

From GOLD



to Young Professionals

IEEE's GOLD (Graduates of the Last Decade) recently rebranded itself as Young Professionals. But it's more than a name change. In Canada, section chairs are providing more bang for members' bucks through innovative events. Globally, new initiatives will be launched in 2015.

Young Professionals is a group of IEEE members and volunteers looking to advance their careers and build a lifelong professional network. Aside from developing technical skills, the group is also focused on helping members develop soft skills such as teambuilding and communication, as well as building a network with professionals outside of the engineering sector — and perhaps opening their eyes to career possibilities they hadn't considered before.

Young Professionals plays an important role in IEEE's overall membership. But it's such a unique group that it can sometimes get overlooked, says Lori Hogan, project manager of OmOptics AIF at Memorial University of Newfoundland and a former Region 7 GOLD Coordinator.

By **Vawn Himmelsbach**

"There's a lot of support for students, but once graduates get out there in the workforce that support is still needed," she says. Part of the rebranding from GOLD to Young Professionals involves expanding the timeline from 10 to 15 years from graduation. "By expanding the age

range, it's a good way to keep the attention, or get the attention of people who may be dissatisfied with their original career choice," says Hogan. "We can keep them as IEEE members by presenting them with all the options available to them."

This could involve Young Professionals groups partnering with local start-ups or other technical organizations to help members look at their careers from a different angle. "It's the same industry, but maybe a different flavour than what you were exposed to in your job, and certainly different than what you were exposed to in your undergraduate studies," says Hogan.

There's benefit to industry, too, in exposing new engineers to what they're doing and what they're about — whether or not they're hiring. "Industry should be reaching out regardless so when they do need to hire or promote their

**Young Professionals
welcomes members up
to 15 years after
graduation, recognizing
varied career paths.**

Doing things differently in London Section

Mohamed Abu Sharkh, a cloud computing researcher at Western University, was looking to give back to the community, while at the same time practice his leadership skills.

“What better way to do it than the IEEE?” says Abu Sharkh, who took over as Chair of Young Professionals London Section in September. “A lot of my friends don’t know anything about the IEEE, so there’s a lot of potential to introduce a new vision and come up with new activities that interest people.”

Abu Sharkh started by creating a Facebook page to generate publicity, as well as kicking



off a word-of-mouth campaign. Rather than trying to do everything on his own, he recruited a skillful/capable team of four people with different engineering backgrounds. The team then reached out to students, professors and other members to get feedback on various ideas.

At its STEP (Student Transition & Elevation Partnership) event in October, the team invited five experts to talk about career elevation. “We were very careful in choosing the experts

because we have a wide set of interests — some members want to work as developers, others to become research scientists or go into academia — so we wanted to get one expert from each background,” he says.

They had 75 attendees, “which is great for London,” says Abu Sharkh. “And I can confirm it’s not the pizza.” Last year, the average was about 25 attendees at events.

“The IEEE offers many distinguished lecturers and this is something members are used to,” he says. “We wanted to come up with something different.” So his group teamed up with Women in Engineering for a discussion on technical entrepreneurship.

“We have interesting events planned for 2015 as well, such as a new problem-solving competition for engineers,” says Abu Sharkh. “We’re also trying a new idea where we’re helping students transition to career life by doing mock job interviews with real companies.”

product or service, people will be familiar with their name,” she says. “We’ve done that in the past — invited various companies to a networking event or activity, not necessarily to give a presentation but just to network.”

Today’s young professionals are more aware of what’s happening globally and are more mobile than previous generations of engineers, and that’s changing what they are looking for in their IEEE membership.

“The rapid growth of technology has made more people interested in working remotely or opening up shop,” says Hogan. “It’s no longer a 9-5 job. It’s so easy to do your work anywhere, at any time, and that’s a different challenge.”

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Industry experts discuss risks and rewards of launching a start-up at Toronto Section event



Karl Martin
Founder & CEO, Bionym

Chris Ouslis
Co-Founder, Fresco Microchip & New Business Venture Coach

Wendy Robertson
CEO & Founder, Assemble Incorporated

Kamal Hassan
CEO, IncMind and Director, Founder Institute Toronto

Devon Ryan
Co-Founder, LION Mobile

A diverse panel of entrepreneurs gave their take on the challenges and opportunities of starting a business, as part of a Toronto Young Professionals-hosted event last October. The five-hour Technical Entrepreneurship Mini Conference (TEMC) also included two keynotes and a workshop. The panel was moderated by Mario Milicevic, 2015/2016 Global IEEE Young Professionals Chair. Topics included how to address risk, build partnerships, and “be in the right place at the right time.” Some highlights follow.

