Workshop on Motivic integration, orbital integrals and zeta-functions.
Tentative schedule.

Generalities
Breakfast (buffet): 7.00-9.30 (Note that on some days talks start earlier than 9:30)
Lunch (buffet): 11.30-13.30
Dinner (buffet): 17.30-19.30

Sunday
16:00 Check-in begins (Front Desk Professional Development Centre - open 24 hours)
17:30-19:30 Buffet Dinner
20:00 Informal gathering (common to both workshops) in the 2nd floor lounge, Corbett Hall. Beverages and small assortment of snacks are available on a cash honor system.

In the schedule below, the left column in our schedule, the right column is the tentative (possibly subject to change) schedule of the "Families of automorphic forms and the trace formula" workshop, for reference.

Monday

9:00-9:15 introduction and practical information (BIRS staff)	Introduction and practical info.
9.30-10.30 Loeser, 'The many incarnations of Milnor fibers'	9.30-10.30 Lapid
10:30-11:00 Coffee break	coffee break
11-12:00 Casselman, 'Igusa integrals and orbital integrals for the real prime'	11-11:45 Pfaff

12:00-1pm: Lunch

1-2 pm: Guided Tour of The Banff Centre; meet in the 2nd floor lounge, Corbett Hall

2:00-3:00 Gourevitch, Introduction to Nash spaces. (specific title TBA)	2-2:15 group photo, 2:15-3pm Lipnowski
3:00-3:30 coffee break	coffee break
3:30-4:25 Introduction to Bernstein polynomials	3:30-4:15 Kim
4:40-5:30 Discussion	4:30-5:30 Miller

Tuesday
Common talks:
9:30-10:30 Finis
coffee break
11:00-12:00 Wen-Wei Li

12:00-1:30 **Lunch**

1:45-2:45 Matz	Matz (common talk)
2:45-3:15 Coffee break	coffee break
3:15-4:15 Arc spaces; Introduction to motivic integration (Gordon)	3:30-4:15 Andrade
break	break
4:30-5:30 Sakellaridis, Speculative discussion of the future of orbital integrals	4:30-5:15 Entin

Wednesday

9:00-10:00 Tsai, Hyperelliptic curves in p-adic orbital integral	Young
coffee break	coffee break
10:15-11:15 Hales	10:15-11:00 Kala

Lunch; Free afternoon.

Thursday

9:15-10:15 Nicaise, (on vanishing cycles?)	Shankar
10:15-10:45 Coffee break	coffee break
10:45-11:45 Takloo-Bighash	Rubinstein
11:45 Group photo	

lunch

1:30-2:30 Raibaut (motivic wavefront set?)	1:30-2:15 Asgari
Coffee break	coffee break
3:00-3:45 Bouthier, Hitchin-Frenkel-Ngo fibration and its intersection complex.	Lee
4-5pm TBA	Knightly

Friday
Discussion sessions in both workshops ending by 11:30am.
Lunch.

Some abstracts.

Cheng-Chiang Tsai. *Hyperelliptic curves in p-adic orbital integral*

We show how certain p-adic orbitals (which may be used to determine Shalika germs) give numbers of rational points on varieties over the residue field related to hyperelliptic curves, generalizing previous result of T. Hales. This is done by comparing with varieties that Xiaoheng Wang constructed for the study of arithmetic statistics of hyperelliptic curves. If time permits, we will talk about some ideas to suggest that hyperelliptic curves might be all we get for classical groups.

Yiannis Sakellaridis, *Speculative discussion of the future of orbital integrals.*

Following the completion of the program of endoscopy, do we need to keep studying orbital integrals in the context of the Langlands program?

There is no definite answer, but there are several indications that we should. In this talk, I will try to explain:

1) the RTF-theoretic nature of problems in the relative Langlands program, such as the Gross-Prasad conjecture (where RTF stands for "relative trace formula");

2) non-standard attempts to analyze and compare spaces of orbital integrals in the context of "beyond endoscopy";

3) the need to incorporate singular spaces into the theory, where even the appropriate notion of "Schwartz functions" is still unknown.