



FBPE
FLORIDA BOARD OF
PROFESSIONAL ENGINEERS

Connection

Linking You With the Florida Board's Latest Engineering News and Information.

2nd Quarter 2017 – October 2017

From the Executive Director: The Business of Regulating

By **Zana Raybon**, FBPE Executive Director & FEMC President

As I prepare to attend my second regulatory conference this year, I would like to share some insight that I have gained and what regulators across the country may be expecting in the coming year.

This week I will attend the 2017 FARB Regulatory Law Seminar, which is a conference hosted by the Federation of Associations of Regulatory Boards. For three days, attendees will focus on the challenges facing regulatory boards and the legal cases that are likely to shape the decisions of those boards.



I also attended the 2017 CLEAR Annual Educational Conference last month, which is hosted by the Council of Licensure, Education & Regulation. This conference focuses more on the concerns that board administrators face and the upcoming changes that will affect professional boards around the world.

Some of my takeaways from the conference last month are:

- How are we dealing with sexual abuse cases in the regulatory arena?
- Are we ensuring that there are no undue barriers to licensure in our state?
- Are our board members behaving appropriately and in a professional manner?
- How do we define good moral character for purposes of initial licensure and sustaining a professional license?

Speaking from personal experience, I know that FBPE Board members take their job seriously and have always conducted themselves in a completely professional manner. However, it is amazing to hear about the conduct of members of other boards. It truly makes me appreciate the men and women who serve the engineering profession in our state.

It was interesting, though, to see how the topic of sexual abuse has become so prevalent and how boards are struggling to deal with these types of criminal cases as it relates to professional licensure. It is the first time I have ever seen so many sessions on this issue in the five years I have been attending this particular conference. Apparently, this matter also bleeds into the

issue of good moral character, as well. Many boards wrestle to define what good moral character is and what to do about it.

This week I will attend a conference that is related to the CLEAR event but focuses more on the legal aspects. We will concentrate on legal cases that have helped to shape the licensing landscape in the past year and cases that have not yet been decided but may influence licensure decisions in the coming year. Some of the matters to be discussed will be investigations, compliance, examination score invalidation, and delegation of authority. One of the guest speakers will be Tara Koslov, the acting director of the Office of Public Policy at the Federal Trade Commission. I expect it will be a very informative session.

I look forward to learning more about the matters that affect our business – the business of regulating – and to bring that information back to our board.

Chair's Corner: Dealing With One Storm, Preparing for the Next

By **Anthony J. Fiorillo**, PE, SI, CGC, FBPE Chair

Welcome to fall! If you are like me, you are ready for cooler weather, the start of the holiday season, and the end of hurricane season!

Hurricane Irma pounded the state with high winds, storm surges, and torrential rains leaving approximately 6.2 million homes without power (some for weeks), ripped off roofs, flooded streets, halted flights, canceled quite a number of football games, and sadly left quite a number of people dead. It is estimated that the storm did approximately \$20 to \$40 billion in damage to insured property. I think we can all agree Irma was a real female dog!



The old adage says that hindsight is 20/20, so let's take a look at a few lessons learned so that we can be better prepared for the next one. First and foremost, if instructed to evacuate, then get out of Dodge! Second, storm tracks change. I spoke with a number of people, including my sister-in-law, on the west coast of Florida who thought they were in the clear as the storm began shifting east. Lo and behold, Irma tracked along the west coast, wreaked havoc, and left many without basic supplies. Always be prepared!

The Federal Emergency Management Agency (FEMA) recommends that all Americans have basic supplies on hand in order to survive for at least three days. However, the agency recommends that each individual consider where they live and the unique needs of their family. Have a plan for each of the different types of emergencies that may happen. Make sure to purchase supplies, generators, and gas early. Keep plenty of water, canned and/or freeze-dried food on hand. A manual can opener is always a good idea. Propane grills are great for cooking when power is out. You can purchase portable grills with mini propane canisters at your local sporting or camping store. FEMA also recommends battery-powered or hand-cranked flashlights and radios with the NOAA weather radio station at the ready; first-aid kit; moist towelettes, garbage bags, a five-gallon bucket, and plastic ties for personal sanitation; hand sanitizer; and one gallon of water per person per day, etc. For more information, please read

FEMA's Emergency Supply List at https://www.fema.gov/media-library-data/1390846764394-dc08e309debe561d866b05ac84daf1ee/checklist_2014.pdf.

