842, the government offered land to homesteaders willing to live near the forts. Brothers Aaron and Isaac Jernigan settled near Fort Gatlin in 1843, and in 1850 a post office opened in the settlement then known as Jernigan.

The population soon spread northward from Jernigan, beyond the fort, leaving the exact location of the community in question. But a gift to the county of land for a courthouse near Lake Eola soon settled disputes and led to the creation of a new town called Orlando.

While different versions of the origin of the name are recounted, there is no certain story as to how the city of Orlando was named. One story says the name honors soldier Orlando Reeves who died near what is now Lake Eola in downtown Orlando during the Second Seminole War—according to the legend, he warned sleeping soldiers of a coming attack before falling himself. One other popular theory credits early settler Judge Speer as suggesting Orlando, the name of the romantic hero in Shakespeare's play, *As You Like It*.

### **SQUEEZING THE CITRUS MARKET**

Orlando's early economy centered around the cattle industry, but the city's greatest growth occurred during several economic booms, the first following the arrival of the South Florida Railroad in 1881, which made it easier to travel to the area. Businesses appeared and hotels opened to accommodate the first wave of tourists. The railroad, renamed the Atlantic Coast Line in 1902, enabled citrus growers to ship fresh fruit to northern markets, making Orlando a major citrus producing center by 1890.

With the nation's growing demand for grapefruit, tangerines, and oranges, coupled with the extension of the South Florida Railroad into Central Florida in 1880, the citrus industry flourished. On July 21, 1875, by a vote of 22 men from the 85 residents, the 2-mi<sup>2</sup> (5.2-km<sup>2</sup>) city of Orlando was officially incorporated.

In 1894 and 1895, hard freezes hit Central Florida, destroying 95% of the citrus trees and severely damaging the citrus industry. It took 15 years for the industry to recover, and citrus was a major agricultural industry in Orlando throughout most of the first half of the 20th century. At its peak in the 1950s, more than 80,000 acres (32,000 hectares) of citrus trees were thriving in Central Florida.

Orlando's second boom paralleled national prosperity and progress. Orlando expanded in the early 20th century as many homes received electrical power. Cars appeared in Orlando in 1903 with a speed limit of 5 m/h (8 km/h). The automobile and improved highways brought increased tourism, the growth of business and construction, and the beginnings of suburbanization. The city's population increased from about 9000 in 1920 to more than 27,000 by 1930.

### **FLYING HIGH**

Capitalizing on Orlando's near-perfect, year-round flying weather, aviation brought another economic boom. In 1922, Orlando's first airport opened to haul cargo. Orlando's Municipal Airport, built in 1928, became the Orlando Army Air Base and quietly contributed to the war efforts both before and during World War II as one of the first places to train bomber pilots. The military built a second airfield near Pine Castle in 1941, which later became McCoy Air Force Base and is now the Orlando International Airport. At the end of the Second World War, Pine Castle Air Base served as the site for top-secret X-1 tests and as home to a strategic air command (SAC) unit in the 1950s.

In 1956, a major period of growth resulted when the Glenn L. Martin Company of Baltimore, Maryland, purchased 10.6 mi<sup>2</sup> (27.4 km<sup>2</sup>) of southern Orange County land and announced plans to build a missile factory. The U.S. Missile Test Center, established at Cape Canaveral in 1955, brought the aerospace industry to Orlando. The Martin Company opened a plant in 1956 and quickly became the area's leading employer. Orlando's population, almost 37,000 in 1940, reached about 52,000 by 1950. Today, the company operates under the name of Lockheed Martin and serves as the backbone of the area's technology industry. Orlando is now home to a number of major technological and digital media companies including Electronic Arts (EA), House of Moves, and Blue Orb, Inc. Orlando also has special schooling programs for this field at University of Central Florida's Florida Interactive Entertainment Academy (FIEA) and Full Sail.

