

Sunday 17 August

Shuttle at train arrival in front of the Marloie Railway station at:

13h16; 14h16; 15h16; 16h16; 17h17; 18h16; 19h14

19:00 Welcome reception

Monday 18 August

8:30 – 9:00 Registration

9:00 – 9:15 Welcome address

Tutorial

9:15 – 9:55 *A whistle-stop tutorial on observational turbulence studies: Background and motivation for a statistical treatment* – K. Kiyani

Session 2: Optimal combination of in-situ and imaging data

Chair: Laura Balmaceda

9:55 – 10:30 Invited: *Combining HI and in situ observations to constrain CME evolution* – C. Möstl

10:30 – 11:00 Coffee break

11:00 – 12:30 Invited: *Processing and Analyzing Images of Coronal Mass Ejections* – T. Howard
Visual Verification of Coronal Mass Ejections in ENLIL Ensemble Simulations through Optical Flow Analysis – A. Bock
The new CORIMP CME catalog & 3D reconstructions – J. Byrne

12:30 – 14:00 Lunch at Le Floreal

Session 2 (continued)

Chair: Luciano Rodriguez

14:00 – 14:40 *Kinematic of CMEs using SECCHI/HI observations* – N. Srivastava
3D morphological reconstruction of CMEs and CME-driven shocks from SECCHI COR and HI1 observations and their link to in-situ measurements – L. Feng

Working Group Session

14:40 – 15:00 Presentation of the Working Groups

15:00 – 16:00 Working group session

16:00 – 16:30 Coffee break

16:30 – 18:00 Poster presentation for Sessions 1, 2, 3

18:00 – 20:00 Demo-session

19:00 – 20:00 A taste of regional beers & Snack.

End of the day

Tuesday 19 August

Tutorial

9:00 – 9:40 *Introduction to supervised learning* – R. D'Ambrosio

Session 4: Tracking of small scale magnetic features and its applications

Chair: Craig DeForest

9:40 – 10:30 Invited *Small-scale magnetic structure at the solar surface* – M. Schüssler

10:30 – 11:00 Coffee break

11:00 – 12:30 Invited *Surface magnetic flux & its evolution* – C. Parnell

Magnetic Feature Tracking and the Small-Scale Solar Dynamo – D. Lamb

Analysis of long-term magnetic flux transport on the solar surface by auto-tracking technique of patches. – Y. Iida

Discussion

12:30 – 14:00 Lunch at Le Floréal

Session 4 (continued)

Chair: Yusuke Iida

14:00 – 15:00 *Calculating solar differential rotation by automatic tracking of CBPs with hybrid PSO-Snake algorithm* – E. Shahamatnia

Can flux cancellation build-up magnetic flux ropes? – S. Yardley,

Continuous Solar Magnetic Carpet – A. Gorobets

15:00 – 15:30 Coffee break

15:30 – 16:30 Poster presentation for Sessions 4, 5, and extra-session posters

Micro-workshop session

16:30 – 19:00 Micro-workshop

End of the day

Wednesday 20 August

Session 3: How well can we predict solar eruptions and disturbances?

Chair: Marie Dominique

9:00 – 10:30 Invited: *The Physics Behind Flare Prediction and Present Methods for Flare Forecasting* – G. Barnes

Invited: *Machine Learning for Solar Flare Prediction* – R. D'Ambrosio

10:30 – 11:00 Coffee break

11:00 – 12:30 *Automated Detection of δ -spots.* – S. Padinhatteeri

Image patch analysis and clustering of sunspots: A dimensionality reduction approach – K. Moon

Systematic measurements of global variations in the coronal magnetic field using "EIT waves" – D. Long

Solar Demon - Detecting Flares, Dimmings and EUV waves on SDO/AIA images – E. Kraaikamp

Discussion

12:30 – 14:00 Lunch at Le Floréal

Session 5: Origin of variability and prediction of solar wind

Chair: Thierry Dudok de Wit

14:00 – 15:00 Invited *A multi-scale approach to the analysis of anisotropic plasma turbulence (or studying turbulence wearing wavelet spectacles)* – K. Kiyani

A multifractal analysis of air temperature signals based on the wavelet leaders method – A. Delière

15:00 – 15:30 Coffee break

Working Group Session

15:30 – 17:30 Working group session

18:00 (**Sharp!**) Departure for Bastogne (stop at Panoramic view in Nadrin and at Mardasson in Bastogne)

19:30 Conference dinner

Return to La Roche around 23:30

Thursday 21 August

Session 1 Power laws in solar physics: observations and proper estimation

Chair: Jack Ireland

9:00 – 10:30 Invited: *On Power-law Distributions of Observed Solar Features* – C. Parnell

Invited: *Bayesian Analysis of Power Law Models in High-Energy Astrophysics and in Solar Physics* – D. van Dyk

10:30 – 11:00 Coffee break

Session 5 Origin of variability and prediction of solar wind

Chair: Craig De Forest

11:00 – 11:45 Invited: *Turbulence, nonlinear dynamics, and sources of intermittency and variability in the solar wind* – W. Matthaeus

Future SIP Challenges

Chair: Alex Young

11:45 – 12:30 Invited: *Imaging Techniques for High-Resolution and Instantaneous Observations of the Solar Corona* – F. Kamalabadi

12:30 – 14:00 Lunch at Le Floréal

14:00-15:00 Report from the Working groups

Panel discussion

15:00 – 15:15 *Big Data, Big Challenges, and Big Ideas in 21st Century Astrostatistics* – David Van Dyk

15:15 – 17:00 Panel discussion on SIP challenges

End of the workshop

17:00 - 19:30 Social activities

19:30 BBQ (organized by Le Floréal)

Friday 22 August

Shuttle in front of Le Floreal at La Roche at:

07h45; 08h45; 09h45; 10h45; 11h45

The journey from the railway station of Marloie to the Floreal at La Roche-en-Ardenne is about 40 minutes.