(Moderator)



Mario Milicevic
Ph. D. candidate U of T, Global YP Chair, IEEE

Mario Milicevic: A lot of people want to take the plunge into entrepreneurship. In your opinion or experience, what are the biggest challenges faced by many young or new entrepreneurs?

Devon Ryan: One of the biggest challenges for me was just getting started. I started when I was pursuing my electrical-engineering degree. And that actually ended up really benefiting me because I started taking advantage of the fundamentals that I was learning in college right away, instead of waiting until post-graduation. So, getting started early, and just starting something, is a big challenge, and I

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IEEE global YP Chair to build on R7 entrepreneurship initiative

Mario Milicevic sees entrepreneurship from a global perspective. That's because this PhD candidate in electrical and computer engineering at the University of Toronto, and past Chair of Toronto Section Young Professionals, is now Young Professionals Chair for all of IEEE. And he has big plans. In November, he attended the IEEE MGA Board meeting to learn about IEEE's position on entrepreneurship-related events and initiatives.

The IEEE has several entrepreneurship initiatives scattered around its various committees and boards, such as the Boston ENET and IEEE-USA Entrepreneurship Village. Just recently, the Technical Activities Board approved the creation of an adhoc committee to run a global entrepreneurship portfolio.

"I want to provide a bridge for Young Professionals to access all of the many scattered pieces of the puzzle," says Milicevic. "I've had many lengthy

discussions with other volunteers about where Young Professionals fits into the whole mix. The answer: Everywhere."

The IEEE Young Professionals Committee will work closely with the Technical Activities Board, IEEE-USA and potentially the IEEE Standards Association to develop a cohesive global entrepreneurship offering for Young Professionals members.

"The goal is to have dynamic and diverse events around the world, tapping into the existing resources of larger entities within IEEE."



There's also more social awareness. "I've seen more people drawn to smaller start-up environments early on in their profession, where they have more involvement in the company and can shape or direct where the early products are going, and in turn shape and determine the

Milicevic intends to spread the word about entrepreneurship among the IEEE Young Professionals community, and to explain the resources available to IEEE members in non-entrepreneurial hubs. Other goals are to provide training on how to build a successful venture, complemented by networking, funding and partnership opportunities.

"We don't wish to reinvent the wheel, so we intend to partner with external organizations such as Founder Institute — a global, reputable startup accelerator program," says Milicevic.

The Technical Entrepreneurship Mini Conference (TEMC) held last October in Toronto was run as a pilot to gauge interest; similar events could be run as one-day adjuncts to IEEE conferences and workshops in the coming year.

"The IEEE Young Professionals global entrepreneurship offering will be flexible and allow for creativity among local organizers," he says. "The goal is to have dynamic and diverse events around the world, while tapping into the existing resources of larger entities within the IEEE."

direction of the company as a whole," she says.

Young Professionals are at a point in their life where they need a reason to justify the cost of their IEEE membership. "They're buying their first house, their first car, getting married," says

highly recommend that if you're really interested in entrepreneurship, just start something. ... Don't let that be a huge barrier. Just get the ball rolling.

Kamal Hassan: Be sure when you're getting started that you're in a place and time in your

life that you're ready to commit to something, because starting a business can be very hard. Things don't always go as planned. And, if and when they don't go as planned, the people who are still around are the ones who don't give up, the ones who keep going and plug through it.

Wendy Robertson: To be an entrepreneur you have to talk to people. You have to spend a lot of time talking to your team and interacting with them daily. It's not enough to assign tasks and go off on your own direction. ... Commit to having a focus on talking to people and building those conversations that are going to convert into investment. The things that you're going to convert are people, because people buy people — they don't buy technology. So you really have to put yourself out there. And, for a lot of entrepreneurs, that's the hardest thing.

Chris Ouslis: There are two archetypes, or maybe yin and yang, which typically go on inside our heads. ... The positive side can be very much elating and the negative side can be very much depressing. The thing you have to keep in mind is that this is totally natural. We do face these two aspects of our consciousness. The key thing to remember is you have to be very patient with yourself. Most of us tend to be quite patient outside, but we're not so forgiving and patient with ourselves inside. ... It's going to be tough. You have to do things that you will be uncomfortable with. In fact, that's an essen-



Thoughts from the outgoing IEEE Canada YP Coordinator

Dan Hosseinzadeh, chief technology officer of PathCore Inc., is ending a successful three-year term as IEEE Canada Young Professionals Coordinator. In his role, he provided support and resources to the various chairs across Canada and acted as a liaison between the Region and the global organization.

