



Matthieu Simonin
Research Engineer @ Inria

Member of Labos1point5 research group

Carbon Footprint
IC2E / Rennes / 2025



Foreword : Labos1point5

Labos1point5 (<https://labo1point5.org>):

- → Nation Wide French inter-disciplinary research group (~200 members)
- → **Research object : The academic system wrt its environmental impact**
- → Different topics addressed
 - Methodologies to estimate environmental footprint (e.g carbon footprint)
 - Teaching (e.g provide resources for teachers about environmental impacts / doctoral courses)
 - Development of tools (e.g online calculator used by 1000+ labs)
 - Dissemination (e.g seminars...)



Questioning the conferences

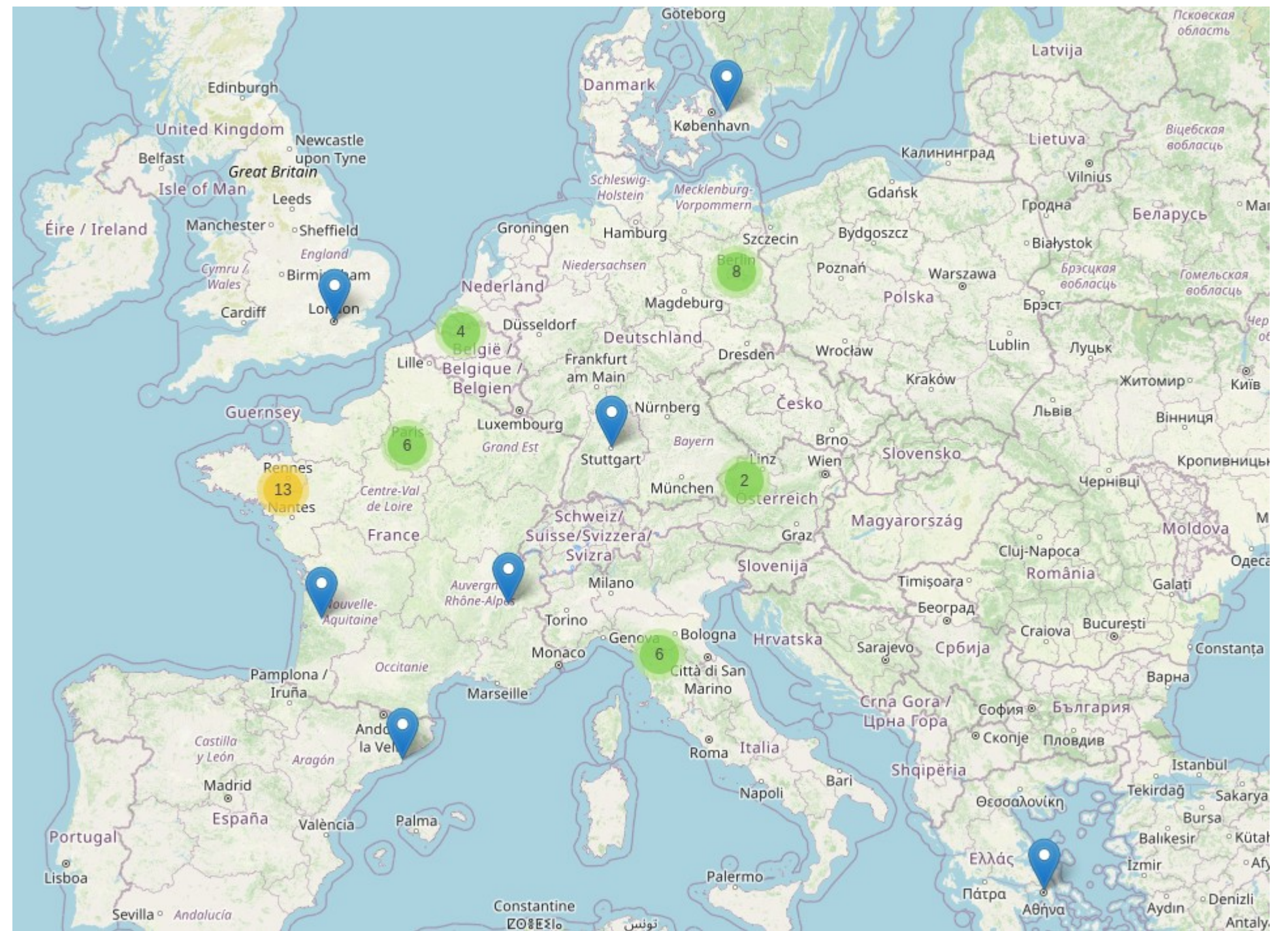
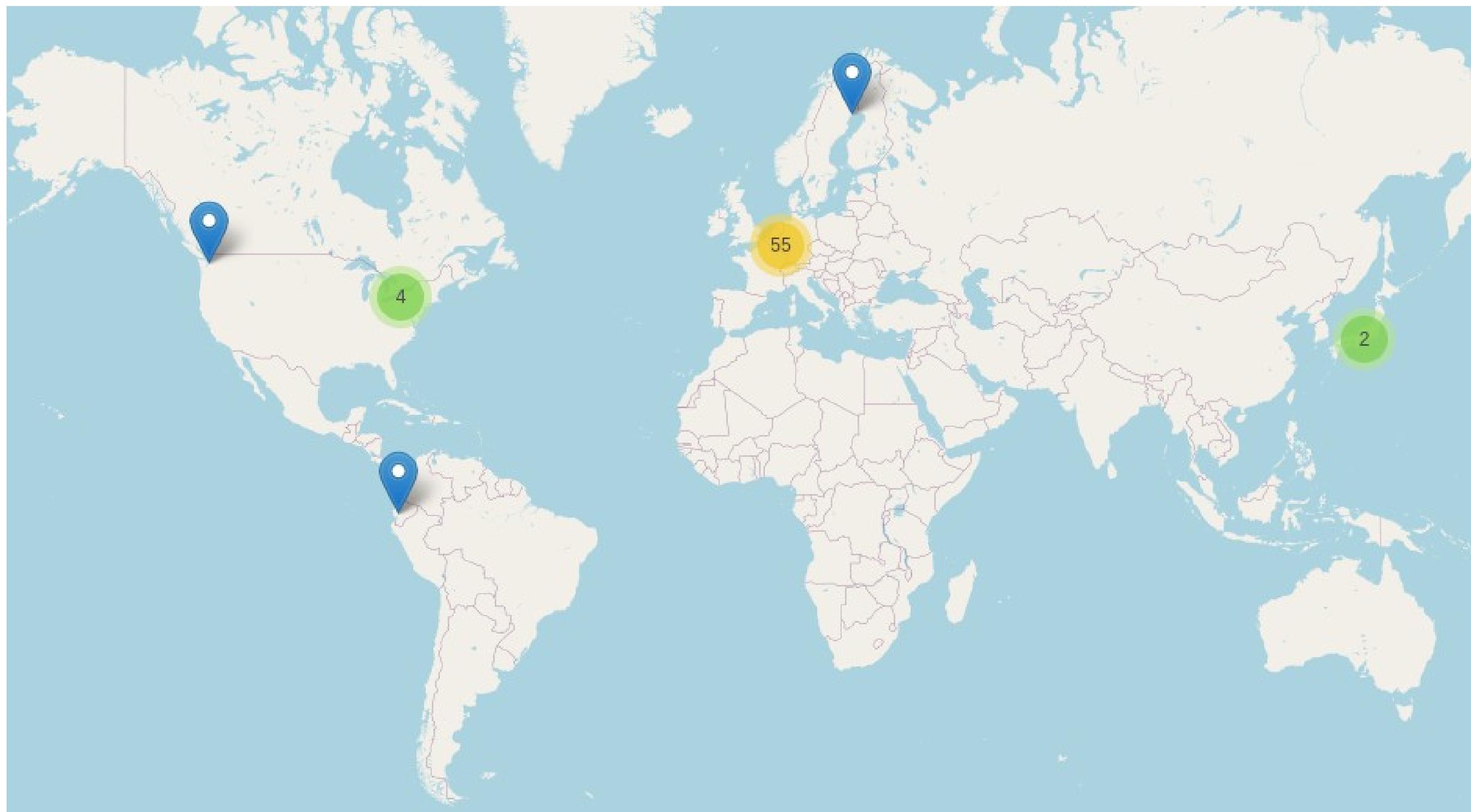
Questioning the conferences :

