

# ACM and Climate Change

(carbon offsetting and beyond...)

**Jens Palsberg**  
SIGPLAN Chair

**Benjamin Pierce**  
SIGPLAN Vice Chair and Climate Committee Chair

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# Annual global temperatures from 1850 to 2017



**Emissions must decline by at least 40 percent by 2030 and reach net zero by 2050, if we are to hold warming to 1.5 degrees.**

“No documented historic precedent” for the transformation of the world economy needed to achieve this.

## **ACM has a *responsibility* and an *opportunity* to lead in this area...**

**Because our activities have a significant carbon footprint**, which must be balanced against their benefits

**Because as scientists we have a special responsibility** to take the urgent warnings of other scientists seriously

**Because we can be a model** for other scientific (and non-scientific) organizations

**What can ACM do?**



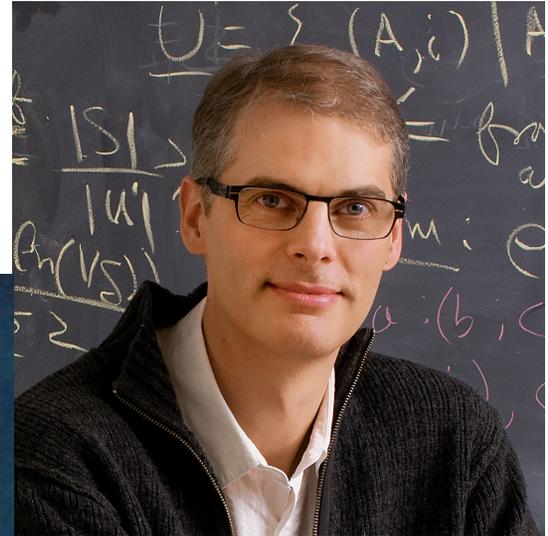
**Mike Hicks**



**Crista Lopes**



**Jens Palsberg**



**Benjamin Pierce  
(chair)**

## **The SIGPLAN climate committee**

- Use **virtual PCs** instead of physical ones
- Choose conference **locations** to minimize carbon footprint
- **Co-locate, merge, or delete** conferences
- Develop **alternatives to traveling** long distances
  - **Livestreaming** of talks
  - **Remote** presentation / participation
  - **Regional** meetings
  - Fully **virtual conferences**
- Buy **carbon offsets**

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# Carbon Offsetting

## Why offset?

- Easy(ish) short-term action that makes a significant, concrete difference
- Buys time for developing longer-term strategies
- Starts to put a price on carbon emissions
  - ...which gives conference organizers and planners an incentive to reduce carbon footprint

## From Last Year's SGB Meeting...

“SIGPLAN requests that ACM’s staff and legal counsel work with us to find a way for conferences to purchase carbon offsets if they want to.

We ask that other SGB members join us this request.”

Highlights from ACM's new

## Carbon Offset Program

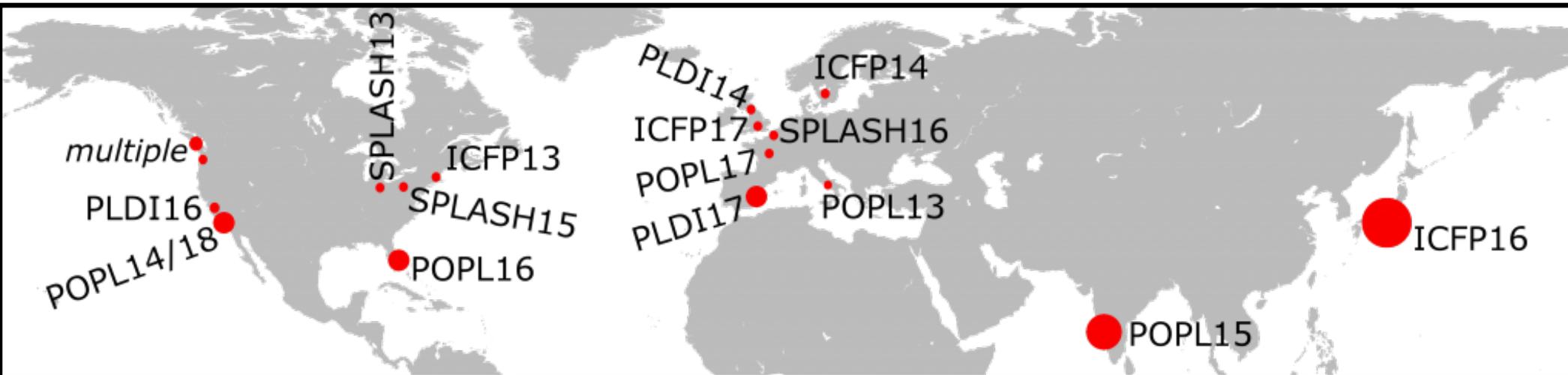
“If the SIG has approved the program and you wish to proceed for your conference, a **checkbox** must be included in the **conference registration form** giving conference attendees the option to make a carbon offset contribution. This must be made very clear and distinct from the registration fee. The registration form will need to state that this will **appear as a contribution on their receipt and/or invoice** and the attendee may want to consult his/her organization in advance to determine if the expense is reimbursable.”

# Experience

- The new policy was implemented at the *Federated Computing Research Conference* in June 2018 (in Phoenix!)
  - Thanks to a huge last-minute push by Donna Cappo and Vivek Sarkar!
- Results:
  - 36 attendees (out of 2,770 total) purchased offsets
  - Total collected: \$605

**New Initiative:**

**Measure,  
then Optimize**



Carbon footprint per participant for travel to recent SIGPLAN conferences. The smallest dot (ICFP 14, in Gothenburg, Sweden) represents .9 tons of CO<sub>2</sub>e per participant; the largest dot (ICFP 16, in Nara Japan) represents 1.94 tons per participant.

## Plans:

1. **Measure** the carbon footprints of our conferences
2. **Publish** the results
3. Work on **reducing** these footprints year on year

# A Request to Other SIGs

**We are starting to work with a few other SIGs\* on gathering, analyzing, and publishing carbon footprint data for their conferences.**

**We would love to have a couple more!**

**If your SIG wants to participate, please put me and Jens in contact with a point person.**

\*SIGBED, SIGCOMM, SIGARCH

For more details, including a **blog post** about our new proposals,  
google **“SIGPLAN Climate”**

**Questions?**

**Discussion?**