One of his accomplishments was creation of new Young Professionals groups. There were no groups in Quebec, for

example, so he started the formal process of establishing one.

Working with IEEE Canada's outgoing Member Services Group Chair, Mo El-Hawary, he set up an annual award for Best Canadian Young Professionals Group, with a \$500 prize and bragging rights.

"Once you become a volunteer with the IEEE, it's got a gravitational pull. You create friendships and depend on each other to get things done."



The 2013 winner was the Toronto affinity group, with Canadian Atlantic and London close runners-up. For 2014, the Southern Alberta group takes home the honours, with London again runnerup.

"Overall, my job was to communicate

the opportunity to the chairs so they could be recognized for the work they're doing," he says. "At the same time, I was there to provide support where needed." While he says Young Professionals can provide technical information to members, it's also a valuable resource for networking with peers and advancing their careers. And there are intangible benefits that are sometimes harder to quantify.

"It's almost like a family," says Hosseinzadeh. "Once you become a volunteer and get involved with the IEEE, it's got a gravitational pull. You create friendships and depend on each other to get things done — and learn skills you can often apply to furthering your own career."

Dan Coode, business manager of cable network products at SED Systems in Saskatoon, and a previous Region 7 GOLD Coordinator. "There is no end of ways they're being asked to spend money at that point in their life."

IEEE membership is therefore a challenging value proposition, he says. But, he adds, "It's also the best time to bring them onboard

because once people settle into a routine, it's hard to change it. Ten years later, they're unlikely to say, 'Hey, I'm going to join IEEE.'"

The Young Professionals demographic is perhaps the most important in the IEEE, says Coode, since they're the ones who will be creating the standards of the future and will foster a new era of engineers.

These days, people don't stay at the same job for the entirety of their career. They'll likely switch jobs, and even careers, multiple times. The ultimate goal of the IEEE is to be there throughout a person's career, no matter which organization they work for, in whatever capacity. "IEEE can be that home," says Coode. "But we need them to join up and stay as members."

tial part of your growth and your company's growth. And be patient with yourself, and forgiving, and know that you can get through this. ... It might take you until tomorrow or next month. But don't let negative thoughts detract from what your focus and your goals are.

Mario Milicevic: So it sounds like there's a lot of risk involved. What are some of the key risk areas that entrepreneurs should be aware of, and how can we address these early on?

Karl Martin: When you start, you will have a ton of assumptions in your head. Many of these will remain untested for some time. You will learn more as you go, but you will continue to be operating under a lot of uncertainty. And I think one of the biggest risks is simply a lack of awareness of the assumptions that you're making. You paint this picture of the future, with whatever you're making. You think it's so obvious — the world will follow what you're doing because it's so obviously the solution. But if you don't actually think through all the assumptions, you will miss import-



ant steps of validation that you need to take. ... So I think it's a very clear awareness: Don't get too absorbed in your own story and the Kool-Aid that you're dishing out to other people. Think very critically, and then knock things out one by one. The magic is not going to happen on its own; you have to make it happen.

Chris Ouslis: I think one of the key aspects to risk is something I typically see in a lot of companies. When we go to select people — partners or hired staff, for example, typically we tend to

hire people, maybe subconsciously, who are similar to ourselves in many aspects of character, of disposition, and, sometimes, even of skills. And that's quite dangerous. What you want to build up when you're putting together an organization is a complimentary set of individuals who are capable of addressing your weaknesses and complimenting the aspects of your skill set that are missing. What you want to do is be able to create a complete team. That's an unusual thing because it's sort of stepping out of your comfort zone into an area where you might not be so comfortable, in determining strengths and skills, and how to best determine if someone else has those.

Wendy Robertson: For entrepreneurs, I think that everybody comes to their business able to contribute a subject matter or expertise. That's why they've started the company: They feel they have a particular insight, or a particular invention, that they can apply. But most entrepreneurs don't understand cash. And cash is the most important thing you have to learn about, because everybody

IEEE has a lot to offer. “But if you look at the diversity of the IEEE membership, it’s very difficult to articulate in a quick elevator pitch the value of IEEE membership — because there are probably 50 different pitches you can make depending on who you’re talking to,” says Coode.

His own experience has been one of ever-expanding opportunities. Since being Region 7 Young Professionals Coordinator, he has been Chair, IEEE MGA Center for Leadership Excellence, as well as a member of the IEEE MGA Strategic Direction and Environmental Assessment Committee.