- Major source of carbon emissions (flights) for labs
- **It's a carbon lock :**
 - dissemination through conferences is the norm **in computer science**
 -
 - **Goal of the presentation :** provide some insight for IC2E in terms of carbon emissions
 -
 - Dataset : 64 answers to the poll (thanks Ammar Kazem and all for answering!)



Questioning the conferences

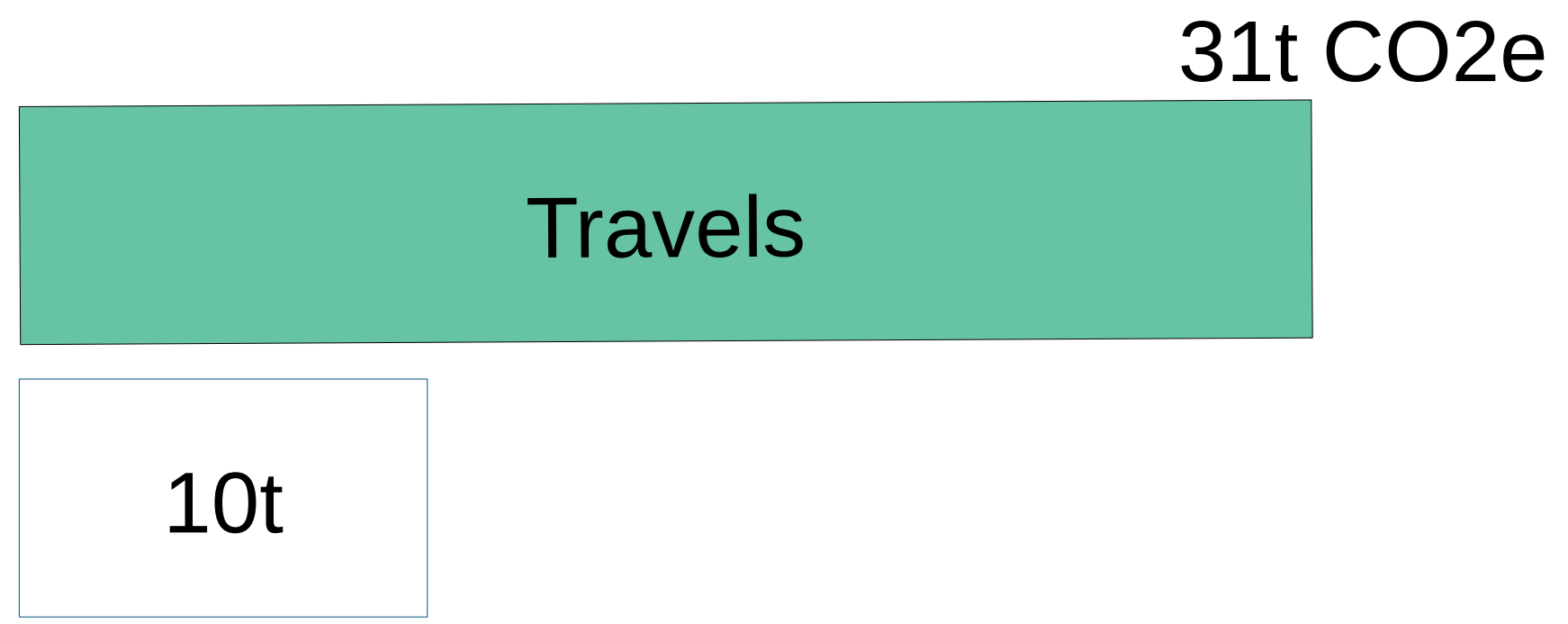
→ IC2E 2025 center of gravity is in... Europe



