

AICN Newsletter

The Quarterly Publication of the Alliance of IEEE Consultants Networks

1st QUARTER 2019

AICNCC CHAIR'S REPORT



Welcome to the 2019 Q1 AICNCC Consulting Newsletter! I'm Jacob Beningo, the 2019 AICNCC Chair. I started my consulting business back in 2009, where I started out as a moonlighting contractor. Two years, I later

stepped out on my own as a full-time consultant. I focus on real-time, embedded software based on microcontrollers.

This year, the AICNCC is will continue to help the consulting field progress, and better serve you through several different initiatives. These initiatives include:

- Establishing and maintaining two-way communication channels between the committee and local consultants' networks

- Better understanding the challenges the local levels face, and determining how the AICNCC can best provide support
- Investigating additional services the AICNCC can provide you to generate value, and help you be a successful consultant
- Continuing to improve the IEEE-USA Consultant Finder

I'm looking forward to serving you this year. If at any time you have questions, feedback, or suggestions, free to reach out to me.

Best Regards,

Jacob Beningo
2019 IEEE-USA AICNCC Chair
jacob@beningo.com



AICNCC WELCOMES A NEW CONSULTANTS NETWORK IN FOOTHILL, CALIFORNIA

The Alliance of IEEE Consultants Networks Coordinating Committee (AICNCC) congratulates the IEEE Foothill Section Consultants Network Affinity Group on the formation of their network. This newest Consultants Network became official on 16 March. If fellow consultants would like to give a personal welcome to any new network, check out the consultants' page on IEEE-USA's website for contact information. If other IEEE members would like to form a consultant's network, IEEE-USA

offers step-by-step instructions about how to start a formal one. We encourage new consultants' networks to register as Affinity Groups. After a group forms a network, it can take advantage of IEEE's branding and resources, and qualify for funding through IEEE Section rebates. If you do not see your consultants network's contact information listed on the IEEE-USA website, contact Daryll Griffin at d.r.griffin@ieee.org. ■

For questions, comments or submissions
please contact Daryll Griffin at +1 202 530 8337
or d.r.griffin@ieee.org.

<https://ieeeusa.org/careers/consultants/>

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ANOTHER CONSULTANT'S BLOG

In organizing and gathering information for this newsletter, IEEE-USA staff browse the Internet looking for interesting stories to publish. Often, we come across interesting blogs and posts that we want to share with you. Recently, we came across this blog post--[“Three Techniques to Help You Connect and Be Heard.”](#) Scroll down to the 13 February 2019 post. It is worth a peek—and definitely worth your time. ■



CERTIFICATES FOR IEEE CONSULTANT NETWORK SUBSCRIBERS

IEEE Collabratec recently added the ability for IEEE members to download their subscriptions and membership certificates. Since launching this feature, IEEE has received requests from many of you about wanting to download a certificate related to your role as IEEE Consultants Network subscribers. IEEE Collabratec has now made this feature available.

Steps to download and print your certificate:

1. Log into [IEEE Collabratec](#).
2. Click on your name on the top right of the screen. Select “Member Certificates” from the drop-down menu.
3. From the “Member Certificates” page, click on the “Download PDF” link to the right of “IEEE Consultants Network.”
4. Open the PDF, and print it.

Thanks so much for your interest, and your continued support of the IEEE Consultants Network. ■

IEEE-USA CONSULTANT WEBINARS

In case you missed it, IEEE-USA has posted its recently recorded webinars, [Contracts and Contract Provisions - Other Important Aspects to Consider](#) and [How Consultants Will Save on Their Taxes and Keep More of Their Profits from the New Tax Cuts & Jobs Act](#). Both webinars were well received by those in attendance, and IEEE-USA Alliance of Independent Consultants Network Coordinating Committee (AICNCC) believes both webinars will be beneficial to all consultants.



Additionally, IEEE-USA has another webinar in the planning stages for 7 June, at 1:00 p.m. Gig Economy. This webinar will help those who still have full-time jobs, but who want to develop their “side hustle.” Click [this link](#) to register for this upcoming webinar. ■

IEEE-USA E-BOOKS FOR EXPERIENCED OR WOULD-BE CONSULTANTS

IEEE-USA Consultants Fee Survey Report—2018 Edition

Since 1972, IEEE-USA has conducted surveys of U.S. IEEE members' compensation. It implemented separate surveys, focusing on consultants' compensation, in 1998. Except for the years 1999-2001, 2003, 2005 and 2008, IEEE-USA has published this report. With the exception of 2009, all surveys were stand-alone surveys. All findings in this report represent only those IEEE members who identified themselves as self-employed consultants. For purposes of this survey, IEEE-USA defines such participants as the 457 individuals who indicated that 50 percent, or more, of their consulting hours comes from working independently, with partners, or incorporated.

The information provided is critical for consultants' success—such as a general profile of an IEEE consultant; top areas of consultant services; and the median hourly rate consultants charge. This Report is one of a kind. It should be in yours and in the libraries of all IEEE independent consultants.

Purchase the *IEEE-USA Consultants Fee Survey Report—2018 Edition* today! Member \$29.95 Non-Member \$49.95. Go to the [IEEE-USA Shop](#).



IEEE-USA InSight

Check out this [IEEE-USA InSight article](#) for an overview of the 2018 report.