The clean-up is in full swing and will continue for quite some time. Crews from across Florida and the Southeast will be clearing trees, restoring power, etc. Engineers and other professionals are investigating and inspecting structures and bridges to make sure they are safe to occupy or cross. While there is a tremendous need for engineers following disasters, these engineers must be licensed. Section 471.021, Florida Statutes, allows for issuance of a temporary license to practice engineering in the state; however, this license is only good for one project for a period not to exceed one year. This same stipulation applies to a temporary Certificate of Authorization for engineering firms. For more information on licensure, please see <https://fbpe.org/licensure/application-process/endorsement-comity-reciprocity/>.

Puerto Rico, the U.S. Virgin Islands, and many other Caribbean islands will also need extensive help in their clean-up and rebuilding efforts. Before working in these areas, I highly encourage you to look into local licensing requirements. To learn more about licensing requirements in Puerto Rico, please see <http://estado.pr.gov/en/engineers-and-surveyors/>. For information in the U.S. Virgin Islands, please see <http://www.dlca.gov.vi>.

Should you have any questions about licensure in the state of Florida or have questions pertaining to other matters, please email board@fbpe.org.

To view a listing of upcoming meetings, you may access the calendar on the Board's website at [FBPE.org](http://fbpe.org).

All the best,
Tony

Engineers Performing Safety Assessments in Irma's Wake

By William C. Bracken, PE, SI, CFM

On Sept. 10, 2017, Hurricane Irma made U.S. landfall in the Florida Keys as a Category 4 hurricane, with sustained winds of 130 mph. After crossing the Lower Keys, the storm then made a second landfall in Marco Island, where it began traveling up the center of our state, ultimately exiting into Georgia between Jacksonville and Tallahassee. In its wake, Hurricane Irma left a large portion of our state without power, other portions dealing with record flooding, and still other portions dealing with significant wind damage.



With so much of our state impacted, the harder-hit communities were forced to seek outside assistance assessing their damage and determining whether their buildings could be safely reoccupied.

When assessments are not performed in a rapid fashion by properly qualified individuals, residents can and most likely will reoccupy potentially unsafe buildings. Faced with that knowledge, the harder-hit communities sought assistance from those within our industry. In response, the Florida Building Officials Association in conjunction with the National Council of Structural Engineers Associations' (NCSEA) Florida chapter (FSEA) provided more than 40 professionals, engineers, and code officials, trained in performing Post-Disaster Damage and Safety Assessments.

Within 48 hours of landfall, 84 NCSEA members from across the country volunteered to provide assistance. Of those, 22 were actively deployed. These engineers were partnered with code and safety officials who worked within seven municipalities over a three-week period assessing thousands of structures.

The key to preventing residents from reoccupying unsafe buildings is to ensure that appropriate damage and safety assessments are performed rapidly. Currently, two organizations – NCSEA and the International Code Council (ICC) – are working to help train professionals to perform these assessments. The training that is delivered focuses on the Applied Technology Council’s (ATC) safety evaluations,



specifically, here in Florida, the ATC-45, titled *Safety Evaluation of Buildings after Windstorms and Floods*.

These safety evaluations were developed for the purpose of evaluating damage to buildings resulting from hurricanes, tornadoes, and floods. This manual was developed following the hurricanes of the 1990s, which included Hurricane Andrew, Hurricane Fran, and Hurricane Iniki. This document serves as one of the foundational elements for

ICC’s Disaster Response Inspector program and NCSEA’s Structural Engineers Emergency Response (SEER) program.

For small-scale events, local building departments are often able to conduct these assessments using their own personnel. However, in large scale events, local building departments are unable to meet the demand. For this reason, FSEA (NCSEA’s Florida delegate) is working with ICC to train and certify qualified professionals throughout the state of Florida so they can perform post-disaster damage and safety assessments.

In addition, a credentialing process has been developed at a national level whereby properly qualified, trained, and certified volunteers can be prequalified. Once prequalified, those individuals can be added to a list by ICC and NCSEA. By properly training and pre-qualifying volunteers, a pool of individuals will exist to assist locals and building officials to help jump start recovery.