Figures : Labos1point5



IC2E @ RENNES



Emissions dominated by plane

Scenario : replacing plane by train in Europe => -30 %

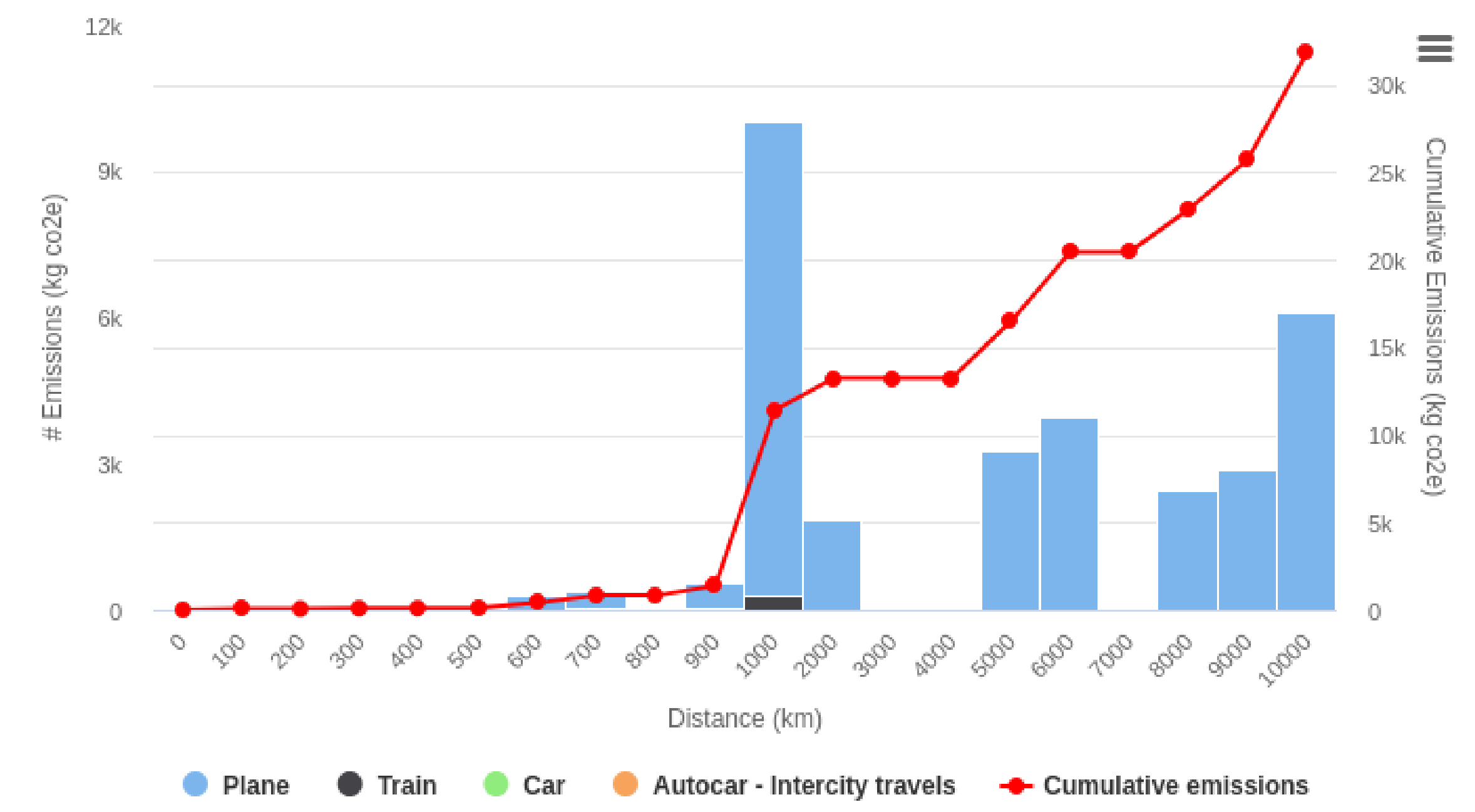
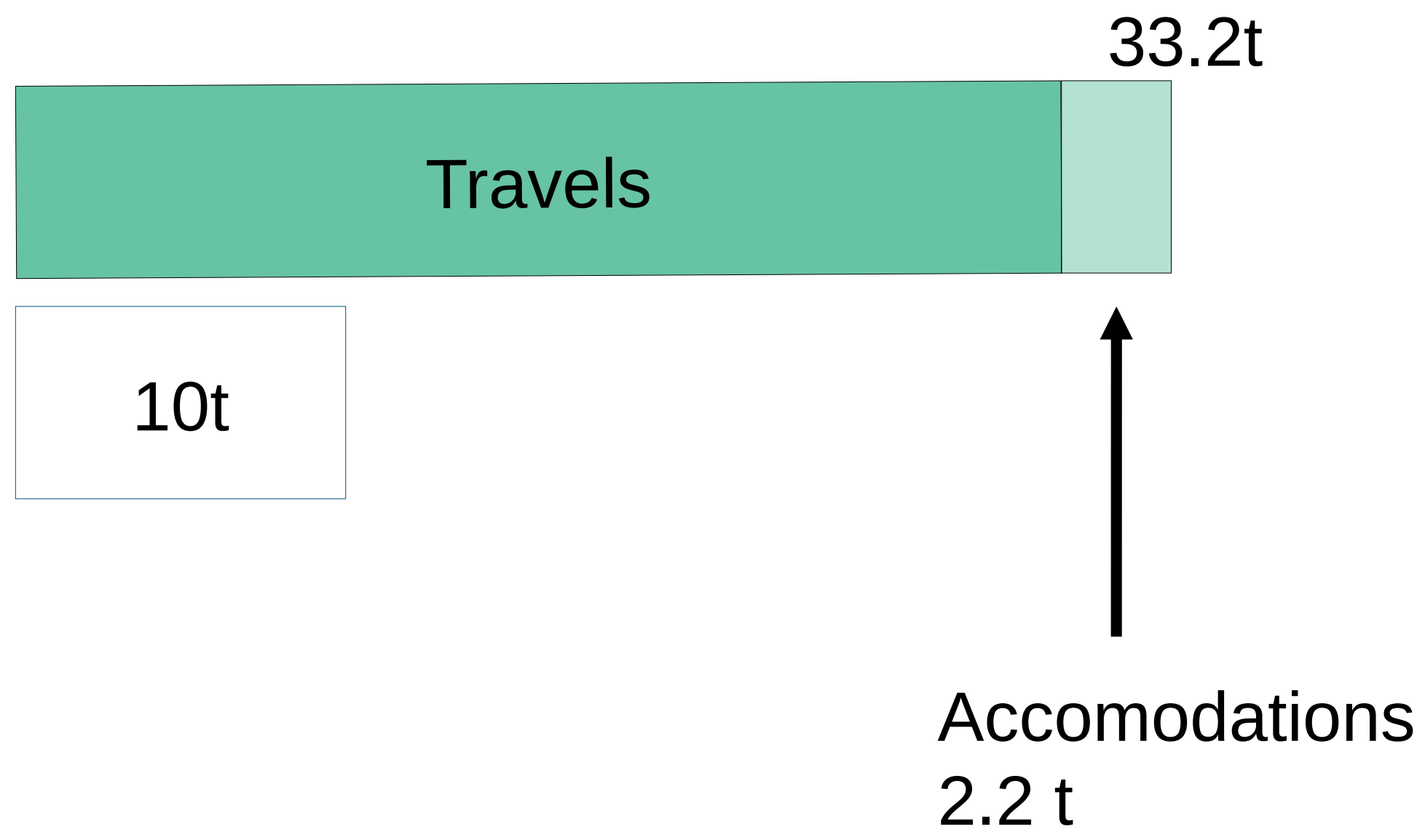


