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**Sent:** Monday, August 28, 2017 8:04 AM  
**To:** Alex Fong  
**Subject:** FPC Newsletter - August 2017



## Florida Photonics Update

### The Florida Photonics Cluster Newsletter

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**August 2017**

**FROM THE PRESIDENT - Alex Fong**



### **Do You Really Need a Business Case to Do The Right Thing?**

Recently, I presented my management with an opportunity for our firm: to participate in an industry activity that involved development of young professionals. Management embraced the opportunity. Their response to this activity was professional, positive and, well, what one would expect from a forward-thinking business. In the not-too-long run, our participation makes sense to our bottom line. After all, it benefits my company to both identify and recruit talented new employees. Thus, there are solid, albeit selfish reasons why businesses should participate in such altruistic initiatives to "do the right thing".

All of which got me to thinking, why do we need a "business case or reason" to do the right thing? Sure, we're in business for the purpose of business and making money. At the same time, our corporate entities are part of a larger social awareness where doing the "right thing" transcends the drive for profits. Whether through instinct or moral code we as individuals are often compelled to do that thing which we

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know will make our world a better place. Most of us get that and find a way to follow through even in our working lives. Often the business case for doing this is just a post-rationalization we make to justify altruistic behavior within the context of the work place.

It may very well be that the first instances of businesses being socially conscientious and charitable involved little to no prior analysis of even the most informal returns on their investments. Most likely, the business leaders felt a desire to recognize the contributions and role that their community played in their success. Simply put, it felt like the right thing to do. An enlightened consciousness provided the basis for their generosity. The bakery that first sponsored a little league team or local scout troop likely didn't think about the networking opportunities. They recognized a responsibility to their neighborhood to help out.

However, today's managers feel pressured, perhaps from upper management or shareholders, to only make decisions that can be justified in terms of the bottom line. In addition, the time frame for these decisions seems to be getting shorter and shorter. But this view is myopic. The manifesto of short-term profit at any cost, devoid of socially conscientious business leadership, is seen by the public as blind corporate greed.

This kind of policy dooms firms to fail in the long term, or at least to be less competitive and successful. Policy reflects culture. United's adherence to policies driven strictly by cost savings and profit margins and an inability by their top management to admit their mistakes cost the airline a billion in market capitalization and a negative cloud in terms of public perception that they seem unable to shake (<http://www.businessinsider.com/visualized-the-impact-of-uniteds-pr-nightmare-2017-4>). However, it's not always feckless managers or heartless executives and owners pushing for profit regardless of the outcome. When asked personally to contribute to the well-being of causes and organizations close to their hearts, most would. But at work they are pushed to tow the line of conventional thinking when it comes to profit-based decision making.

Consider outdoor retailer REI who have opted out of operating on Thanksgiving and Black Friday the last two years (<http://fortune.com/2016/10/24/rei-closing-black-friday-again/>). This decision goes beyond contributing to charities or sponsoring interns from a local college. This is a broad statement of their values and proof of their commitment to the ones involving their employees. Moreover it is consistent with the basis of their business, of why customers shop there: to find the products they need to spend quality time with their families. CEO Jerry Stritzke and the leadership of REI are attempting to do the thing they believe in, the right

thing. Not only has it not hurt them, they continue to meet and exceed their growth targets, but it is paying off in terms of very positive media buzz and happy employees.

There are numerous other examples of course, but the point remains: sometimes one does not need to crunch the numbers or talk up doing the right thing. Most of us know what is right. It's obvious and necessary but not doing it is probably what a business ought to be worried about.

This is a recently published piece that can also be found here on LinkedIn:

<https://www.linkedin.com/pulse/do-you-really-need-business-case-right-thing-alexandre-fong>

### Company Spotlight: imec

We recently had the privilege to interview Phill  Christie, Program Director at the Belgium-based international nanoelectronics research center, imec, to learn more about imec, which is a Collaborative Research & Development Partner with BRIDG, the new industry-led smart-sensor consortium in NeoCity, FL near Kissimmee, FL.



Phill has over thirty years of international experience in the system-level assessment of electronic and optical devices and how these technology developments impact corporate business strategy. After receiving his doctorate in Applied Physics from the University of Durham, UK, he joined the faculty of the Electrical and Computer Engineering Department at the University of Delaware where his research group focused on design, modelling and metrology of electronic and optical interconnect-limited computer systems.