Consulting for Geeks

Thinking about consulting, but not sure where to start? Already consulting, but need some advice? IEEE-USA has a publication that may help. IEEE-USA E-BOOKS is offering *Consulting for Geeks*, written by author and consultant Daryl Gerke. It is now available for only \$2.99 for IEEE members.

The focus of *Consulting for Geeks* is on how to become a small, independent consultant. Daryl Gerke, P.E., is a self-described “corporate misfit,” who started and ran a successful consulting engineering practice for almost 40 years (30 years full time), with his late business partner, Bill Kimmel, P.E., Gerke's secret mission is to help fellow engineers (or anyone else interested in consulting) enjoy life as a consultant. In this e-book, he discusses management versus technical consulting, ways to attract clients, and things to consider when starting a new practice.

Go to the [IEEE-USA Shop](#), and purchase this informative e-book on consulting.



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2nd QUARTER 2019



GET TO KNOW THE NEW IEEE-USA CONSULTANT FINDER: WHAT IS IT? HOW DOES IT HELP ME?

The IEEE-USA Consultants Database recently became the [IEEE-USA Consultant Finder, powered by IEEE Collabratec](#). This redesigned service will maintain all the key features of its predecessor: simple and advanced search features, an assignment placement portal, and a full consultant profile for paid subscribers.

IEEE-USA's Consultant Finder comes with a new visual update, making it easier to use than ever before. It is also now searchable by web crawlers, so even more potential clients will be able to find your consultant profile. In addition, this service will continue to be free for clients, project managers and HR professionals to search for consultants like you to hire, or to [post a consulting or contract assignment](#).

"People associate quality and respect with the IEEE brand name," said Gary Blank, IEEE-USA's 2014 President. "That's a big advantage for the IEEE-USA Consultant Finder. Since only IEEE members can post profiles, project managers

searching the database know they're getting a certain level of excellence."

Blank, a long-time subscriber, has personally seen the success the database brings. "I've gotten a lot of consulting business from the platform," said Blank. "More people ought to take advantage of it, because it really works!"

If you are already a consultant, or are curious about getting started in the gig economy, the IEEE-USA Consultant Finder is a very handy tool. Invest in yourself—subscribe today for just \$49.50. Sign into your IEEE account, and add the [IEEE Consultants Network Membership Premium](#). If you are already a subscriber, just log in via [IEEE Collabratec](#) (or the IEEE Collabratec App) to review and update your profile. You can also take advantage of new features—like adding a photo; uploading a short biography; and listing your desired salary, or hourly rate.

For a closer look at the new features of the new Consultant Finder; and to find out how to get started, check out IEEE IT Manager Karen McLean's [free webinar](#). ■

For questions, comments or submissions
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UPWORK RANKS IN DEMAND SKILLS FOR THE FIRST QUARTER 2019

In April, Upwork—the largest global freelancing website—released its [Quarterly Skills Index](#) that ranks the fastest-growing freelance skills in the first quarter 2019. While most of the skills listed are not directly related to the engineering profession, IEEE consultants may want to take note of one or two of the items listed. ■



IEEE AND AMAZON WEB SERVICES OFFER NEW GROWTH OPPORTUNITIES TO IEEE ENTREPRENEURSHIP

New benefits include \$10,000 in AWS promotional credit, AWS business support and training

On June 17, 2019, IEEE signed an agreement with Amazon Web Services (AWS). Under the agreement, Amazon will provide IEEE members currently building their own businesses with complimentary service credits to the AWS Activate program. This collaboration will provide tools to help members launch and grow their entrepreneurial ventures.

“Through the AWS Activate program, AWS provides access to the cloud resources that are fueling the growth of exciting startups and global enterprises alike,” said Troy Bertram, Director, Business Development, Amazon Web Services, Inc. “We look forward to working with IEEE to put the full potential of the cloud into the hands of builders so that they can scale and thrive.”

In addition to sponsoring the activities of the IEEE Entrepreneurship Community, the AWS Activate program will provide IEEE Entrepreneurship Community members with access to cloud computing resources including \$10,000 in AWS Promotional Credit, one year of AWS Business Support and access to Self-Paced Labs for training. All IEEE members are able to join the IEEE Entrepreneurship Community and participate in the program.

“IEEE and AWS share a common commitment to support engineering-driven startups and to encourage their growth and expansion,” said Stephen Welby, IEEE Executive Director and Chief Operating Officer. “We look forward to working together with Amazon as an anchor sponsor of the IEEE Entrepreneurship Community’s programs and services, to identify opportunities to help our IEEE members create successful enterprises.”

For detailed information, visit https://entrepreneurship.ieee.org/aws_activate/. ■

IEEE PRODUCTS AND SERVICES THAT BENEFIT INDEPENDENT IEEE CONSULTANTS

IEEE and IEEE-USA are always working to provide products and services to its members deciding to branch out on their own, and start their own consulting practices. As you know, the Alliance of IEEE Consultants Networks Coordinating Committee (AICNCC) has been traveling throughout the United States, and has observed that many IEEE members are unaware of the products and services available to them.