Figure : Emissions for the travel sections of all the transportation modes depending on the travel distance. In red the cumulative sum of the emissions is drawn. In the general case a mission is made of different travel sections.



Green Days 2025



Accommodations

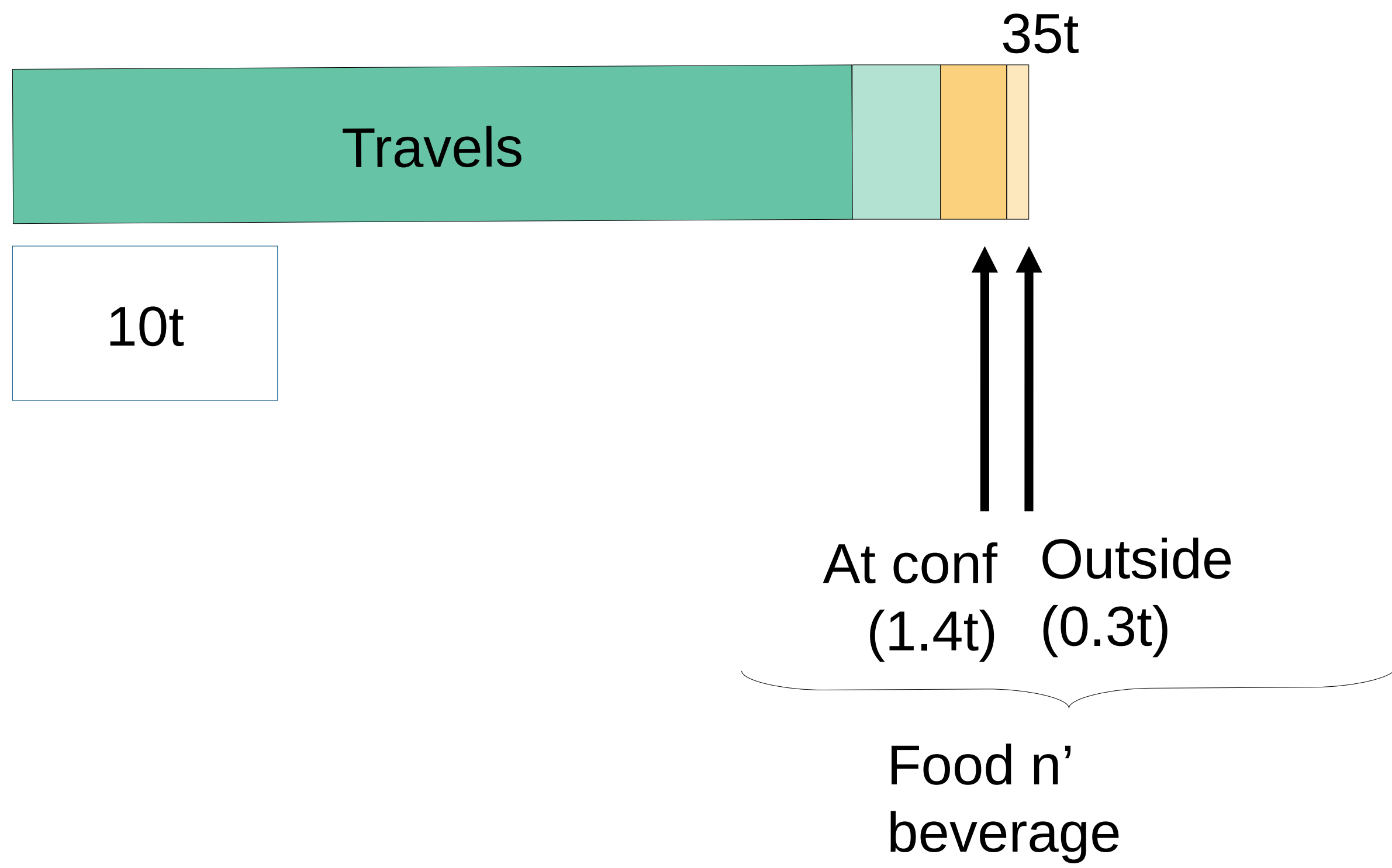
- → Total 217 nights

Emission Factor

- → 10 kgCO₂e / night (France only)



