



## NPI advocacy efforts promote role of photonics in cancer treatment, advanced manufacturing and more

It has been a busy spring for the National Photonics Initiative. In April, the NPI held its annual lobby day on Capitol Hill to educate lawmakers on the importance of supporting the US optics and photonics community. To support the White House's recently launched National Cancer Moonshot Initiative, the NPI formed a new task force aimed at finding ways to leverage optics and photonics technology to fight cancer and began development of a technology roadmap. Optics and photonics also gained recognition in February for the key role the technology played in enabling the observation of gravitational waves – a historic discovery that confirms Einstein's Theory of General Relativity.

See information below on how you can build on the momentum of this spring in the months ahead by hosting a congressional site visit during the upcoming legislative recess periods.

Thank you for your continued support of the NPI!

### Optics and Photonics on Capitol Hill



More than 26 members of the optics and photonics community [came together](#) in Washington, DC, for the NPI's annual Congressional Visits Day (CVD) on April 12 and 13.

Over the two day event, our members met with over 50 congressional offices to advocate for the legislative priorities related to optics and photonics, including:

- Supporting Fiscal Year 2017 budget funding for research & development (R&D).
- Supporting funding for the National Network for Manufacturing Innovation (NNMI), of which the American Institute for Manufacturing Integrated Photonics (AIM Photonics) is a part.
- Reauthorizing the America COMPETES Act.
- Reauthorizing the Higher Education Act (HEA) and Carl D. Perkins Career and Technical Education (CTE) Act.

If you are interested in learning more about NPI's legislative goals, all of the documents used during CVD are available on the [NPI website](#). Thank you to all who participated to make 2016 CVD a success, including members of the NPI Steering Committee Bob Lieberman, Tom Baer and Ed White!

### Leveraging Optics and Photonics to Fight Cancer



In January 2016, President Obama announced a new national "Moonshot" initiative led by Vice President Joe Biden to fight cancer by bringing about a decade's worth of scientific advances in the next five years. Shortly after, the NPI formed a Cancer Task Force, bringing together experts in medicine and optics and photonics to identify technologies critical to the National Cancer Moonshot Initiative and create a technology road map to achieve technology goals.

The task force has produced an executive summary identifying key areas where optics and photonics technology can be leveraged, including improved early detection through quantitative screening, imaging of lymph nodes pre-excision, better follow-on care by measuring drug response/monitoring for disease recurrence, and improving the efficacy and lowering the cost of cancer detection and treatment.

In April, Task Force Chairman Tom Baer had the opportunity to present our draft in a meeting with the leadership of the White House's Moonshot initiative. We look forward to continuing progress on the technology roadmap and identifying ways to work with the administration on this important project.

Thank you to the members of the task force who contributed to the draft, including Drs. Christopher Contag, Richard Frank, Maryellen Giger, James Mulshine, Rebecca Richards-Kortum and Eva Sevick.

### Optics and Photonics Technology Enables Discovery of Gravitational Waves



Optics and photonics technology played a key role in the recent discovery by the Laser Interferometer Gravitational-Wave Observatory (LIGO) of gravitational waves arising from a binary black hole merger. This discovery, one of the most significant in physics within the last century, was made possible by the creation of photonics-enabled ultra-precise laser-based interferometers used to measure gravitational waves. The advanced LIGO instrument is capable of making the most precise distance measurements ever recorded; it can detect the change in spacing between two mirrors separated by over 2.5 miles to a precision of much less than one trillionth the diameter of a human hair.

"Our community commends the National Science Foundation for its investment in LIGO and its belief in advancing our nation through scientific innovation," said NPI Chairman Alan Willner. "The photonics community is inspired by the multidisciplinary cooperation that this historic discovery symbolizes, and we are proud to have played an essential role in enabling some of the most significant physical measurements to date." The NPI's full press release on the announcement is available on the [website](#).

### Host a Congressional Visit

One way to build on the momentum of CVD is by hosting a congressional visit at your organization during upcoming district work constituents. Many members of Congress return to their home states to meet with constituents. These recess periods often coincide with holidays such as Memorial and Independence Day. The NPI has prepared a [step-by-step guide](#) to walk you through the process of setting up a congressional visit. For a great example of the positive impact a site visit can have, see this [press release](#) from Optix on Rep. Seth Moulton's (D-MA) congressional visit, which later resulted in an [op-ed](#) in the Boston Business Journal.

If you are interested in hosting a site visit, do not hesitate to reach out to the NPI with any questions.

*Upcoming 2016 Congressional Recess Periods:*

- April 30-May 9
- May 27-June 6
- June 25-July 4 (Senate July 1-5 only)
- July 16-September 5

### Alan Willner Elected to National Academy of Engineering

Congrats to NPI Steering Committee Chairman Alan Willner on his election in February to the National Academy of Engineering, one of the field's highest honors. In addition to his work with the NPI, Alan is the University of Southern California (USC) Viterbi professor in the Ming Hsieh Department of Electrical Engineering. He will be formally inducted into the NAE at a ceremony in October 2016 in Washington.

### Contact Us

The NPI is interested in hearing from you. Are you interested in joining our efforts? Do you have questions? Need additional information? Please contact Laura Kolton at (202) 416 1499 or [lkolto@osa.org](mailto:lkolto@osa.org), or Krisinda Plenkovich at (360) 685 5518 or [krisindap@spie.org](mailto:krisindap@spie.org).

Please visit the NPI website for more information: [www.lightourfuture.org](http://www.lightourfuture.org).



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