



Bulletin 12

07 March 2022

Dear Nanocar Race II participants,

Less than 3 weeks to go! Expecting you are all preparing well those 24h no-stop drive on Au(111) in the form of a slalom. We have prepared a very minute per minute educative program to be live broadcasted during those 24 h with our TV producer: WebCast service of IN2P3-CNRS and its affiliated private companies. Another private company “Grand Labo” will be in charge of making a 15 min promotional movie of our event available to all after the event.

Please find in annex below the detail timing including a short of the minute per minute script we have constructed indicating the hot spots of our 24 h + the practical details like arrival ceremony, breakfast, lunch and dinner.

You will discover along this timing the repetitive sequence of the “Trajectory” presentations. For practical reasons, we have reduced them to 5 sequences + 2 re-diffusions of the 4th one during the European night time for the other continents. Elise and its team will be in charge of handling your trajectory files. For efficiency, we are preferring that you try to build up yourself you image par image animation movies, for example about 10 experimental images (1h drive) assembled in a 20 s movie may be optimum for example in an mp4 format. The “image per image” Elise team will also be equipped with 2 computers to help you in the construction of those movies, in case. It will be a premiere to be able to almost live broadcast such trajectories and to comment them also live.

We have programmed 4 live debates for educational purpose. Animated by John and Louise, they must help the general public to capture what a molecule machine can do. We have called those about 10 min debates “Punch Line”. Comfortably seated in the TV studio installed inside the “Boule” and organized around 2 teams represented each by one of its members, your representant will have to debate along the proposed selected following themes:

PL1: Do we need legs, paddle or wheels to move on a surface in a controlled way?
Proposition of debators: [H.P. Jacquot de Rouville \(Strasbourg\)](#) and [E. Masson \(Ohio\)](#)

PL2: Do we need a chassis (Technomimetic, nanoarchitectronics)?
Proposition of debators: [G. Rapenne \(Toulouse-Nara\)](#) and [J. Hill \(Tsukuba\)](#)

PL3 : Dipolar moment vs inelastic effect driving?
Proposition: [F. Moresco \(Dresden\)](#) and [N. Lorente \(San Sebastian\)](#) or [David Ecija \(Madrid\)](#)



PL4 : Maxwell demon, automatic or manual driving. Is self or automatic driving possible?
Proposition of debators: [C. Joachim \(Toulouse\)](#) and [Leo Grill \(Rice-Graz\)](#).

Please tell us if you have any other educative debate in mind around molecule-machines.

There will be also pre-recorded nine “3 to 8 min” educative movies for example: “what is an STM?”, “how to design and synthesize a molecule-car?” and so ... which will be broadcasted periodically respecting the different time shift.

The actual internet address of the 24 h live broadcasting is:

https://youtu.be/ofwBAOi01_o

Do not hesitate to contact us for any question, missing information or comments.

See you very soon in Toulouse.

With our best regards to you and your team,



A handwritten signature in black ink, appearing to read 'C. Joachim', with a stylized flourish above the name.

C. Joachim
Nanocar Race II Director



Annex

Nanocar Race II 24-25 march 2022 Practical informations

(Timing subjects to little changes depending on the racing conditions)

23rd March 2022 (Christian: +33 676 73 97 85)

Upon arrival: **Elodie** (Lab reception) and **Jimmy Faria** (JF) will guide you + Badges distribution
13:00 to 14:00: Lunch possible at the CEMES canteen

Along 23 March day: final tests of the connection:

- PC Team remote control: first RJ45 ethernet connection, screens configuration per team (2 screens available per team), HDMI image connection to the HD TV mixing table.
- Portable PC belonging to the team on 2nd RJ45 ethernet per Team: connection test to the lab team.

