

# The Second Santa Rita School for Single Particle Cryo-EM

24 August – 5 September 2006  
Programme

Wednesday 23<sup>rd</sup> of August

Early Arrivals

Thursday 24<sup>th</sup> of August

11:00 – 13:00	Attivals / Software Installation
13:00 – 14:00	Lunch
14:00 – 18:00	Arrivals/ Software Installation
18:00 – 20:00	Official Opening
20:00 – 22:00	Welcome Cocktail and Dinner

Friday 25<sup>th</sup> of August

07:00 – 09:00	Breakfast
09:00 – 10:30	Morning lectures: <ul style="list-style-type: none"><li>- Good Morning</li><li>- Available hardware / Network</li><li>- Introduction in IMAGIC</li><li>- Working in Linux / MS-Windows</li><li>- Introducing the Data Sets</li></ul>
10:30 – 11:00	Coffee break
11:00 – 13:00	Hands-on: Getting started/ Installation of data sets, Single Particles in IMAGIC
13:00 – 14:00	Lunch
14:00 – 17:00	Open afternoon
17:00 – 18:00	Hands-on: Getting started/ Installation of data sets, Playing with IMAGIC
18:00 – 19:45	Evening Lectures: <ul style="list-style-type: none"><li>Specimen preparation/EM</li><li>Manual/automatic particle selection</li></ul>
19:45 – 20:00	Feedback discussion
20:30 – 22:00	Dinner

## Saturday 26<sup>th</sup> of August

07:00 – 09:00

Breakfast

09:00 – 10:30

Morning lectures:

- The Fourier transform in 1D / 2D / 3D
- Fourier Optics/Phase contrast theory (CTF)
- How good are my micrographs anyway

10:30 – 11:00

Coffee break

11:00 – 13:00

Hands-on:

- Playing with Fourier Transforms
- Manual/Automatic Particle selection

13:00 – 14:00

Lunch

14:00 – 17:00

Open afternoon

17:00 – 19:00

Hands-on:

- Power Spectra
- CTF correction

19:00 – 20:00

Evening Lectures:

- Pre-treatment of the input images
- Alignment

20:00 – 20:15

Feedback discussion

20:30 – 22:00

Dinner

## Sunday 27<sup>th</sup> of August

07:00 – 09:00

Breakfast

09:00 – 10:30

Morning lectures:

- Cross Correlation Functions
- MSA classification

10:30 – 11:00

Coffee break

11:00 – 13:00

Hands-on:

- Pre-treatment of the input images
- Reference free alignment
- Multi-reference alignment

13:00 – 14:00

Lunch

14:00 – 17:00

Open afternoon

17:00 – 19:00

Hands-on:

- Conclusion of this mornings Hands-on
- CTF correction

19:00 – 19:45

Evening Lecture:

- To be announced

19:45 – 20:00

Feedback discussion

20:30 – 22:00

Dinner

## Monday 28<sup>th</sup> of August

07:00 – 09:00	Breakfast
09:00 – 18:00	Leisure day Programme in Brotas
19:00 – 22:00	Churasco

## Tuesday 29<sup>th</sup> of August

07:00 – 09:00	Breakfast
09:00 – 10:30	Morning lectures: - MSA revisited - Angular reconstitution theory - Starting up a C1 structure
10:30 – 11:00	Coffee break
11:00 – 13:00	Hands-on: catch up session
13:00 – 14:00	Lunch
14:00 – 17:00	Open afternoon
17:00 – 18:00	Hands-on: Angular reconstitution
18:00 – 19:45	Evening Lectures: - Students lectures
19:45 – 20:00	Feedback discussion
20:30 – 22:00	Dinner

## Wednesday 30<sup>th</sup> of August

07:00 – 09:00	Breakfast
09:00 – 10:30	Morning lectures: - 3D reconstruction theory - Projection matching, refinements - Automatic Masking
10:30 – 11:00	Coffee break
11:00 – 13:00	Hands-on: Angular reconstitution
13:00 – 14:00	Lunch
14:00 – 17:00	Open afternoon
17:00 – 18:00	Hands-on: catch up session
18:00 – 19:45	Evening Lectures: - Pointgroup Symmetry - Student lectures
19:45 – 20:00	Feedback discussion
20:30 – 22:00	Dinner



## Thursday 31<sup>st</sup> of August

07:00 – 09:00	Breakfast
09:00 – 10:30	Morning lectures: - MSA revisited - Fourier shell correlation (FSC)
10:30 – 11:00	Coffee break
11:00 – 13:00	Hands-on: Solve your Structure
13:00 – 14:00	Lunch
14:00 – 17:00	Open afternoon
17:00 – 18:00	Hands-on: Fourier shell correlation (FSC)
18:00 – 19:45	Evening Lectures: - IMAGIC and MPI parallel processing - Students' lectures
19:45 – 20:00	Feedback discussion
20:30 – 22:00	Dinner

## Friday 1<sup>st</sup> of September

07:00 – 09:00	Breakfast
09:00 – 10:30	Morning lectures: - Automatic Masking - Fitting X-ray structures
10:30 – 11:00	Coffee break
11:00 – 13:00	Hands-on: Solve your Structure
13:00 – 14:00	Lunch
14:00 – 16:00	Open afternoon
16:00 – 17:00	Hands-on: Fitting with Situs
17:00 – 20:00	Special Guests Lectures
20:30 – 22:00	Dinner

## Saturday 2<sup>nd</sup> of September

07:00 – 09:00	Breakfast
09:00 – 18:00	Leisure Programme - TBA
19:00 – 22:00	Churasco

## Sunday 3<sup>rd</sup> of September

07:00 – 09:00	Breakfast
09:00 – 10:30	Morning lectures: -4D: Refining to two simultaneous 3D structures - Correlation functions revisited
10:30 – 11:00	Coffee break
11:00 – 13:00	Hands-on: Solve your Structure
13:00 – 14:00	Lunch
14:00 – 17:00	Open afternoon
17:00 – 18:00	Hands-on: Solve your Structure
18:00 – 19:45	Evening Lectures: - Student lectures
19:45 – 20:00	Feedback discussion
20:30 – 22:00	Dinner

## Monday 4<sup>th</sup> of September

07:00 – 09:00	Breakfast
09:00 – 10:30	Morning lectures: - High resolution discussion - New developments in IMAGIC - Solvent flattening
10:30 – 11:00	Coffee break
11:00 – 13:00	Hands-on: Solve your Structure
13:00 – 14:00	Lunch
14:00 – 17:00	Open afternoon
17:00 – 18:00	Hands-on: Solve your Structure
18:00 – 19:45	Evening Lectures: - Random conical tilt discussion - Visualisation programs discussion - Student lectures
19:45 – 20:00	Feedback discussion
20:30 – 22:00	Dinner



**Tuesday 5<sup>th</sup> of September**

**07:00 – 09:00**

**Breakfast**

**10:00 – 12:00**

**Last Hands-on and discussion**

**13:00 – 14:00**

**Lunch and Goodbye / Departures**

**Wednesday 6<sup>th</sup> of September**

**Late Departures**