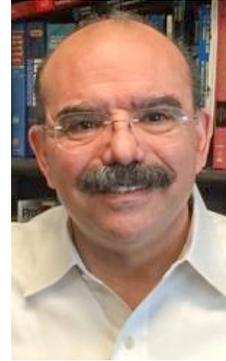
For more information or to become a properly trained non-emergency professional volunteer to assist with post-disaster damage and safety assessments, contact NCSEA’s SEER Committee at ncsea-seer.com, ICC training at iccsafe.org, or ICC’s Disaster Response Network at iccsafe.org/about-icc/safety/icc-disaster-response-network-2/.

Colleges of Engineering Name New Deans

Two Florida universities have named new deans of their colleges of engineering.

Florida International University: In March, John L. Volakis, Ph.D., was appointed dean of FIU's [College of Engineering & Computing](#). Volakis was previously the Roy and Lois Chope chair and professor of electrical and computer engineering at Ohio State University and director of the university's ElectroScience Laboratory.

"At the heart of engineering is the ability to find creative ways to solve complex problems," FIU Provost and Executive Vice President Kenneth G. Furton said. "Under Dean Volakis' direction, the College of Engineering & Computing will prepare students to develop innovative solutions to those challenges, and prepare them to excel in a demanding field."



An immigrant from Greece, Volakis arrived in the United States knowing only a few words of English, and worked to pay for his education. Today, he has earned international recognition for introducing hybrid finite element methods, widely used in electromagnetics computer-aided-design packages, small and wideband antennas, and textile electronics with applications for radio frequency communications for cellular and satellite communications, sensors for healthcare, and the internet of things.

He has a bachelor's degree from Youngstown State University, and master's and Ph.D. degrees from Ohio State University.

"Throughout my career I was fortunate to have great teachers and mentors, and to reach an unlikely level of success," Volakis said. "It is a privilege to give back to a community similar to the one I came from, and to help the College of Engineering & Computing lead the nation in student success and research indicators."

Florida Atlantic University: In August, Stella N. Batalama, Ph.D., was named dean of FAU's [College of Engineering and Computer Science](#). Batalama was chair of the University of Buffalo's Department of Electrical Engineering.

She held various positions at the University of Buffalo since 1995, including associate dean for research in the School of Engineering and Applied Sciences, and from 2003-2004 was acting director of the Air Force Research Laboratory Center for Integrated Transmission and Exploitation, in Rome, N.Y.

"We are very excited that Dr. Stella Batalama decided to join Florida Atlantic University," said Gary W. Perry, Ph.D., FAU provost and vice president for academic affairs. "Dr. Batalama is a leader in her field and she brings with her impressive academic and research expertise that will propel our College of Engineering and Computer Science to new heights. We extend our appreciation to Dr. Mohammad Ilyas for his dedicated commitment and many contributions to the College of Engineering and Computer Science in his role as dean."



Batalama received her Ph.D. in electrical engineering from the University of Virginia, and her undergraduate and graduate degrees in computer science and engineering from the University of Patras in Greece. She also completed the Program for Leadership Development at Harvard Business School. She is a senior member of the Institute of Electrical and Electronics Engineering (IEEE), a member of the Society of Women Engineers, and a member of the American Society for Engineering Education.

NCEES Honors Florida PE for Service

Raymond Jones Jr., PE, of University Park, Fla., has been awarded the NCEES Distinguished Examination Service Award for his dedicated service to NCEES and the engineering profession. The organization honored Jones at its 96th annual meeting, held Aug. 23-26, 2017, in Miami Beach.



Jones began volunteering with the Principles and Practice of Engineering (PE) Mechanical Exam Development Committee in 1990. During his 27 years as an exam development volunteer, he served as vice chair of the committee from 1998 to 2003 and as chair from 2004 to 2008.

In addition to writing and reviewing exam items, Jones has helped with assembling and grading exams for the Thermal and Fluids Systems, HVAC and Refrigeration, and breadth exam modules. He has participated in professional activities and knowledge studies, or PAKS, to update exam specifications and standard-setting studies to establish the passing score. He also was instrumental to moving the PE Mechanical exam to a multiple-choice format.