He returned to Europe as Senior Principal Scientist at Philips research, leading teams integrating chip design and fabrication processes with a focus on low power devices and systems. In 2009, he joined the Belgium-based international nanoelectronics research center, imec, where he is currently Program Director leading a team responsible for business and technology strategy for the IC-link division, which provides SMEs and universities with access and design support for advanced electronic and optical semiconductor technologies.

Here are some excerpts from our discussions.

**Alex Fong:** Can you tell us about your background/history?

**Phill Christie:** imec is a world-leading nanoelectronics R&D organization based in Leuven, Belgium but has a local presence in Russia, Japan, China, Brazil, India and, of course, in Central Florida due to the opening in 2016 of our Nanoelectronics Design Center in Kissimmee. Imec provides access to advanced foundry technologies to universities, small and medium businesses, and larger companies whose core competence is not electronic/optical IC design. For the specific case of integrated optics, we offer regular, scheduled access to imec's silicon photonics ISiPP50G+ platform through a Multi-Project Wafer (MPW) service.

**AF:** What are some of the challenges you face today? How are you coping with the current economic conditions?

**PC:** I would say the main challenge we face today is scaling our operations to accommodate the growth in requests for silicon-based Photonic IC (PIC) production. Over the last year, we have seen a dramatic increase both in the number of designs submitted to imec's MPW service but also in the number of bi-lateral dedicated mask runs. I think a lot of this growth can be accounted for by the release of imec's new ISiPP50G process, which implements library components with 50 GHz bandwidths. I also suspect that we are seeing a shift in the datacom industry towards the lower-cost advantages that a silicon-based process offers.

**AF:** What distinguishes your organization from your competitors or other similar organizations?

**PC:** The distinguishing feature of our organization is that our technologies are developed through very close collaboration with imec's industrial research partners. Imec's business model is unique in that affiliate companies send assignees to imec and work in close proximity to imec's researchers and program managers. This ensures that the performance limits and quality of our technologies are constantly being challenged to be the best that they can be by companies with very high expectations for their return on investment. We benefit hugely from this business model as I strongly believe we offer an MPW service with among the highest performance specifications in the industry.

Our offering is also unique in that we offer access to both PIC technologies and CMOS ASIC technologies in collaboration with world-leading external foundries. This allows us to offer a combined package of PIC and a dedicated CMOS ASIC controller chip. This combination allows a much broader spectrum of applications and leads to the concept of digitally enhanced photonic data processing.

**AF:** Do you seek to partner/collaborate with other organizations: universities, companies, other? If so, is it for research, marketing, manufacturing, other?

**PC:** Our MPW service provides low-cost access to PIC production but this is only a single component in a complex manufacturing flow. We are always eager to talk with partners who can work with us to provide packaging, assembly and test services.

**AF:** Do you have a memorable success story you'd like to share?

**PC:** By far the best part of working in an industry providing MPW services is the close interaction we have with start-ups and universities. As part of an R&D institute specializing in technology transfer, we have a particular affinity with this segment of the global high-tech economy. I strongly believe that we work with innovators and entrepreneurs to make great products happen. We do have a policy of not revealing individual customer names, but we have worked closely with companies and university groups making huge strides in commercializing innovative products for non-invasive blood analysis for diabetes, pollution measurement, IR spectrometry, and quantum computing.

**AF:** What are your future plans?

**PC:** An important focus is on reducing turn-around time. In addition, we will work with the imec technology team in the Optical I/O Program to provide the highest quality Process Development Kits (PDKs) and process specifications to enable continuous improvements in performance and quality and also to increase the number of MPW runs scheduled each year to accommodate the increasing demand for PICs.

**AF:** Thanks for your time!

**PC:** Most welcome.

**UCF is Number One supplier of engineers to the aerospace and defense industries**

The University of Central Florida produces more graduates who get jobs in aerospace and defense companies than any other university in the nation, according to an annual workforce survey conducted by the top aviation industry publication in the U.S.. See <http://today.ucf.edu/ucf-is-1-supplier-of-engineers-to-aerospace-and-defense-industries/> for more on this fine achievement.

## FPC General Members meeting at E.R. Precision Optical, May 11, 2017

An FPC General Members meeting at E.R. Precision Optical was held May 11, 2017.

