

# **TOOLS 2010 - Tools for SUSY and the New Physics, Sharpening our Tools**

**Tuesday 29 June 2010 - Friday 02 July 2010**

**University of Southampton  
Programme**

## Tuesday 29 June 2010

**Registration - Lecture Theatre (09:00-09:45)**

**Coffee - Lattes Restaurant (09:45-10:15)**

**Welcome - Lecture Theatre (29 June 10:15-10:30)**

**A. Djouadi: The physics of EWSB - Lecture Theatre (29 June 10:30-11:30)**

- Conveners: Prof. Moretti, Stefano

time title presenter

|       |                              |                   |
|-------|------------------------------|-------------------|
| 10:30 | The Physics of EWSB (01h00') | DJOUADI, Abdelhak |
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**S. Sekmen: MC requirements for the CMS experiment - Lecture Theatre (29 June 11:30-12:30)**

- Conveners: Prof. Moretti, Stefano

time title presenter

|       |   |               |
|-------|---|---------------|
| 11:30 | MC requirements for the CMS experiment (01h00') | SEKMEN, Sezen |
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**Lunch - Lattes Restaurant (12:30-14:00)**

**R. Pittau: Recent developments and results in theoretical, perturbative QCD - Lecture Theatre (29 June 14:00-15:00)**

- Conveners: Boudjema, Fawzi

time title presenter

|       |   |                 |
|-------|---|-----------------|
| 14:00 | Recent developments and results in theoretical, perturbative QCD (01h00') | PITTAU, Roberto |
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**A. Larkoski: On-shell methods for  $t\bar{t}$  + jets with polarization - Lecture Theatre (29 June 15:00-15:30)**

- Conveners: Boudjema, Fawzi

time title presenter

|       |   |                  |
|-------|---|------------------|
| 15:00 | On-shell methods for $t\bar{t}$ + jets with polarization (00h30') | LARKOSKI, Andrew |
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**S. Majhi: HERWIRI - Lecture Theatre (29 June 15:30-16:00)**

- Conveners: Boudjema, Fawzi

time title presenter

|       |                  |                   |
|-------|------------------|-------------------|
| 15:30 | HERWIRI (00h30') | MAJHI, Swapan, K. |
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**Coffee - Lattes Restaurant (16:00-16:30)**

**N. Spooner: Update on Direct Searches for WIMP Dark Matter - Lecture Theatre (29 June 16:30-17:30)**

- Conveners: Boudjema, Fawzi

time title presenter

|       |   |               |
|-------|---|---------------|
| 16:30 | Update on Direct Searches for WIMP Dark Matter (01h00') | SPOONER, Neil |
|-------|---|---------------|

**R. Corke : PYTHIA 8 Tutorial - Lecture Theatre (29 June 17:30-18:30)****- Conveners: Boudjema, Fawzi**

time title

presenter

|       |                            |                |
|-------|----------------------------|----------------|
| 17:30 | PYTHIA 8 Tutorial (01h00') | CORKE, Richard |
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**Welcome Cocktail - Lattes Restaurant (18:30-19:30)**

## Wednesday 30 June 2010

### **N. Baro: Automatized full one-loop renormalization of the MSSM - Lecture Theatre (30 June**

**09:00-09:30)**

- Conveners: Belyaev, Alexander

| time  | title  | presenter  |
|-------|--|------------|
| 09:00 | Automatized full one-loop renormalization of the MSSM (00h30') | BARO, Nans |

### **M. T. Frandsen: MWT@LHC: implementations and collider studies of MWT using MC - Lecture Theatre (30 June 09:30-10:00)**

- Conveners: Belyaev, Alexander

| time  | title  | presenter            |
|-------|--|----------------------|
| 09:30 | MWT@LHC: implementations and collider studies of MWT using MC (00h30') | FRANSEN, Mads Toudal |

### **M. Sampaio: CHARYBDIS2: Modelling higher dimensional black hole events - Lecture Theatre (30 June 10:00-10:30)**

- Conveners: Belyaev, Alexander

| time  | title   | presenter      |
|-------|---|----------------|
| 10:00 | CHARYBDIS2: Modelling higher dimensional black hole events (00h30') | SAMPAIO, Marco |