Following are some of the IEEE-USA products and services you should take advantage of:

The [Alliance of IEEE Consultants' Network Coordinating Committee \(AICNCC\)](#): The AICNCC is a standing committee IEEE-USA created to support U.S. IEEE self-employed members' career interests. For the past several years, this committee has traveled throughout the United States—collaborating with local consultants networks—to hold in-person workshops on all topics covering what it takes to become a full-time, independent consultant.

In addition, the AICNCC's objectives include fostering the growth of local consultants' networks in the United States; encouraging consultants to join existing local networks, or form new ones; promoting the use of independent technical and engineering consultants by industry and business; and providing educational activities for self-employed members.

Through this committee, IEEE-USA also provides consultants:

- A quarterly [AICNCC Consultants Newsletter](#)
- The annual IEEE-USA Consultants Fee Survey and [IEEE-USA Consultants Fee Survey Report](#)
- [eBooks](#) on consulting
- Instructions on [how to start an IEEE local consultants network](#)
- A [Sample Consultant Agreement](#)
- Timely live and archived [webinars](#) on a variety of consultant topics

A brand new highlight of IEEE-USA's products and services for consultants is the [IEEE-USA Consultant Finder](#). The IEEE-USA Consultant Finder is a central location, where consultants can create public profiles containing their expertise and contact information. Clients and businesses searching for electrical engineering consultants are able to access this public site, and use different search features to find the right consultant.

IEEE Services

IEEE members can also access other services through other platforms, such as the [IEEE Consultants Network](#). Through this subscription, IEEE members will automatically get a copy of the IEEE-USA AICN Quarterly

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Newsletter; be alerted to webinars addressing consultants' issues; and subscribers will be eligible to join the IEEE [Consultants Exchange online community](#) in IEEE Collabratec. Subscribing to this service is free of charge.

IEEE also offers members a fee-based subscription, the [IEEE Consultants Network Membership Premium](#). Through this subscription, members receive everything that IEEE Consultant Network subscribers receive; and in addition, these subscribers can place their profiles in the [IEEE-USA Consultant Finder](#).

Also – the IEEE Member Discounts team program information is located in our newly formatted web page at www.ieee.org/discounts. IEEE members can find group insurance for home and small business use. Consultants also may be interested in the attractive group rates of IEEE Member Group Term Life insurance, 10-Year Level Term insurance, 20-Year Level Term Insurance, or Disability Insurance.

Note some special benefits of IEEE Life and Disability Insurance Plans:

- Critical Illness Rider for the Term Life Plan
- Buy-up Benefit for the Disability Income Insurance Plan

Other products for the self-employed include:

- Professional Liability insurance
- General Liability (for certain circumstances)
- Small Employer Group Insurance
- Dental Insurance
- Long-Term Care Insurance

[The IEEE Professional Liability Program](#)* for IEEE members counters risks you face and protects you from negligent acts, errors and omissions in your consulting jobs and contracts. In addition, the IEEE Member Professional Liability Insurance Program now offers IEEE members' access to a Choice Platform, which provides them with a choice of coverage options from leading IEEE-approved insurers, such as Certain Underwriters at Lloyd's of London and/or Beazley Insurance Company.

Consultants may also find it interesting that IEEE's Member Discounts team also offers great savings on:

- Dell Small Business Systems and personal computing machines
- UPS discounts for shipping and freight

New to the Member Discount offerings is the "Member Discounts Marketplace." Currently featured discounts include R&D tax credit services; Cyber security webcams and microphone blockers; visual productivity software

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for individuals and teams; and cyber security training courses. Consultants can login with your IEEE Web account to unlock exclusive discounts that reveal the brand names of these products.

For entrepreneurs, IEEE has created the [InnovationQ Plus](#). This new product is a patent discovery and analytics platform that combines the power of a machine, learning-based search engine, with a global patent database and critical IEEE content to quickly sift through millions of complex documents—to find relevant prior articles, and uncover powerful insights. InnovationQ Plus enables IP discovery, analysis, and mapping of patent and non-patent material in one easy-to-use, highly accurate search tool. ■



THE GIG ECONOMY

As a companion piece to the 19 July IEEE-USA webinar, “[Gig Economy - How to Keep Your Day Job and Your Side Hustle](#),” this newsletter has linked to an article from the American Marketing Association. The title of the article is “[Going Solo: The Rise of the Gig Economy](#).” While the article focuses on the marketing industry, it provides a great overview of what is happening in the world of consulting and freelancers. It makes the point that the marketing landscape is evolving, and companies are increasingly engaging highly skilled freelance marketers to support a multitude of projects and global campaigns. IEEE-USA believes the field of engineering has always had that strong segment of companies looking to hire highly skilled consultants and freelancers, to solve problems and support large-scale projects. ■



SIMPLIFY YOUR EXPERTISE...

IEEE-USA's [Alliance of IEEE Consultants' Networks Coordinating Committee \(AICNCC\)](#) member Daryl Gerke, P.E., often shares his musing and advice to the world through his website: www.jumpstoconsulting.com.

IEEE-USA found this blog post interesting, and is reprinting it for your reading pleasure:

This post was inspired by another recent [post from fellow AZ blogger](#) (and a person I have long admired) Pamela Slim. She started off with this quote, which I borrowed:

"In the beginner's mind there are many possibilities, but in the expert's there are few." – Shunryu Suzuki

It got me thinking about our roles as consultants. Most of us have wide knowledge and experience in our areas of expertise. As such, we could offer many possible solutions to the problems our clients face.