As usual, there were many interesting presentations at the recent FPC meeting. Here is a brief summary:

Bill Greener of Bond, Schoeneck, & King, PLLC Attorneys made some very interesting points in his talk on "To Patent or Not to Patent? That is the Question"

Dr. Aristide Dogariu from UCF/CREOL made an interesting technical presentation on "Harnessing Light: Advanced Photonics in Cell Biology and Photomedicine".

There were 2 overview presentations on ER Precision Optical: one by Eric Verney, Sr. Director, Materials Technology and one by Ray Pini, Director of ProHawk Sales & Marketing

The program concluded with a very interesting tour of the ER Precision Optical facilities.

## FPC member companies at SPIE DCS-2017 in Anaheim, CA & more will at DCS-2018 in Orlando!

**Several FPC members exhibited at the SPIE Defense + Commercial Sensing Expo 11-13 April 2017 in Anaheim, CA:**

- Analog Modules
- CREOL/UCF
- E R Precision Optical Corp.
- IMPERX Inc.
- JENOPTIK Optical Systems
- LightPath Technologies
- Ocean Optics, Inc.
- OptiGrate Corp.

**The DCS meeting returns to Orlando, Florida in 2018** as part of a new 3-city rotation for the event.

The FPC is working work with CREOL again to organize a Florida cluster grouping in 2018 on the show floor, and to set up other activities to maximize interest in and participation in the meeting. Our objective is to convince SPIE to choose Orlando as the permanent home for the meeting instead of the 3-city rotation schedule they started in 2016: Baltimore, MD; Anaheim, CA; Orlando, FL. Contact us at the FPC if you would like to support to this effort.

**Ocean Optics Moves Corporate Offices**

*New location at 8060 Bryan Dairy Road, Largo, FL supports addition of spectral sensing products*



Located just 10 miles away from the previous location, the new facility brings more space dedicated to R&D, and better accommodates the recent addition of PIXELTEQ to Ocean Optics' product portfolio. In addition, the new offices house the company's sales, marketing, service, finance and administrative functions. Design and manufacturing of the company's spectrometer and accessory products will continue at Ocean Optics' Winter Park, Florida facility.

Phone, +1 727-733-2447 and website, [www.oceanoptics.com](http://www.oceanoptics.com), remain the same. A list of Ocean Optics' global offices is available at [www.oceanoptics.com/contact-us/office-locations](http://www.oceanoptics.com/contact-us/office-locations).

### President of JENOPTIK Optical Systems LLC, Jay Kumler Appointed to Luminate National Advisory Board

*Industry expert Jay Kumler joins 11 other nationally recognized OPI entrepreneurs, innovators, business executives and investors to the Luminate national advisory board.*



11 August 2017, Jupiter, FL USA - The Luminate optics, photonics, and imaging (OPI) accelerator names Jay Kumler, President of Jenoptik Optical Systems, a premier provider of optical systems in North America, to national advisory board.

Luminate is a new \$5M per year accelerator for OPI enabled startups. The organization is formally accepting applications from prospective companies with visionary entrepreneurs solving challenging problems including but not limited to: machine vision, inspection, biophotonics, security, surveillance, augmented & virtual reality, and autonomous vehicles. Teams will be competing for one of ten available slots in the first cohort, guaranteeing them a minimum investment of \$100,000, and potentially as much as \$1M. Luminate applicants must be incorporated, have a full-time team, should have proven their core technology, and preferably developed a working prototype.

"I am honored to be a part of this distinguished group of key industry leaders and to help facilitate the advancement the OPI industry," said Jay Kumler.

"The addition of this group of world-class advisors will help improve the chances of Luminate companies ultimately succeeding. The board will participate in the recruitment, selection, coaching, networking and mentoring of the cohort. Each member of the advisory board has a passion for helping new entrepreneurs, and a wealth of knowledge that will guide our startups to spend their time avoiding mistakes, rather than fixing them. That kind of assistance is simply invaluable." says Don Golini, Advisory Board Chair.

### Board of Advisors

- \* Eugene Arthurs - CEO, SPIE
- \* Milton Chang - Managing Director, Incubic Management
- \* Stuart Elby - SVP, Data Center Business Group, Infinera
- \* Steve Fantone - Founder & President, Optikos Corporation
- \* Mike Foley - Managing Director, Artemis Capital Partners, L.P.
- \* Chair, Don Golini - Founder, QED Technologies
- \* Jay Kumler - President, Jenoptik Optical Systems
- \* Michael Liehr - CEO, AIM Photonics
- \* Duncan Moore - Vice Provost for Entrepreneurship, University of Rochester
- \* Ryne Raffaele - VP for Research and Associate Provost, Rochester Institute of Technology
- \* Darius Sankey - CEO, 3Discovered
- \* Jim Senall - President, High Tech of Rochester

For those interested in getting involved with the Luminate accelerator, either as a startup, mentor, corporate or venture partner, please visit [www.luminate.org](http://www.luminate.org).