### **K. Williams: HiggsBounds: Using results from the Higgs searches at LEP and the Tevatron to constrain extensions of the Standard Model - Lecture Theatre (30 June 10:30-11:00)**

- Conveners: Belyaev, Alexander

| time  | title   | presenter        |
|-------|---|------------------|
| 10:30 | HiggsBounds: Using results from the Higgs searches at LEP and the Tevatron to constrain extensions of the Standard Model (00h30') | WILLIAMS, Karina |

### **Coffee - Lattes Restaurant (11:00-11:30)**

### **C. Duhr: Feynrules Tutorial - Lecture Theatre (30 June 11:30-12:30)**

- Conveners: Belyaev, Alexander

| time  | title                       | presenter    |
|-------|-----------------------------|--------------|
| 11:30 | Feynrules Tutorial (01h00') | DUHR, Claude |

### **Lunch - Lattes Restaurant (12:30-14:00)**

### **A. Semenov: Automatic generation of Feynman rules with LanHEP - Lecture Theatre (30 June 14:00-14:30)**

- Conveners: Accomando, Elena

| time  | title  | presenter       |
|-------|--|-----------------|
| 14:00 | Automatic generation of Feynman rules with LanHEP (00h30') | SEMENOV, Andrey |

**T. Hahn: FeynArts Tutorial - Lecture Theatre (30 June 14:30-15:30)**

- Conveners: Accomando, Elena

time title presenter

|       |                            |              |
|-------|----------------------------|--------------|
| 14:30 | FeynArts Tutorial (01h00') | HAHN, Thomas |
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**N. Christensen: Status of CalcHEP - Lecture Theatre (30 June 15:30-16:00)**

- Conveners: Accomando, Elena

time title presenter

|       |                            |                   |
|-------|----------------------------|-------------------|
| 15:30 | Status of CalcHEP (00h30') | CHRISTENSEN, Neil |
|-------|----------------------------|-------------------|

**Coffee - Lattes Restaurant (16:00-16:30)****C. Speckner: Status of the WHIZARD package - Lecture Theatre (30 June 16:30-17:00)**

time title presenter

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|-------|--|---------------------|
| 16:30 | Status of the WHIZARD package (00h30') | SPECKNER, Christian |
|-------|--|---------------------|

**O. Mattelaer: Status of Madgraph5 - Lecture Theatre (30 June 17:00-17:30)**

- Conveners: Accomando, Elena

time title presenter

|       |                              |                    |
|-------|------------------------------|--------------------|
| 17:00 | Status of Madgraph5 (00h30') | MATTELAER, Olivier |
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**P. Richardson: MC Review - Lecture Theatre (30 June 17:30-18:30)**

- Conveners: Accomando, Elena

time title presenter

|       |                    |                       |
|-------|--------------------|-----------------------|
| 17:30 | MC Review (01h00') | Dr. RICHARDSON, Peter |
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**A. Belyaev: Discussion Leader of the Collider Round-table - Lecture Theatre (30 June 18:30-19:30)**

## Thursday 01 July 2010

### **J. Ellis: Overview of supersymmetric dark matter - Lecture Theatre (01 July 09:00-10:00)**

- Conveners: Litim, Daniel

| time  | title   | presenter   |
|-------|---|-------------|
| 09:00 | Overview of supersymmetric dark matter (01h00') | ELLIS, John |

### **A. Morselli: Indirect detection of dark matter, current status and recent results - Lecture Theatre (01 July 10:00-11:00)**

- Conveners: Litim, Daniel

| time  | title   | presenter      |
|-------|---|----------------|
| 10:00 | Indirect detection of dark matter, current status and recent results (01h00') | MORSELLI, Aldo |

### **Coffee - Lattes Restaurant (11:00-11:30)**

### **G. Belanger: MicroOmegas Tutorial - Lecture Theatre (01 July 11:30-12:30)**

- Conveners: Litim, Daniel

| time  | title                         | presenter           |
|-------|-------------------------------|---------------------|
| 11:30 | MicroOmegas Tutorial (01h00') | BELANGER, Genevieve |