But our real value is the ability to winnow those possibilities down to a select few, and then make recommendations. Much like a doctor (also a professional consultant) who makes a diagnosis, followed by a prescription, or recommended course of action.

So how do you do this? You begin by asking questions, and then carefully listening to those answers.

Those answers may lead to more questions, so you dig deeper.

As a consulting engineer, I've long followed a methodology used by medical doctors known as *differential diagnosis*. I first heard this term from a client whose brother was an MD. As we were troubleshooting his problem, he shared this approach he had learned from his brother.

Later, I had a chance to expand my understanding, thanks to an MD from the Mayo Clinic. An airplane seat mate, I asked about the term. As a teaching doctor, he broke into a big smile and shared his knowledge (and wisdom) as

we flew across the country. The flight was most memorable, and has since influenced my consulting approach.

The goal is to "rule things in – rule things out." For example, the Mayo MD said, "If a patient presents with a red rash, there may be a hundred possible causes. However, with some additional information (such as vital signs, or simple questions) one may be able to quickly reduce this to but a few possibilities.

Based on that, you begin by treating the most likely cause. Even then, you are playing the probabilities, so if the initial treatment does not solve the problem, move to the next most likely solution. Or, as mom and dad used to say, "If at first you don't succeed, try, try again..."

I have since modified the approach. Rather than prioritizing solely on probabilities, I first try the very simple solutions. I learned this after spending several days trying most likely solutions, while ignoring an easy low probability solution that worked. A bit embarrassing.

Doing this also gives rise to an occasional consulting miracle. For example, even if the simple solution has a 1% probability of success, that still means that one out of a hundred times, it works. And when it does, everyone thinks you are a genius.

Finally, don't just treat the symptoms – seek to treat the cause. The goal is to not only understand the problem, but to identify the underlying root cause of the problem. Asking questions, digging deeper, and using differential diagnosis all help. ■

Daryl Gerke, P.E., is the co-founder and surviving partner of Kimmel Gerke Associates, an electrical engineering consulting firm focused on EMI/EMC (electromagnetic interference and compatibility) design issues. Gerke is an IEEE Senior Life Member, and a long-time member of the IEEE EMC Society. Daryl can be reached at daryl@jumpstoconsulting.com. You can visit his consulting site at www.emiguru.com.

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3rd QUARTER 2019

RENEW YOUR SUBSCRIPTION: CELEBRATE A YEAR OF THE FINDER

In the fall of 2018, IEEE-USA introduced the [IEEE-USA Consultant Finder](#), powered by IEEE Collabratec, to IEEE members. This redesigned service's key features include:

- Simple and advanced search features
- An assignment placement portal
- A full consultant profile for paid subscribers

In addition, the [IEEE-USA Consultant Finder's](#) visual design makes it easy to use. In addition, it has web crawlers, so even more potential clients will be able to find this new website—and the individual consultant profiles. Lastly, the Finder has opened this service fully to international independent consultants (those outside of North America) to post their profiles and market their services. Since Collabratec powers this service, all 400,000 IEEE members have access to the Finder. Moreover, this service is free for clients, project

managers and HR professionals to search for consultants to hire.

We would like every IEEE member considering jumping into the world of the gig economy to check out the IEEE-USA Consultant Finder for marketing their services. There is no better, or easier, time to get started, than during the IEEE membership renewal period. Just add the [IEEE Consultants Network Membership Premium](#) into your cart, when you renew your IEEE membership. This step allows your IEEE Collabratec profile to be listed in the [IEEE-USA Consultant Finder](#).

The visual upgrade makes the Finder easier to use; and it will attract even more clients, project managers and HR professionals to search for a consultant, or post a consulting or contract assignment. IEEE-USA is also actively trying to promote this service to professionals through Google ad words, as well as constantly updating Search Engine Optimization (SEO) tags.



We look forward to your continued support of this product with your renewed subscription. IEEE-USA knows this service will benefit all IEEE independent consultant members and their consultant practices.

Please note: Current “Membership Premium” subscribers—it is now a great time to review your consultant profile. Log in via IEEE Collabratec (or the IEEE Collabratec App)—and consider adding or updating your photo; reviewing your biography; and updating your desired salary, or hourly rate.

You can also review the IEEE-USA webinar “[All You Ever Wanted to Know about the New IEEE-USA Consultant Finder](#).” This new webinar outlines the new features of this service.

So again, welcome to the IEEE-USA Consultant Finder. And thank you to those that have already subscribed to this service. We hope you like the new look and upgrades! For IEEE members who have not yet subscribed, be sure you take a closer look--don't miss this great opportunity! ■

✓ CHECK IT OUT: THE NEW IEEE-USA CONSULTANTS FEE SURVEY REPORT — 2019 EDITION

All findings in this report represent only those IEEE members who identified themselves as self-employed consultants. For purposes of this survey, such participants are defined as the 751 individuals who indicated 50 percent, or more, of their consulting income came from working independently, with partners, or incorporated. The information provided is critical for consultants' success--such as a general profile of an IEEE consultant; top areas of consultant services; and most importantly, the median hourly rate consultants charge. This Report is one of a kind, and we believe each annual publication should be in the library of all IEEE independent consultants. Purchase the [IEEE-USA Consultants Fee Survey Report—2019 Edition](#) today! ■



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AB 5 BECOMES LAW IN CALIFORNIA

What does it mean for you?