“I certainly would not be where I am in my career without some of the lessons I’ve learned from the IEEE — like management, like communication. It’s allowed me to learn and practice new skills and hone that toolbox.”

But there are no shortage of opportunities for growth at the Section level, Coode says. He points out that while the IEEE provides access to technical societies and research, younger members can learn career lessons from those with more experience, a benefit they would otherwise gain the hard way.

“I see people who are overly loyal to a company — they’re being overworked and there are other opportunities that might be better for them — and that same company could turn around and randomly lay people off,” says Coode.

So one of the events held during his tenure with Young Professionals was a mentorship night. But rather than matching young professionals with more senior professionals, the group brought in engineers nearing retirement to talk about instructive experiences from the course of their careers.

Through events such as this, Young Professionals provides real value by addressing some of the challenges that members face — or will face — in their professional lives, such as learning how to deal with a difficult boss, start planning for retirement or invest their money.

But that value has to be ongoing. “Are young professionals going to spend that money on a rock concert or an IEEE membership? If you have ‘x’ amount of money you have to decide where you’ll spend it, and if the value equation doesn’t make sense with the IEEE, we might keep someone for a year, but we won’t be able to retain them for a lifetime.”

One way Young Professionals will build loyalty is by focusing on community. “A lot of people take new jobs in new cities, especially when they’re starting their careers, and they’re looking for some sort of community. The IEEE gives them that with a group of people who are like-minded and working in similar fields — it’s a great social and professional network,” says Coode.

To help accomplish this, Young Professionals is developing a mobile app so members can find local groups and events wherever they are. Young Professionals also plans to update members on the latest news and events via social networks, e-newsletters and the website, and will launch a video series to inform members of the latest happenings through one-minute clips.

In Toronto, the Young Professionals group launched innovative programming to broaden members’ skill sets.

“We were tired of having the same events all the time,” says Rob Kamranpoor, program manager at Hydro One and the chair of Toronto Section GOLD for 2012/2013. “We wanted to teach members something they’re going to need in the real world.”

looking at your business understands cash better than you do. And you have to understand that, whether you’re bootstrapping or whether you’ve got a grant; if you have money in; if you have angel investment. The follow-on investors are going to look at how you’ve spent that money. And the temptation with early-stage entrepreneurs who are functioning in a granted environment is that they pay themselves, because their time has a value, and they can give it a value equivalency, and they give themselves a salary. And when the money runs out, they’re surprised, because they thought that having worked diligently toward the first milestone of their company, more cash would follow on. And that isn’t

necessarily true. It doesn’t happen for everybody in an incubator, and it doesn’t happen for everybody who’s earned a foundation grant from one of the innovation groups in the country. And what you have to understand is that the filter of financial responsibility, being financially literate, is actually one of your biggest defences to weathering some of the things you don’t expect.

Mario Milicevic: What are some things that entrepreneurs should think about when they’re building a partnership with another company?

Devon Ryan: To be completely frank, I think it’s secondary. I did just recently partner, but that wasn’t my main focus. They came to me, and it seemed like the time was right for where I was as a whole with LION Mobile. So, we went ahead and negotiated and became partners. But the key thing is sales. You want to get that first sale, and you want to be able to deliver, especially if you have investors. So I wouldn’t focus too much on partnerships. That’s a common thing that entrepreneurs do. People only talk about partnerships because they don’t have sales. But if you have sales, sales are everything, because that’s going to get you up to the next level.

Kamal Hassan: Customers are the partnership that matters. The first customer is often the toughest — so go out of your way and bend over back-



wards to get that first customer. Whatever your future plans are, get one customer in the door because they can leverage future ones. And make sure you serve them well. Your business succeeds when you can keep customers, so make sure that you go out of your way to give them the responsiveness they might not get from other people.

Wendy Robertson: Customers are the type of partners we’re talking about. When companies say they want to partner with you, what they’re really saying is: ‘I’d like your customer list, please, and I’d like to sell what I’m selling to your customers.’ So you have to come to that table with a good hand as well, because your value proposition is that you’re going to make their relationship with their customer more valuable. And it’s a very complex sale to recruit those kinds of partners. If you have a good sense of who your customer is, and a good representative sample, then you’re ready to start talking about partnering.



One of his group's most popular events was a networking event — but one where they switched-up the typical format. Rather than bringing in professionals from the engineering sector, they brought in professionals from a variety of sectors to showcase other career options for those with an engineering degree, such as business or law.