As he approaches three decades of service to the PE Mechanical exam, Jones is assisting with another momentous change to the exam: the move to computer-based testing. He continues to support the committee by being a prolific writer of exam items, mentoring new volunteers, and serving as a subject-matter expert for HVAC questions. He also recently began leading the quality assurance review of exam items for other sub-disciplines.

Jones has been a licensed professional engineer in Florida since 1976. He retired in 2015 from KTA Group Inc., of Herdon, Va., where he was senior mechanical engineer.

Other service award winners were:

- Dale Jans, PE, emeritus member of the South Dakota Board of Technical Professions, who received the Distinguished Service Award with Special Commendation
- Lisa Hanni, LS, emeritus member of the Minnesota State Board of Architecture, Engineering, Land Surveying, Landscape Architecture, Geoscience, and Interior Design, who received the Distinguished Service Award
- Richard Hayter, Ph.D., PE, member of the Kansas Board of Technical Professions, who received the Distinguished Service Award
- Harold Williamson, PE, of Washington, who received the Distinguished Examination Service Award.

Tami Begins Term as NCEES President



The NCEES 2017-2018 Board of Directors. Front row: Rickborn, Purcell, Tami, and Turner. Back row: Hanson, Bowersox, and Knotts. Not pictured: Tyrell.

Patrick Tami, PLS, began his term as 2017-18 NCEES president at the conclusion of the organization's annual meeting, held Aug. 23-26, 2017, in Miami Beach.

A resident of Roseville, Calif., Tami was a member of the California Board for Professional Engineers, Land Surveyors, and Geologists from 2006 to 2016, and is now an emeritus member. He replaces outgoing president Daniel Turner, Ph.D., PE, PLS, of Alabama, who will remain on the NCEES board of directors as immediate past president.

Also during the annual meeting, NCEES members elected James Purcell, PE, of New Jersey, president-elect for the 2017-18 term, and Timothy Rickborn, PE, of South Carolina, treasurer for 2017-19.

NCEES welcomed Christopher Knotts, PE, of Louisiana, and Paul Tyrell, PE, PLS, of Massachusetts, to its board of directors as well. Knotts and Tyrell will serve two-year terms as vice presidents of the Southern Zone and Northeast Zone, respectively.

Rounding out the board of directors are two members serving the second year of their two-year terms: Maurice Bowersox, PE, of Kansas, returns as Central Zone vice president; and Brian Hanson, PE, of Alaska, continues as Western Zone vice president.

PE Chemical Exam Transitions to Computer-Based Testing

The National Council of Examiners for Engineers and Surveyors (NCEES) is now offering the Principles and Practice of Engineer (PE) Chemical exam exclusively via computer-based testing. The first appointments to take the CBT Chemical exam will begin Jan. 2, 2018.

CBT provides greater convenience for examinees, uniform testing conditions, and enhanced security.

Because CBT is offered year-round at Pearson VUE centers, applicants will be able to schedule an exam date that fits their schedule. Another reported advantage to CBT is that all of the requisite references and resources are provided, eliminating the need for applicants to bring any materials to the exam site.

The total appointment time for the exam is nine hours. The actual exam lasts eight hours; the other hour allows time for administrative tasks, including a tutorial and an optional 50-minute break.

The computer-based PE Chemical exam contains 80 questions. It is a supplied-reference exam. A searchable electronic [PE Chemical Reference Handbook](#) will be displayed on the monitor during the exam. No other material will be allowed in the exam room.

It includes alternative item types (AITs). AITs are items other than traditional multiple-choice questions with one correct answer. They could include the following:

- Multiple select (requires examinees to select multiple answers)
- Point and click (requires examinees to click on part of a graphic to answer)
- Drag and drop (requires examinees to click on and drag items to match, sort, rank, or label)
- Fill in the blank (provides a space for examinees to enter a response to a question).

According to a schedule announced earlier this year, NCEES will follow up the Chemical exam with the Nuclear exam's transition in October 2018. The transition schedule also includes:

- 2019 - Environmental, Software, and Petroleum
- 2020 - Mechanical (three exams), Fire Protection, and Industrial and Systems
- 2021 - Electrical (three exams), Agricultural & Biological Engineering, and Mining and Mineral Processing
- 2022 - Architectural Engineering, Control Systems, Naval Architecture and Marine, and Metallurgical and Materials
- 2023 - Civil (five exams)
- 2024 - Structural (two exams).