On 18 September 2019, California Governor Gavin Newsom signed Bill AB 5 into law. The law redefines the relationship between employers and consultants. Drafted in response to a state Supreme Court case (*Dynamex Operations West, Inc. v. Superior Court of Los Angeles*) this law makes it harder for employers to classify individuals as contract workers, as opposed to regular employees. AB 5 codifies that court case; and it strengthens contractor rules further.

The initial purpose of the new law was to make people who drive for Uber or Lyft employees of those companies, instead of independent contractors, but the law's impact is much broader-intentionally so. The bill impacts most Californians who work as consultants or independent contractors, including those in the IT fields. If certain conditions are not met, AB 5 could make it very difficult for many IT independent consultants to continue working as independent consultants in California.

The heart of AB 5 creates a three-part criteria for determining if someone is an independent contractor. To be an independent contractor, a person must:

- Be free of control and direction of the hiring company
- Perform work that is outside the hiring company's usual course of business

- Must be customarily engaged in work that is similar to the contracting work he/she has been hired to do

If any part of this “ABC Test” are not met, then the person becomes a regular company employee; and they are eligible for benefits, and other company perks.

Most IT consultants would fail this test, because the companies they work for are in the IT business (although the courts will have to rule on what “usual course of business” means). As such, most California consultants would be re-classified as employees, under this rule.

However, two exemptions in AB 5 may help engineers. The first exempts anyone with a state-issued license from AB 5. This factor will help some IEEE members—but most electrical and computer engineers, as well as other IT professionals employed in the private sector—are not licensed and do not practice under the industry-exemption to licensure.

The second exemption relates to Sole Proprietorships, LLCs, and other legal business entities. Independent consultants who have created a legal entity to house their consulting work will be exempted from the new rules, if they meet certain conditions.

This specific exemption [Section (e), on page 8 of the law] is for business-to-business contracting relationships. AB 5 dramatically limits companies' ability to hire consultants, but companies can hire consulting companies, under certain conditions. This exemption means that a consultant who has built a legal entity around his/her work, including LLCs and Sole Proprietorships, can continue to work as an independent consultant.

An entity needs to meet 12 conditions to qualify as a "Business Service Provider," (BSP), as well as qualify for the exemption. (In AB 5, the BSP is the consultant, and the contracting business is the company for whom the consultant is working.) To qualify for this exemption, the BSP must meet all of these 12 conditions:

1. The BSP must be independent from the contracting business.
2. The BSP must provide services to the contracting company, not its customers.
3. The BSP must have a written contract to work for the contracting company.
4. The BSP must have all necessary business licenses to operate in whatever jurisdiction they are operating in.
5. The BSP must have a business location that is different from the contracting business (but it can be their residence).
6. The BSP must be customarily engage in work similar to work being performed for the contracting company.
7. The BSP has contracts for similar work with other companies, and can maintain other clientele--without restriction from the contracting company.
8. The BSP advertises to the general public services similar to those it is performing for the contracting company.
9. The BSP provides its own tools, vehicles and equipment to perform the services.
10. The BSP can negotiate its own rates.
11. The BSP can set its own hours and work location--as allowed by the nature of the work.
12. The BSP is NOT performing work that requires a state license from the Contractor's State License Board.
(This condition appears to be limited to the construction industry, which has its own exemption.)

IEEE-USA Leadership Reacts

Brian Berg, Board member and past Chair of the IEEE Consultants' Network of Silicon Valley (CNSV), believes that with the exemptions, requirements of the new law are quite reasonable for independent IT and engineering consultants in California to meet. According to Berg, the new law now in effect encourages, for example, joining an organization, such as the CNSV (by way of #8). Each CNSV member is able to edit their own webpage, describing their skills, and advertising their consulting services.

Jacob Beningo, Chair of the IEEE-USA's Alliance of IEEE Consultants' Networks Coordinating Committee (AICNCC), believes local consultants networks in California that have not already done so, may want to consider creating a website that promotes their members' consultant services. In addition, California consultants may want to consider subscribing to the IEEE-USA Consultant Finder--to help meet the conditions the business-to-business contracting exemption sets, says Beningo.

IEEE-USA and IEEE leaders, including IEEE-USA President Tom Coughlin (himself a California consultant, as well as a CNSV Board member), worked with California lawmakers to ensure that the new law did not harm California's consultant community. While the final law was not exactly what IEEE members asked for, the most damaging rules were dropped before the bill became law.

IEEE-USA remains concerned about the effect this law will have on new consultants. To qualify for the business service provider exemption, consultants need to prove they have taken similar jobs with other companies--hard to do for their first job. Creating a legal shell for consulting work, increasing advertising expenses, and some of the other criteria will also increase consultants' costs, further discouraging new entrants into the consulting market.

Several other states are considering laws similar to AB 5. IEEE members are encouraged to watch their local state legislature carefully--and alert IEEE-USA if legislation regulating the gig economy, or consultants, are added to their state's legislative agenda. ■

R&D TAX CREDITS FOR ENGINEERS:

How You Can Benefit

Remember the tax law says you have to file and pay taxes but it does not require that you leave a tip – use R&D tax credits to keep from “over-tipping.”

