

Day 1: Establishing Goals

9:00–9:30: Organisers' introduction. Summarising goals, scope, and program of the workshop.

9:30–10:30: Keynote 1.

Mike Berners-Lee (via remote link) will explore the workshop's topic from a climate-focused perspective. He will start with a high-level update on the climate emergency and its part in a wider metacrisis. He will look at the dynamics of energy, efficiency, growth and anthropogenic climate change, and the historical and current role of ICT in this. He will look at the conditions under which computing can play a part in transition to a low carbon and otherwise sustainable future. This talk will be followed by Q&A and a group discussion on computing's role in a path to successful climate change mitigation.

10:30–11:00 (or 10:00-10:30): Coffee break.

11:00–11:45: Hopes and fears. Small group discussions. Participants discuss what they think needs to happen, and how hopeful/pessimistic they are about it happening and why.

11:45–12:15: Feeding Back. Groups return to discuss the key takeaways from their discussions.

12:15–13:00: Lunch break. Discussion continues over lunch.

13:00–13:45: Keynote 2.

Vint Cerf (via remote link) will explore the workshop's topic from a technology-focused perspective. He will provide an overview of the evolution of computing technologies and the social vision underpinning these technologies. He will reflect on prevailing priorities and their (in)congruency with a climate agenda. He will end by offering an inspiring vision for aligning tech futures with climate goals and exploring the potential role for and shape of governance within this vision. This will be followed by Q&A and a group discussion on computing's many (and often conflicting) responsibilities.

13:45–15:30: Computing positives and negatives. Small group discussions. Participants discuss which computing technologies have the greatest potential for positive climate impact, which have the greatest potential for negative climate impact, and which negative environmental impacts are "justifiable" on the basis of other social responsibilities.

15:30–16:00: Coffee and cake.

16:00–17:00: Feedback and consolidation. Groups will report on the content of their discussions, and the organisers will facilitate discussion on how the landscape of computing research and innovation might change if climate were prioritised.

18:00: Dinner

Day 2: Pathways to Realising Goals

9:00–9:15: Organisers' introduction. Summarising goals and structure for the day, recapping the previous day.

9:15–10:15: Keynotes 3&4.

Vlad C. Coroamă will speak on efforts to develop a methodology for measuring net impact of digital technologies (on balance between emissions generated and emissions avoided) and the challenges relating to rebound effects. Emma Strubell will speak on the state-of-the-art in measuring the environmental footprint of AI, and challenges entailed therein. These will be followed by Q&A and group discussion.

10:15–10:45: Coffee break.

10:45–11:45: Carbon reductions. Small group discussions. Participants discuss advancements in specific areas of computing that are (or can) yield significant carbon reductions.

11:45–12:15: Feeding Back. Groups return to discuss the key takeaways from their discussions.

12:15–13:00: Lunch break. Lunch break. Discussion continues over lunch.

13:00–13:45: Keynote 5.

Tom Romanov will provide an overview of the global regulatory/legislative landscape, both in terms of policies designed to curb environmental impacts of computing and in terms of spurring

technology innovation. He will also reflect on the role and opportunities of organizations such as ACM to effect positive change for the climate within this landscape. This will be followed by Q&A and a group discussion on the political barriers to realising the vision outlined by the group on Day 1, and pathways to overcoming them.

13:45–15:30: Developing a plan. Attendees will work in small groups to explore the finer details of a coordinated plan for addressing sectoral emissions.

15:30–16:00: Coffee and cake.

16:00–17:00: Feedback and consolidation. Groups will report on the content of their discussions, and the organisers will facilitate discussion towards converging on a shared view on how to effect positive change.

18:00: Dinner

Day 3: Creating a Manifesto

9:00–10:00: Paired reflection. Working in groups of 2 and reflecting on the discussions across the entire workshop, attendees will begin to draft items for a Dagstuhl Manifesto.

10:00–10:30: Coffee break.

10:30–11:15: Merging items. Groups of 2 will join two other groups of 2 to compare items, and work together to merge these items, combining as appropriate and collectively refining the language.

11:15–11:45: What can ACM do? Group discussion on the role ACM (in coordination with other computing organizations) might play in leading computing towards greater climate responsibility.

11:45–12:15: Conclusions and Next Steps. Organisers will summarise the outputs from the workshop, key areas of tension or disagreement, and unresolved issues. The whole group will discuss the best route forward in creating a shared manifesto and in enacting its vision.

12:15–13:00: Lunch break and close.