"I mixed my engineering degree with a business degree, and that helped me out a lot," says Kamranpoor. "I wanted to show young professionals they have other options if they want to take another route."

When he took over as chair, he handpicked his team and set his expectations. "We set out our goals at the beginning of the year and actually went above and beyond what we wanted to do — and it hasn't stopped under my successors," says Kamranpoor. "We went from having five or 10 people coming out to events to 900 people registering for one of our events in 2013.

"If you try the same thing over and over again, you're going to get the same results over and over again," observes Kamranpoor. "With IEEE GOLD, I wanted to knock everything down and do it differently. It was risky but it paid off."



Chris Ouslis: Partnerships may be helpful because you may want to get some of that PR exposure. Maybe the name of your partner will somehow benefit your company in some way. But, ultimately, as was mentioned, what is important are sales. The partnership might bring you some sort of tangential or indirect benefit. But what you're really looking for, typically as you're starting, are customers — and a variety of customers — because at any time any one customer may bow out. Their volumes may drop. Things may change. You need to have enough of a diversified customer base so that no one customer is providing a significant amount of your revenue. Now, having said that, typically at the beginning your first customer, or your first few customers, are the ones really who are going to provide the foundation. So you're going to have a significant amount of your revenue, or maybe 100 per cent, for a certain period of time, from one customer. You're going to need to go through that.

"I certainly would not be where I am in my career without some of the lessons I've learned from the IEEE — like management, like communication. It's allowed me to learn and practice new skills" — Dan Coode

His favourite event was a panel on green energy — a timely topic that he felt would catch people's attention. It did: Some 70 people showed up to the event, and it was so successful that he ran it a second time.

While these events provide networking opportunities for members, ultimately it's up to them to sell themselves, Kamranpoor says.

Social skills are critical, but that's often lacking in the engineering field, says Kamranpoor. "You don't really learn those skills in engineering, and that's something we need to really focus on and improve because in the real world if you don't have those social skills you're going to be left behind," he says.

Hence the focus during his tenure at Toronto Section Young Professionals on workshops to help participants become more adept at interacting with others. "We wanted to show them real-life perspectives," he says. "Don't just think your resume is going to get you in the door because it's not. People don't care about your 4.0 GPA if you don't have team-building skills."

Kamranpoor will have plenty of opportunity to share his enthusiasm for developing a broader skill set for Young Professionals; he is the group's 2015 Coordinator for IEEE Canada. ■

Vawn Himmelsbach is a freelance writer who has written about business and technology for close to 20 years.

Mario Milicevic: What are your thoughts on being in the right place at the right time? Is there such a thing?

Karl Martin: Absolutely. It's like the product that we're making right now — if we had actually conceived it when we started the company, it would have been too early. So it tends to be about adaptability. There's a common saying: 'Get out of the office!' You have to see what's going on to understand where you fit in the world. It doesn't matter how perfect or ideal you think your product is: It has to be at the right place at the right time. You only know that by talking to lots of people. Your idea of the product and the market might not be at the right time, so you have to learn and iterate until you reach that. You can't brute-force your way through it.

Chris Ouslis: I guess the question could be: Is there such a thing as luck, perhaps, or that sort of an opportunity? The best response might be that luck favours the well-prepared. I can't recall who said that, but it's a great quote. That is, it's not really luck. Or, perhaps, the more effort you put into something, the luckier you become. That's another quote that I've heard. Lots of hard work, a lot of effort, knowing your area very well, getting out to see a lot of customers, and getting as much exposure and attention — you will eventually come upon an opportunity.

Wendy Robertson: If there isn't a product-market fit, being early is not a good story. Being smart enough to understand how to make your product, to deconstruct it, to make it the right thing for right now, is a much harder and more valuable skill. But the issue with being too early is like an epidemic amongst innovators, because being early means also being original and having something that's patentable. And sometimes it just comes down to finding and figuring out what the market will buy right now, and doing a little bit better than what's out there.

Devon Ryan: I like to surf, and I have yet to catch that perfect wave. It's always in my grasp, but I can never find it. And, to me, it's really rare that you can actually catch the perfect wave. In all the headlines, where you see WhatsApp or Instagram was purchased for billions of dollars — those sound like overnight successes, like they caught the perfect wave. But they're not. They started off as a minimum viable product: Somebody had an idea and they tested the market and they put the app out in the app store. And a lot of those apps, like WhatsApp and Instagram, didn't even start off with the same name, let alone the same idea. So I think the key take-away is that you've got to be dynamic. You can't be married to the idea. Be ready to change. Try not to think about chasing the perfect wave. ■



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