The IEEE Member Discounts Marketplace is where IEEE rotates new discount offers. These are time-sensitive savings opportunities from a variety of professional services and products for home and office. This month, the feature offer is from Engineered Tax Services. Engineered Tax Services is offering a free webinar to learn about R&D tax credits, as well as a member discount to those who engage their services.

Federal Research and Development (R&D) tax credits have been available to businesses for more than three decades. However, many engineers don't realize the tax credits are available to them or don't understand which activities qualify. The new tax law continues its permanent status, understanding the importance of U.S. investments towards innovation. And engineers of all types can qualify for these valuable tax credits.

R&D tax credits can result in tens of thousands of dollars or more of benefit for engineers.

R&D Tax Credit Benefits

The R&D tax credit is meant to incentivize companies to invest in innovation and technological investments so that the U.S. can remain on the forefront of those advancements. Most states also offer tax credits for R&D activities. The credit, which is designed to reimburse companies that develop new products, processes, or inventions, offers a significant percentage back to the company for qualified research activities and qualified research expenses. These savings can offset wages and salaries paid for qualified activities. You do not need to be a large company to qualify.

The Qualitative Four-Part Test for Qualifying R&D Research

A simple four-part test helps to determine which activities constitute qualified research according to criteria established by the IRS:

1. **Permitted Purpose:** The activities must relate to new or improved business components, function, performance, reliability, and quality
2. **Technological in Nature:** The activity performed must fundamentally rely on principles of physical or biological science, engineering, and computer science
3. **Elimination of Uncertainty:** The activity must be intended to discover information to eliminate uncertainty concerning the capability, method or design for developing or improving a product or process.
4. **Process of Experimentation:** The taxpayer must engage in an evaluative process that is capable of identifying and evaluating more than one alternative to achieve a result. This may include modeling, simulation or a systematic trial and error methodology.

R&D Tax Credit Study

Claiming R&D tax credits involves a fair amount of documentation required by the IRS. That's why it's important to seek professional help from a consultant with a strong expertise in helping architects successfully claim these valuable tax credits. Our R&D experts dig much deeper into the fundamentals of your business activities—incorporating operations, engineering, financial, and tax expertise that results in more credits and meticulous documentation that is necessary to support your activities, costs, and credit. There is a direct correlation between the amount of your defensible credit and the expertise of the advisor performing the tax credit study. ■



UPWORK RANKS IN DEMAND SKILLS FOR THE SECOND QUARTER 2019

In August, Upwork—the largest global freelancing website—released its [Quarterly Skills Index](#) that ranks the fastest-growing freelance skills for second quarter 2019. While most of the ranked skills are not directly related to the engineering profession, IEEE consultants may want to take note of one or two of the items listed. ■

ANOTHER CONSULTANT'S BLOG

In organizing and gathering information for this quarterly newsletter, IEEE-USA staff browse the Internet looking for pertinent stories to include in certain issues. Often, we come across interesting blogs and posts that we want to share with IEEE consultants, and would-be consultants. With the growth of the “Gig Economy,” many articles are floating on the Internet about how people can venture out, and become their own boss. This blog post, [“How to Become a Consultant: 9 Steps to Doing it Right,”](#) is another good entry for those considering becoming an independent engineering consultant. ■

FREE IEEE WEBINAR USE THE RESEARCH & DEVELOPMENT TAX CREDIT TO REDUCE YOUR TAX BILL

Tax law says you have to pay taxes but it does not require that you leave a tip!

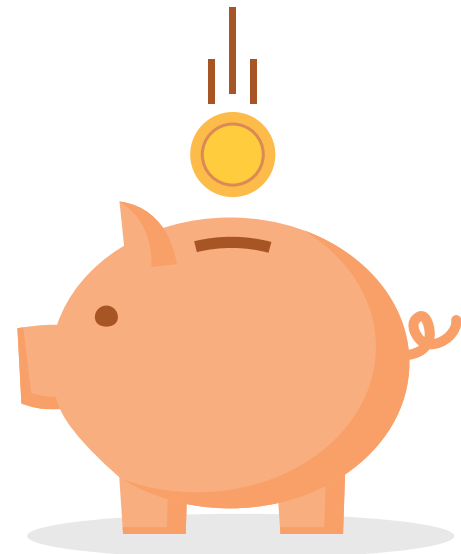
Engineers and Engineering firms can qualify for the extremely valuable Research&Development Tax Credit. Many of your typical day-to-day activities will qualify as R&D expenses under new IRS definitions.

Register for a free IEEE members-only webinar on 19 November at 1:30 p.m. ET (17:30 UTC) to learn how easy it is to claim the Credit.

IEEE members receive a 20% discount on all services.

*Note: Only US-based activities qualify for this Credit.