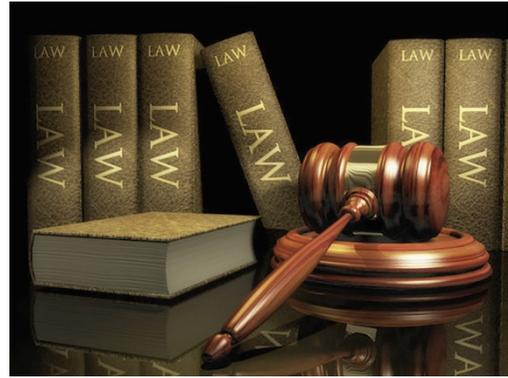
NCEES develops and administers engineering and surveying licensure exams within the United States. For more information on NCEES' computer-based testing, please visit its website at NCEES.org.

What Is the 'Industrial Exemption'?

By William C. Bracken, PE, SI, CFM

While Florida Statute 471 states that Florida's Legislature deems it necessary in the interest of public health and safety to regulate the practice of engineering in Florida, there exist licensure exemptions for those whose practices fit within certain categories:

- (1) Engineers working under the supervision of a licensed engineer who is in *Responsible Charge*;
- (2) "In-house" engineers employed by a manufacturing or other business firm not providing a service directly to the public;
- (3) Engineers employed by public utilities;
- (4) Engineers employed by defense, space, or aerospace companies; and
- (5) Engineers employed by the state or federal government.



Exemptions (2) through (5) are commonly referred to as "Industrial Exemptions." This article is not offered in support or opposition of Industrial Exemptions, but is offered as background on why exemptions are thought to exist and how they are applied within Florida.

The regulation of design professionals is deemed necessary when the design professional is providing services to the public and there are no federal or industry regulatory boards or agencies looking out for the safety of the public. This regulation is accomplished by way of the licensure requirements found within **F.S. 471.003 *Qualifications for practice; exemptions.***

471.003(1) No person other than a duly licensed engineer shall practice engineering or use the name or title of "licensed engineer," "professional engineer," or any other title, designation, words, letters, abbreviations, or device tending to indicate that such person holds an active license as an engineer in this state.

However, Florida Statutes then carve out industrial exemptions within **471.003 *Qualifications for practice; exemptions.***

471.003(2) The following persons are not required to be licensed under the provisions of this chapter as a licensed engineer:

(c) Regular full-time employees of a corporation not engaged in the practice of engineering as such, whose practice of engineering for such corporation is limited to the design or fabrication of manufactured products and servicing of such products.

(d) Regular full-time employees of a public utility or other entity subject to regulation by the Florida Public Service Commission, Federal Energy Regulatory Commission, or Federal Communications Commission.

(e) Employees of a firm, corporation, or partnership who are the subordinates of a person in responsible charge, licensed under this chapter.

(j) Any defense, space, or aerospace company, whether a sole proprietorship, firm, limited liability company, partnership, joint venture, joint stock association, corporation, or other business entity, subsidiary, or affiliate, or any employee, contract worker, subcontractor, or independent contractor of the defense, space, or aerospace company who provides engineering for aircraft, space launch vehicles, launch services, satellites, satellite services, or other defense, space, or aerospace-related product or services, or components thereof.

Based on the paper titled *The Enigma of Engineering's Industrial Exemption to Licensure: The Exception that Swallowed a Profession*, published by the Liberty University School of Law ⁽¹⁾, the Industrial Exemption surfaced around 1940 when leaders of industrial firms and public utilities mounted a counterattack against the sweeping tide of licensing laws. This attack, instead of seeking repeal of the licensing laws, sought exemption of industry employees. It is reported within the paper that industry asserted that, so long as a firm was willing to take responsibility for its engineers' work and was liable for their negligence, licensing was unnecessary for protection of the public's interests.