### **TOURISM TAKES OFF**

Along with the population, tourism steadily grew in Central Florida. Cypress Gardens opened its doors in 1936 and became the second most popular attraction to visit in the country after the Grand Canyon. This established Orlando

as one of the top vacation destinations in the world. Weeki Wachee Springs, famous for underwater performances by “mermaids,” put on its first show in 1947. The Florida Wildlife Institute opened in 1949 and became Gatorland in 1954. Walt Disney World Magic Kingdom was next to open its gates in 1971. SeaWorld Orlando followed suit when it splashed open in 1973. Over the years, Walt Disney World Resort continued to expand with the opening of EPCOT in 1982, Disney’s Hollywood Studios in 1989, and Disney’s Animal Kingdom Park in 1998, as well as resorts, water parks, golf courses, and entertainment complexes. In 1990, Universal Studios Florida came onto the scene. In 1999, Universal Orlando Resort opened a second park, Universal’s Islands of Adventure, followed by the addition of an entertainment complex and three hotels. In 2000, Discovery Cove opened with a unique dolphin-swim experience, and in March 2008, Aquatica, SeaWorld’s Waterpark opened, offering visitors a new one-of-a-kind water park experience.

### MEET ME IN ORLANDO

While Orlando’s tourism industry has grown exponentially with the rapid development of renowned theme parks, Orlando is also quickly becoming one of the country’s leaders in the meetings and conventions industry. Orlando’s Orange County Convention Center opened in 1983 with 147,510 ft<sup>2</sup> (13,275 m<sup>2</sup>) of exhibition space and

has grown to more than 2.1 million ft<sup>2</sup> (189,000 m<sup>2</sup>). Orlando’s hotels and cultural venues now offer more than 4.2 million ft<sup>2</sup> (390,193 m<sup>2</sup>) of meeting space. More than 3 million convention and meetings attendees visit Orlando each year.

### GROWING BIGGER AND STRONGER

Orlando continues to grow, offering nearly 100 attractions, 115,000 hotel rooms, and more than 5,300 restaurants, as well as the second largest convention center in the nation. Tourism has become the leading industry for Central Florida with more than 44 million visitors annually and an economic impact of 30 billion. Today, more than 2.1 million people reside in Greater Orlando, which consists of Orange, Osceola, Seminole, and Lake counties.

### REFERENCES

- [1] Web site of CDC-ECC 2011 [Online]. Available: <http://control.disp.uniroma2.it/cdcecc2011/>
- [2] D. Y. Abramovitch and G. F. Franklin, “Fifty years in control: The story of the IEEE Control Systems Society,” *IEEE Control Syst. Mag.*, vol. 24, pp. 19–36, Dec. 2004.
- [3] C. B. Schrader and M. W. Spong, “The IEEE Conference on Decision and Control: Tracing CDC history,” *IEEE Control Syst. Mag.*, vol. 24, pp. 56–66, Dec. 2004.

Edwin K.P. Chong



## » PEOPLE IN CONTROL (continued from page 29)

Yes. I highly recommend service to the CSS. The CSS is run entirely by volunteers, and the Society leaders are often looking for new volunteers. Many of the volunteers are there, at least in part, for the social aspects; therefore, even though the work will sometimes distract from research, the company is often enjoyable with good memories and a few mysteries. I am still trying to find out about the Wild Ginger affair.

### Q. You served as a department chair for three years. How was that experience?

**Jay:** When I came to UCR in 1994, the College of Engineering was brand new. So new in fact, that one of my supervisors at Draper (Eli Gai), told me that UCR did not even exist. The EE Department had not yet graduated its first undergraduate class or established a graduate program. I

came anyway, because the University of California system had a great history of growing excellent programs. When our new dean was authorized to make significant new hires in 1997, I looked at it as an opportunity to shape a young EE Department; therefore, even though I was still an associate professor, I accepted the role of department chair. In my three years as chair, our faculty grew from seven to 15, we established the materials portion of our department, our graduate program started, we established a computer engineering degree program, and passed ABET accreditation. At the end of three years, my participation in the chemical plume-tracing project was growing as the project shifted from DARPA to ONR, so I gave up the role as department chair. Due to the hard work of our faculty, our college and department are now well established and recog-

nized. As I stated above related to volunteering within CSS, it is very rewarding to be a small part of organizing a successful venture.

### Q. What are some of your interests and hobbies outside of your professional career?

**Jay:** Outside of work I spend time with family, typical activities being sailing, hiking, or biking. When I get personal time I enjoy duplicate bridge and reading. I first learned bridge during graduate school and continue to enjoy it when time is available. With my children, Sarah (19) and Daniel (17), heading off to college, more time may become available soon.

### Q. Thank you for speaking with CSM!

**Jay:** You’re welcome. It is an honor to have been asked.