### **Lunch - Lattes Restaurant (12:30-14:00)**

### **G. Hiller: Flavor physics phenomenology - Lecture Theatre (01 July 14:00-15:00)**

- Conveners: Belanger, Genevieve

| time  | title                                 | presenter      |
|-------|---------------------------------------|----------------|
| 14:00 | Flavor physics phenomenology (01h00') | HILLER, Gudrun |

### **N. Mahmoudi: Status of SuperIso and SuperIso Relic - Lecture Theatre (01 July 15:00-15:30)**

- Conveners: Belanger, Genevieve

| time  | title  | presenter        |
|-------|--|------------------|
| 15:00 | Status of SuperIso and SuperIso Relic (00h30') | MAHMOUDI, Nazila |

### **Coffee - Lattes Restaurant (15:30-16:00)**

### **L. Barzè: Looking for Dark Matter at Leptonic Colliders - Lecture Theatre (01 July 16:00-16:30)**

- Conveners: Belanger, Genevieve

| time  | title  | presenter   |
|-------|--|-------------|
| 16:00 | Looking for Dark Matter at Leptonic Colliders (00h30') | BARZÈ, Luca |

### **S. West: Discussion Leader of the Dark Matter Round-Table - Lecture Theatre (01 July 16:30-17:30)**

### **Workshop Dinner - (19:00-22:00)**

## Friday 02 July 2010

### **A. Renaud: SFitter - Lecture Theatre (02 July 09:00-09:30)**

- Conveners: Shepherd-Themistocleous, Claire

time title presenter

|       |                  |                |
|-------|------------------|----------------|
| 09:00 | SFitter (00h30') | RENAUD, Adrien |
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### **B. O'Leary: Incorporating Event Rates Into MSSM Parameter Determinations - Lecture Theatre (02 July 09:30-10:00)**

- Conveners: Shepherd-Themistocleous, Claire

time title presenter

|       |   |              |
|-------|---|--------------|
| 09:30 | Incorporating Event Rates Into MSSM Parameter Determinations (00h30') | O'LEARY, Ben |
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### **F. Staub: SARAH Package - Lecture Theatre (02 July 10:00-10:30)**

- Conveners: Shepherd-Themistocleous, Claire

time title presenter

|       |                        |                |
|-------|------------------------|----------------|
| 10:00 | SARAH Package (00h30') | STAUB, Florian |
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### **Y. Akrami: Genetic Algorithms: New Tools to Explore Supersymmetric Parameter Spaces - Lecture Theatre (02 July 10:30-11:00)**

- Conveners: Shepherd-Themistocleous, Claire

time title presenter

|       |   |                |
|-------|---|----------------|
| 10:30 | Genetic Algorithms: New Tools to Explore Supersymmetric Parameter Spaces (00h30') | AKRAMI, yashar |
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### **Coffee - Lattes Restaurant (11:00-11:30)**

### **J. Rathsman: 2HDMC - Lecture Theatre (02 July 11:30-12:00)**

- Conveners: Shepherd-Themistocleous, Claire

time title presenter

|       |                |                 |
|-------|----------------|-----------------|
| 11:30 | 2HDMC (00h30') | RATHSMAN, Johan |
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### **W. Frisch: HFOLD a program package for calculationg MSSM two-body Higgs decays at full one-loop level - Lecture Theatre (02 July 12:00-12:30)**

- Conveners: Shepherd-Themistocleous, Claire

time title presenter

|       |   |                  |
|-------|---|------------------|
| 12:00 | HFOLD a program package for calculationg MSSM two-body Higgs decays at full one-loop level (00h30') | FRISCH, Wolfgang |
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### **F. Boudjema: Summary - Lecture Theatre (02 July 12:30-13:00)**

#### Summary

- Conveners: Shepherd-Themistocleous, Claire

| time  | title            | presenter       |
|-------|------------------|-----------------|
| 12:30 | Summary (00h30') | BOUDJEMA, Fawzi |