This has evolved into what is in place today, the safety of the public is protected by way of licensure regulation of the engineer when that engineer offers services to the public; or regulation of the product by way of product safety standards and product liability. Here in Florida, the Industrial Exemption is only afforded to those who meet the narrow requirements of F.S. 471.003(2)(a) through (j). So regardless of whether an engineer working within Florida is licensed or unlicensed, they are required to be familiar with Florida's engineering licensure laws.

The Industrial Exemption is not however a free pass to practice engineering, broker engineering services, or call oneself a Professional Engineer. There exist restrictions within **F.S. 471.023 Certification of Business Organizations** and **471.031 Prohibitions; penalties**.

471.023(1) states in part that offering engineering services to the public through a business organization is permitted only if the business organization possesses a *Certificate of Authorization*, commonly referred to as an engineering business license.

471.031(1)(b) states in part that *"a person may not use the name or title 'professional engineer' or any other title, designation, words, letters, abbreviations, or device tending to indicate that such person holds an active license as an engineer when the person is not licensed under this chapter."* Further, even those afforded the Industrial Exemption cannot use the title or personnel classification of "engineer" if the title includes or connotes the term "professional engineer," "registered engineer," "licensed engineer," "registered professional engineer," or "licensed professional engineer."

In closing, as a word of caution, licensure is no guarantee that an engineer is performing competently, and conversely the lack of licensure should not be perceived as an engineer is any less qualified to perform competently. For more on Florida's engineering licensure laws and rules, please visit the Florida Board of Professional Engineers' website at FBPE.org.

- (1) Spinden, Paul M., "The Enigma of Engineering's Industrial Exemption to Licensure: The Exception that Swallowed A Profession" (2015). Faculty Publications and Presentations. Paper 72.
http://digitalcommons.liberty.edu/lusol_fac_pubs/72

FBPE Attends NCEES Annual Meeting

Representatives from the FBPE attended as delegates and attendees to the NCEES annual meeting Aug. 23-26, 2017, in Miami Beach.



Photos above show the FBPE contingent having grand time at the installation banquet. We can even be a bit silly at times. Front row: Rebecca Sammons, FBPE staff; Julie Fleming, guest; and Lawrence Harris, Esq., Board Counsel. Second row: Zana Raybon, FBPE staff; Kenneth Todd, PE, Board member; and Dr. Michelle Rambo-Roddenberry, PE, Board member. Third row: Babu Varghese, PE, Board member; C. Kevin Fleming, PE, Board member and vice-chair; and Henn Rebane, PE, FBPE past chair and NCEES past president.

Legal Department: Latest Engineer Discipline

Pursuant to Rule 61G15-37.001(11), Florida Administrative Code, the Florida Engineers Management Corp. is required to post all Final Orders involving active disciplinary cases to the website until the terms of the final order are completed, or until the licensee becomes inactive, retires, relinquishes the license or permits the license to become null and void. Included in this section are the most recent cases in which final action has been taken by the Board, a brief description of the licensee's violation and discipline as well as a link to the final order. [View actions.](#)

Special Recognition: Congratulations, Examinees!

FBPE applauds all of the candidates that successfully passed the following exams. We wish them much success as they move towards the next step in their engineering careers! [See the complete list online.](#)

Mark Your Calendar!

We regularly update our calendar to ensure you stay up to date with the latest events! [Check out the calendar online at our website.](#)

FBPE Board Members & FEMC Board Members

FBPE Board Members

Anthony J. Fiorillo, PE, SI, CGC; Chair
C. Kevin Fleming, PE; Vice-Chair
Vivian Boza
William C. Bracken, PE, SI, CFM
Roland P. Dove, PE
Elizabeth B. Ferguson, Esq.
Warren G. Hahn, PE
Michelle D. Rambo-Roddenberry, Ph.D., PE
Pankaj Shah, PE
Kenneth Todd, PE
Babu Varghese, PE, SI, CGC, CCC
Zana Raybon; Executive Director

FEMC Board Members

Donald L. Goddeau, PE; Chair
Stephen Kowkabany, PE; Vice-Chair
Jeff Arey, PE
Barney T. Bishop III
Kimberlee DeBosier, PE
Shannon LaRocque, PE
John R. Stewart
Zana Raybon; FEMC President
John J. Rimes III, Esq.; FEMC Vice President
Rebecca Sammons; FEMC Secretary
Michele Morris; FEMC Treasurer