Green Days 2025



Food and beverage

At the conf

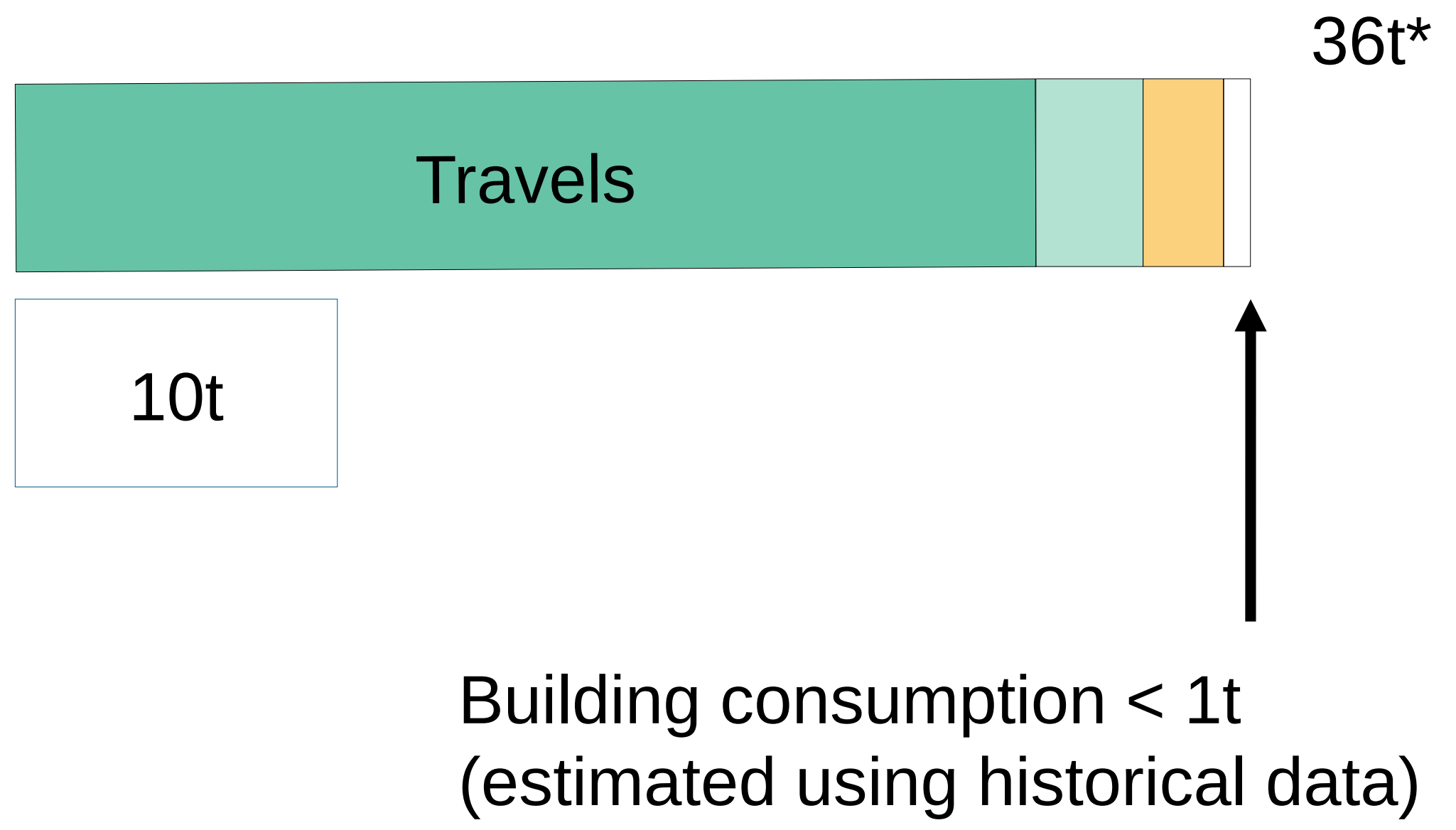
- Includes meals + coffee breaks
- → Meals are 50 % vegetarian