### About Jenoptik

As an integrated photonics group, Jenoptik divides its activities in three segments: Optics & Life Science, Mobility and Defense & Civil Systems. Its customers around the world mainly include companies in the semiconductor equipment manufacturing industry, automotive and automotive supplier industry, medical technology, security and defense technology as well as the aviation industry.

### Contact

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**Next FPC-MACF Meeting at Northrop Grumman Laser Systems - 21 September 2017**

The FPC's next meeting is a joint meeting with the Manufacturers Association of Central Florida (MACF) at Northrop Grumman Laser Systems in Apopka, FL. Because of space limitations, this meeting is limited to FPC and MACF members on a first-come, first-serve basis. A report on this

meeting will be available on the FPC website soon after the meeting.

### Save the Date! FPC Annual meeting in December

The Florida Photonics Cluster will hold its next Annual Meeting in early December.

The location and agenda is still being finalized, but even though this is the official Annual Meeting of the association, all interested parties are welcome to attend with no registration fee. To receive the agenda and a full RSVP invitation, send an email to Jim Pearson, FPC Executive Director, at [jpearson@creol.ucf.edu](mailto:jpearson@creol.ucf.edu).

### WELCOME NEW FPC MEMBERS!

The FPC is delighted to recognize the companies that have joined the association so far during 2017:

- 4D Technology
- Finetech
- ONTEKO LLC
- SciCoLab Venture

Go to FPC Website [Members](#) page to learn more.

### Utilize the services and discounts provided by FPC member supplier companies!

One of the advantages of FPC membership is the network of suppliers to our industry, and particularly the suppliers who have joined the FPC and some of whom offer discounts to FPC members. Here is a brief list; further information is on the FPC website under the Members listing.

- [Bond, Schoeneck, & King, PLLC Attorneys](#). Provides a full range of Intellectual Property services
- [Coastal Cloud](#). Provides a 10% discount on their full range of services that include technology strategy & architecture, business process optimization, solution selection / configuration / implementation, user training & adoption as well as on-going solution administration.
- [Diamond Level Service](#). Event Design and Management services for trade shows, special events, conferences, and business presentations. Discounts are provided to FPC members.
- [Fowler, White, Burnett, Attorneys](#). Provides clients a talented roster of seasoned legal professionals who practice in numerous disciplines, including aviation, commercial litigation, corporate, bankruptcy and restructuring, maritime, health care, intellectual

- property, labor and employment, insurance defense, international, real estate, tax and white collar crime.
- [Laser Guardian](#). Provides a 10% discount on their full range of services that include testing laser systems for emissions above safe limits as defined by the FDA under regulation 21CFR1040, and assisting in developing laser safety programs compliant to state and federal regulations through implementation of the ANSI Z136.1 standard for the safe use of lasers.
  - [Laser Focus World & BioOptics World](#). Discounts provided to FPC members for ads in the magazines: 20% for print media, 15% for digital media.
  - [Laser Institute of America](#). Discounts provided on LIA membership when joining for the first time, on ads in LIA media, and exhibit space at LIA meeting events.
  - [OnTarget Web Solutions](#). Provider of internet marketing and web design services, including FPC web design and hosting.
  - [Optics Professionals, LLC](#). Professional recruiting services, representing companies and individuals in optics and imaging technologies and related industries.
  - [Williams & Associates](#). Provides wide range of promotional products and marketing services. 10% discount to FPC members.