Registration Link: <https://attendee.gotowebinar.com/register/3550579634385990668>



AICN Newsletter

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4th QUARTER 2019

RENEW YOUR SUBSCRIPTION: YOU STILL HAVE TIME

Although, the new year has started, you still have time to renew your subscription for the IEEE-USA Consultant Finder. In the fall of 2018, IEEE-USA introduced the [IEEE-USA Consultant Finder](#), powered by IEEE Collabratec, to IEEE members. This redesigned service's key features include:

- Simple and advanced search features
- An assignment placement portal
- A full consultant profile for paid subscribers

In addition, the [IEEE-USA Consultant Finder's](#) visual design makes it easy to use. In addition, it has web crawlers, so even more potential clients will be able to find this new website—and the individual consultant profiles. Lastly, the Finder has opened this service fully to international independent consultants (those outside of North America) to post their profiles and market their services. Since Collabratec powers this service, all 400,000 IEEE members have access to

the Finder. Moreover, clients, project managers and HR professionals can search for consultants to hire – free!

All IEEE members considering, or jumping, into the world of the gig economy should check out the IEEE-USA Consultant Finder for marketing their services. The IEEE membership renewal period is the best and easiest time to get started. When you renew your IEEE membership, just add the [IEEE Consultants Network Membership Premium](#) into your cart. This step allows your IEEE Collabratec profile to be listed in the [IEEE-USA Consultant Finder](#).

The visual upgrade makes the Finder easier to use; and it will attract even more clients, project managers and HR professionals to search for a consultant, or post a consulting or contract assignment. IEEE-USA is also actively trying to promote this service to professionals through Google ad words, as well as constantly updating Search Engine Optimization (SEO) tags.



We look forward to your continued support of this product with your renewed subscription. IEEE-USA knows this service will benefit all IEEE independent consultant members and their consultant practices.

Please note: Current “Membership Premium” subscribers—it is now a great time to review your consultant profile. Log in via IEEE Collabratec (or the IEEE Collabratec App)—and consider adding, or updating, your photo; reviewing your biography; and updating your desired salary, or hourly rate.

You can also review the IEEE-USA webinar “[All You Ever Wanted to Know about the New IEEE-USA Consultant Finder](#).” This new webinar outlines the new features of this service.

Again, welcome to the IEEE-USA Consultant Finder. And thank you to those that have already subscribed to this great service. We hope you like the new look and upgrades. For IEEE members who have not yet subscribed, be sure to take a closer look—don't miss this great opportunity! ■

AICNCC WELCOMES A NEW CONSULTANTS NETWORK IN NIGERIA

The Alliance of IEEE Consultants Networks Coordinating Committee (AICNCC) congratulates Kennedy Chinedu Okafor, with the [IEEE Nigeria Section Consultants Network Affinity Group](#); on the formation of their consultants network. This newest Consultants Network became official on 3 December 2019.



If fellow consultants would like to give a personal welcome to any new networks, check out the consultants page on [IEEE-USA's website](#) for contact information. If other IEEE members would like to form a consultant network, IEEE-USA offers [step-by-step instructions](#) about how to start a formal network.

We encourage new consultants networks to register as Affinity Groups. After a group forms a network, it can take advantage of IEEE's branding and resources, and qualify for funding through IEEE Section rebates. If you don't see your consultants network's contact information listed on the IEEE-USA website, contact Daryll Griffin at

d.r.griffin@ieee.org. ■

For questions, comments or submissions
please contact Daryll Griffin at +1 202 530 8337
or d.r.griffin@ieee.org.

<https://ieeeusa.org/careers/consultants/>

IEEE★USA

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IEEE-USA CONSULTANTS FEE SURVEY REPORT 2019 EDITION

2019 IEEE-USA CONSULTANTS FEE SURVEY: *Average Age Continues to Rise, Consultants Experience Declines*

BY HELEN HORWITZ

This article was originally published in IEEE-USA Insight

Growing numbers of mid- to late-career engineering professionals are continuing to move into consulting. According to the [2019 IEEE-USA Consultants Fee Survey](#), this year's respondents have an average of 17 years of consulting experience. The [2018 report also observed this trend](#).

Although the mean (average) age and years of overall engineering experience both increased sharply this year, compared to the past few survey findings — the mean age is now 61 and 26 years of engineering experience. The years of consulting experience declined slightly. Nearly half (49.8%) had 14 years or fewer, with 17.6% having five or fewer years of experience. Some 22.5% have been consulting for 25 years, or more.

Elsewhere, the report notes that, as with IEEE membership in general, the vast majority of consultants is male (92.6%), and identifies as non-Hispanic White (77.6%). The largest minority group among consultants remains Asian or Pacific Islander, with 4.3%. In addition, men have almost a decade more overall

professional experience than women, with female consultants reporting 17.3 years.

Conducted this past spring, the Survey drew a large percentage (25.1%) of respondents over the age of 70, down only slightly from 25.6% in last year's report. Another 36.1% reported being ages 60-69; the 45-59 age range drew 27.6%.

Almost 86% (85.8%) are United States citizens by birth. Another 11.3% are naturalized citizens; while (and consistent with last year), 2.0% are permanent resident aliens.

The median hourly rate consultants charged this year is \$160, reflecting a \$10 increase over last year's report. The typical consultant, who has been in the profession for less than 15 years, reported this hourly rate. Those respondents with 25-34 years of experience reported \$175 — the highest median hourly rate. However, the rate for those with 35 or more years declined to \$154 an hour.

Education level remains a significant factor in how much consultants charge. This year, those with a Ph.D. have a \$40 advantage, with a median hourly rate of \$200. Consistent with last year's report, there is virtually no difference between the hourly rates of consultants with a Bachelor's or Master's degree.