18:30: Nanocar Race briefing (CEMES main building conference room):

- Safety on the CEMES campus or day & night
- "image per image" rules,
- Presentation of the animators **John Crisp** and **Louise Garrigou**,
- Presentation of the "Trajectory team": **Elise Tuncay**, Jean-Pierre Launay and Xavier Bouju,
- Presentation of the TV teams: "WebCast" and "Grand Labo".
- Alternate sleeping night 24-25 March: beds distribution: where on the campus and controlled by Jimmy?

19:00: free evening, taking a rest in preparation of the 24-25 night

24rd March 2022

Arrival in the "Boule" between 09h00 and 10h00. Re-testing all the connection

10:45: on-Air Public Youtube channel via Dresden University

11:00: Nanocar Race II official presentation

11:10: NanoCar Race II departure for 24 h non-stop

12:15 to 12:45: Elise collecting the first image per image trajectory per team

From 13:00 to 14:00: open lunch at the CEMES canteen (near the Boule)

13:20: A representant of each team is presenting its first hour trajectory (2 min comment

each team) from the TV studio. Elise will have loaded all the trajectories on the TV studio PC

14:00 to 16:00: 4 teams are invited to present their team during 8 to 10 min each

14:40: 1st Live debate between 1 representant of 2 teams (10 min max) from the TV studio

15:00 to 15:30: Elise collecting the second image per image trajectory per team

16:00: A representant of each team is presenting its first 4 hours trajectory (2 min comment

each team) from the TV studio. Elise will have loaded all the trajectory on the TV studio PC



16:40: 2nd Live debate between 1 representant of 2 teams (15 min max) from the TV studio
17:00 to 19:00: The 4 remaining teams are invited to present their team during 8 to 10 min
18:30: 3rd Live debate between 1 representant of 2 teams (10 min max) from the TV studio
19:00 to 19:30: Elise collecting the third image per image trajectory per team.

From 19:30 to 22:00 : Open dinner buffet (New CEMES cafeteria) or outside if weather OK

19:20: 4th Live debate between 1 representant of 2 teams (10 min max) from the TV studio
20:15: A representant of each team is presenting its first 8 hours trajectory (3 min comment each team) from the TV studio. Elise will have loaded all the trajectory on the TV studio PC
22:00 to 22:30: Elise collecting the 4th image per image trajectory per team.

23:00: Starting of the night session

23:10: A representant of each team is presenting its first 11 hours trajectory (3 min comment each team) from the TV studio. Elise will have loaded all the trajectories on the TV studio PC

25th March 2022

01:00: Rediffusing the 23h10 trajectory sequence, live comments by Christian, Louise & John

03:00: Rediffusion of 1st live debate at 14h40 on the 24th March + live comments by Louise

04:00: Rediffusion of 2nd live debate at 16h40 on the 24th March + live comments by Louise

05:00: Rediffusion of 3rd live debate at 18h30 on the 24th March+ live comments by Louise

06:00: Rediffusion of 4th live debate at 19h20 on the 24th March+ live comments by Louise

From 07:00 to 09:00: Breakfast buffet (New CEMES cafeteria) for those present at night

07:00 to 08:00: Elise collecting the 5th image per image trajectory per team.

09:20: A representant of each team is presenting the last 7 hours trajectory (4 min comment each team) from the TV studio. Elise will have loaded all the 8 trajectories on the TV studio PC

From 09:50 to 11:10: no educational activity, team concentration.

11:10: Arrival of Nanocar race II

11:10 to 11:30: Elise collecting the last image per image trajectory per team from 07:00 to 11:10 .

11:40 to 12:00: Trajectory analysis from the Trajectory team. Ranking of Nanocar race II

12:00: announcing the official winner and the ranking

12:05: official trophy ceremony (Front of the "Boule" depending on the weather conditions)

12:15: a special drink (Front of the "Boule" depending on the weather conditions)

From 13:00 to 14:00 lunch at the CEMES cantine

Afternoon: a little nap at your hotel

19:30: Special Dinner at "La cuisine de Jean » restaurant, 5 min walking distance from the CEMES (From Saouzelong Toulouse metro station)