In addition, if not yet a member, please urge your company to become a member of our partner associations:

- [Florida Defense Contractors Association](#). A statewide, state-focused advocacy and networking group with the mission to promote the business interests of Florida defense contractors and defense economic stakeholders.
- [Laser Institute of America](#). Corporate Members receive quantity discounts on all LIA products and services, reduced advertising rates in LIA's Journal of Laser Applications®, Membership Directory and LIA TODAY, a free web link from LIA's website to the web address, and a complimentary fifty word listing with company logo in LIA's annual Membership Directory.
- [Manufacturers Assoc. of Central Florida](#). A non-profit organization enhancing the manufacturing industry in Central Florida.
- [Orlando Economic Partnership](#). The OEP - is a not-for-profit, public/private partnership encompassing Central Florida's seven counties - Brevard, Lake, Orange, Osceola, Polk, Seminole and Volusia - as well as the City of Orlando. The organization's top priorities include creating high-wage, high-value jobs, expanding Central Florida's global reach and competitiveness, supporting and enhancing educational/skills preparedness in the talent pipeline, strengthening advocacy for improved infrastructure and community resources, and creating an enviable quality of life that is broad-based and sustainable.

- [OSA Industry Development Associates](#). OIDA provides a wide range of programs and services including: workshops, industry/roadmap reports, policy and funding advocacy, idea exchange sessions, professional networking activities, a multi-media publication and presentation archive, and exclusive member benefits.
- [SPIE Corporate Membership](#). The SPIE Corporate Membership program provides exhibition booth "priority points", discounts, brand exposure, business networking opportunities, as well as access to information, education, government relations, student outreach, and more.
- [CREOL Industrial Affiliates](#). The Industrial Affiliates program provides to industrial corporations, organizations, and individuals many benefits. FPC members receive a discount when joining the Affiliates with a cash donation.

**JOIN THE FPC TODAY!**



[Enjoy the benefits of FPC membership!](#)

### [Why Join FPC? To Make Money!](#)

#### **Benefits of FPC Membership:**

- Identify common needs and interests
- Leverage to develop opportunities through joint efforts, pooled resources and knowledge
- Regional, Statewide, National and International Reach  
Small, Medium, Large Corporations, Academe, and Government all Benefit!

#### **FPC Membership Benefits Include:**

The strength of a unified industry voice for:

- Marketing and increased visibility of the photonics industry and FPC members through strategic marketing efforts
- Developing local and state executive and legislative support
- Interaction with economic development groups

- Workforce development, and advancement and improvement of educational infrastructure
- Obtaining group discounts
- Opportunities to participate in state and national sales and marketing efforts

And even more:

- Visibility for and ready access to your company through links from FPC's website, marketing literature, and trade show displays.
- An expansive resource network that includes partnerships with Enterprise Florida, area economic development organizations, the Florida High Tech Corridor Council, and UCF's CREOL, The College of Optics & Photonics to provide access to incentives, business development programs, research, and education.
- Annual and regional meetings of membership for networking
- Participation in optics/photonics-focused data collection with an annual survey monitoring the pulse of the industry
- Opportunities designed to develop Florida photonics companies into worldwide market participants
- Opportunities to participate in curriculum development at state universities and colleges
- Facilitated access to Florida's best and brightest students and the additional ability to recruit nationwide through the FPC website
- Membership Directory
- Visibility to potential customers
- Access to service providers that can assist your company and provide discounts
- Spotlight on member companies and products through periodic newsletter
- Several FPC member discount opportunities from photonics professional organizations, publishers, and service providers.

**[Join FPC today and enjoy the benefits of membership!](http://www.floridaphotonicscluster.org)**  
**[For more information, visit](http://www.floridaphotonicscluster.org)**  
**[http://www.floridaphotonicscluster.org.](http://www.floridaphotonicscluster.org)**

Greetings FPC Members and Friends,

The Florida Photonics Cluster is designed to support the growth and profitability of the Florida photonics industry through the strength of a unified voice to make Florida the place to go for photonics solutions.

The FPC is dedicated to enhancing the industry through effective

collaboration by bringing together the knowledge, expertise, and service that each of its members organizations has to offer.

#### FPC Goals

- Foster the expansion and growth of Florida's optics and photonics industry by partnering with economic development organizations, the state universities, and community colleges, and local and state governments.
- Market Florida's optics and photonics companies worldwide.
- Facilitate and provide a means of communication within the business community.
- Partner with the Florida education community to enhance and develop a competent statewide optics and photonics-based workforce.
- The FPC is a 501c(6) not-for-profit corporation, registered with the Florida State Division of Corporations.

**For more information, visit [www.floridaphotonicscluster.org](http://www.floridaphotonicscluster.org)**

Sincerely,

Alexandre Fong, President  
Florida Photonics Cluster

Jim Pearson, Executive Director

Florida Photonics Cluster, 12424 Research Pkwy, Ste 100, Orlando, FL 32826

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