Nearly two in 10 (19%) of the consultants in the survey have a Ph.D. Just over four in 10 (41%) consultants' highest degrees are Master's — the largest group being MSEE/MSCE (20%). About three in 10 consultants' highest degrees (30%) are Bachelor's, with most holding a BSEE or BSCE.

Although professional registration is required to practice as an engineer in many countries, it is not essential for most EEs in the United States. In this year's survey, 32.4% reported they are licensed Professional Engineers (PEs); and they enjoyed a \$10 hourly advantage over those without.

When looking at which parts of the United States offer the highest compensation rates in terms of Census regions, consultants in the Middle Atlantic region (New York, Pennsylvania, New Jersey) enjoy the highest median at \$195. West South Central (Oklahoma, Texas, Arkansas, Louisiana) trails slightly at \$188. East North Central (Wisconsin, Michigan, Illinois, Indiana, Ohio) has the lowest at \$171. The survey analyzes responses using United States Census Bureau regions, not IEEE Region designations.

To understand their areas of expertise, the survey asked consultants to select all the specialties, of 96 listed, in which they offer consulting services. The top five areas for consulting services are: Systems Engineering (33.9%); Electrical Power Systems (28.9%); Project Management (26.5%); Expert Witness (25%); and Electrical Power Generation, Transmissions and Distributions (24%).

The five technical specialties with the greatest increases since 2015 are: Instrumentation and Controls (+4.3%); Electronic Components (+3.8%); CAD (+3.6%); Expert Witness (+3.4%); and Troubleshooting (+3.3%). Those showing the greatest declines since 2015 are: Diagnostic Software (-3.2%); Databases and Data Management (-3.8%); Project Management (-5%); Networks – LAN/WAN, Other (-5.2%); and Software Development, Application and Management (-7.7%).

As in other recent surveys, most consultants (79.5%) had a home office for their work setting. A noticeable change from last year is that only about four in 10 (40.6%) carried professional liability

insurance, in case of errors or omissions. In 2018, almost half (49.9%) reported having it.

Respondents who worked solely as an independent consultant in 2018 remained high. After peaking at 48.6% in 2018 (up from 31% in 2017), sole independent consultants dipped slightly this year to 44.3%. Similarly, almost four in 10 (39.1%) worked with partners, as contract employees, as employees of another company, or were incorporated.

The majority of the average consultant's business (55.6%) came from repeat clients; however, outside connections remain important, as earnings also came from client and friend referrals (13%), and client contacts made by networking (10.2%). Several new categories introduced this year — but scarcely used by respondents — included social media networking (1.1%) and Internet/Google ads (0.9%).

Most consultants (59.1%) work with private, non-defense companies; when defense and utilities-related firms are included, the private industry share rises to more than eight in 10 respondents.

On average, the typical consultant billed 25 hours per week; and consistent with last year, continued the decline from 2017, when an average of 29 hours per week was reported. Hourly rates remain the most common billing method; more than seven in 10 (72.4%) use it. Fixed price is the next most common, with 20.3% (up from 15.8% in 2018) reporting that.

Consistent with past surveys, an average 12.5% are having trouble collecting their fees.

IEEE-USA has conducted surveys about the compensation and fringe benefits of its members since 1972. A separate consultants' survey began in 1998. This past spring, 13,288 members identified as consultants in the IEEE membership database were invited by email to complete the 2019 IEEE-USA Consultants Fee Survey. Of this number, 1,133 participated. All findings in this report represent only those identified as self-employed consultants — the 751 individuals who reported that at least half of their consulting hours came from fee-based consulting. IEEE Strategic Research conducted the survey and prepared the report. ■

Helen Horwitz is an award-winning freelance writer who lives in Albuquerque, N.M. She was with IEEE from 1991 through 2011, the first nine as staff director, IEEE Corporate Communications.



THE DATE FAST APPROACHES FOR CALIFORNIA'S AB 5 TO BECOME LAW

As the date for California's new AB 5 law goes into effect, Californians are starting to learn the direct effects it is having on certain industries in the state. IEEE-USA is following these trending issues through the news media, as reports come about the effect it is having on some industries. See the news articles below detailing what industry is doing to adhere to the law--and the push back from other industries wanting to repeal it.

- [Did Vox Just Fire the Entire Golden State of Mind Staff Via Twitter?](#)
- [Assemblywoman Gonzalez, Other Lawmakers Begin to Rethink Certain Parts of AB 5](#)
- [Uber, Postmates and Two Drivers Sue California over Law that Would Reclassify Contractors as Employees](#)
- [Uber, Lyft, Postmates Refuse To Comply with California Gig Economy Law](#)

IEEE-USA will continue to follow the developments on this new law, and its implementation, as they arise. ■

ANOTHER CONSULTANT'S BLOG

In organizing and gathering information for this quarterly newsletter, IEEE-USA staff browse the internet looking for pertinent stories to include for the benefit of consultants. Often, we come across interesting blogs and posts that we want to share with IEEE consultants, and would-be consultants. The following blog discusses how a service bureau can supplement a consultant's team with a trained designer, or an engineer who can bring needed skills and experience to the team. This blog post, "[Consultant's Corner: Time for a Service Bureau Consult](#)," is another good entry for those consultants that confront issues outside of their areas of expertise.. ■