Outside the conf

- → Estimated using the poll answers
- 30 vegetarian meals / 140 other



Green Days 2025

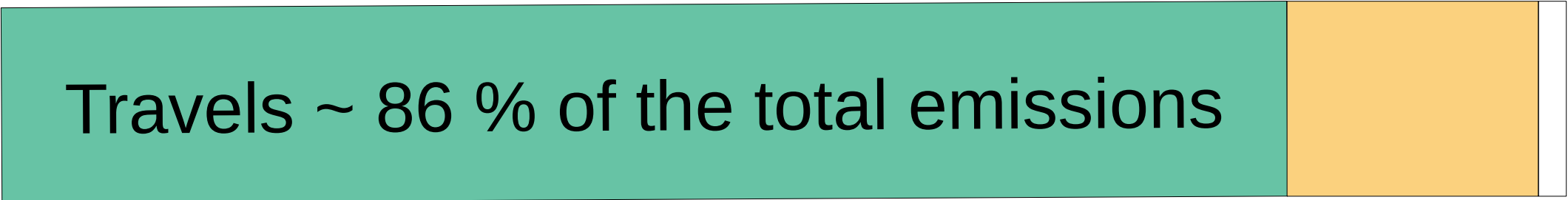


Building consumption

Electricity + gas + water distribution
(known after the conf)

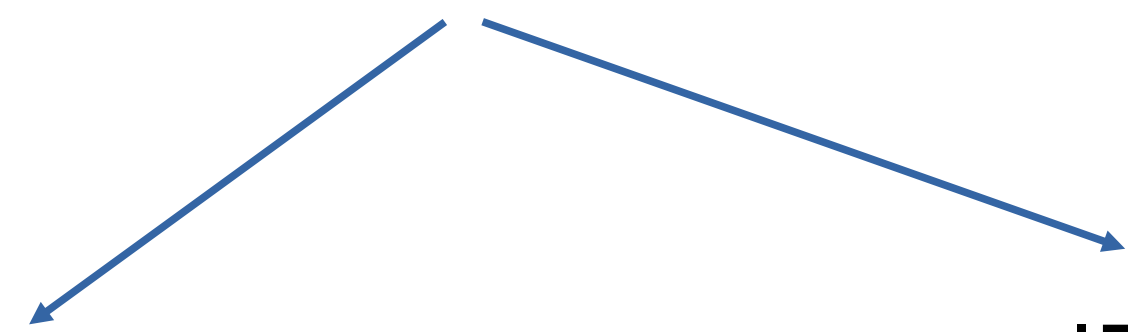


IC2E 2025 : travels + accomodations + food + building



36t

Carbon Intensity : 160 kg/day/person



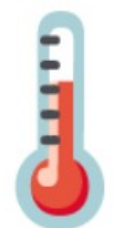
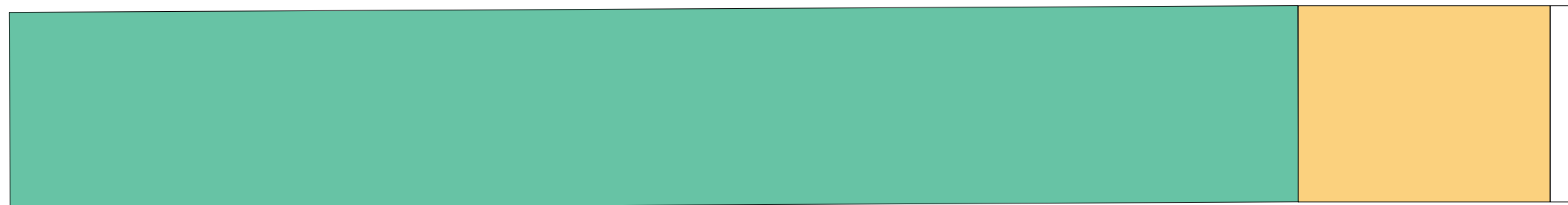
IEEE VR (1200 attendees)
- 420kgCO2e/day/person
Same perimeter

Human on earth
Objective: 2.5 kgCO2e/day
⚠ not the same perimeter (~wider)

Matthieu Simonin
matthieu.simonin@inria.fr



IC2E 2025 : travels + accomodations + food + building



It's urgent to reduce



Everyone, bring this topic to your community
(break the carbon-lock)



Organizers, be creative :

- colocation with other conf
- reduce frequency
- multi-hub locations
- don't organize in an island
- mix the above ...

Matthieu Simonin

matthieu.simonin@inria.fr

Member of Labos1point5 research group