

# KRUGER 2012

## International Workshop on Discovery Physics at the LHC Program

### Sunday, 2 December

**19h00** Welcome Function on the banks of the Sabie River with Shangaan dancers and choir

### Monday, 3 December

#### Morning: Plenary Sessions

**Chairman: Jean Cleymans (Cape Town, South Africa)**

09h45-10h00	Zebulon Vilakazi (iThemba LABS, South Africa): <b>Welcome</b>
10h00-10h45	Gian Francesco Giudice (CERN): <i>Lessons from LHC8</i>
10h45-11h30	Mike Lamont (CERN): <i>LHC Status</i>
<b>11h30-12h00 Morning Tea</b>	
12h00-12h45	Rachid Mazini (Taiwan): <i>Standard Model Higgs Searches in ATLAS</i>
12h45-13h30	Mayda Velasco (Chicago, USA): <i>Search for the Standard Model Higgs with the CMS detector</i>

#### 13H30-14H30 LUNCH

#### Parallel Session I: BSM, Exotics

**Chairman: Trevor Vickey (Wits, South Africa)**

14h30-15h00	Christophe Royon (Saclay, France): <i>Probing extra-dimensions at the LHC using quartic photon W and photon Z anomalous couplings</i>
15h00-15h30	Rocky So (Vancouver, Canada): <i>Searches for Higgs and dark photons at BABAR</i>

#### 15h30-16h00 Afternoon Tea

16h00-16h30	Antonio Branca (Padova, Italy): <i>Search for the Neutral Supersymmetric Higgs Boson at CMS</i>
16h30-17h00	Arnaud Ferrari (Uppsala, Sweden): <i>Searches for neutral and charged Higgs bosons in the ATLAS experiment as a test of physics BSM</i>

#### Parallel Session II: Heavy Ion Collisions

**Chairman: Andre Peshier (Cape Town)**

14h30-15h00	Nicole Alice Martin (GSI, Germany): <i>(Anti-)matter and hyper-matter production at the LHC with ALICE</i>
15h00-15h30	Mikolaj Krzewicki (CERN) : <i>Flow with ALICE</i>

#### 15h30-16h00 Afternoon Tea

16h00-16h30	Roberto Preghenella (Bologna, Italy): <i>Light-flavour identified charged hadron production in pp and Pb-Pb collisions at the LHC.</i>
16h30-17h00	Jesus Guillermo Contreras (Mexico) : <i>J/Psi Production in the ALICE detector</i>

#### Parallel Session III: Theory

**Chairman: Alan Cornell (Wits, South Africa)**

14h30-15h00	Elena Bratkovskaya (Frankfurt, Germany): <i>QGP dynamics in relativistic heavy ion collisions</i>
15h00-15h30	Will Horowitz (Cape Town, South Africa): <i>Is it Hard yet? The qualitative agreement of pQCD Energy Loss with RHIC and LHC Data.</i>

#### 15h30-16h00 Afternoon Tea

16h00-16h30	Joerg Aichelin (Nantes, France): <i>Tomography of the QGP using open charm and bottom mesons</i>
16h30-17h00	Ludwik Turko (Wroclaw, Poland) <i>An effective model description of QCD thermodynamics</i>

#### Afternoon Plenary Session

**Chairman: Jean Cleymans (Cape Town, South Africa)**

17h00-17h45	Helmut Satz (Bielefeld, Germany): <i>The Deconfinement of Charm and Beauty</i>
<b>18h30 Dinner</b>	

## Tuesday, 4 December

### Morning: Plenary Sessions

**Chairman: Zebulon Vilakazi (iThemba LABS, South Africa)**

09h15-10h00	Eilam Gross (Tel Aviv, Israel) : <i>Statistics for Higgs Search and Discovery</i>
10h00-10h45	Yiota Foka (GSI, Germany): <i>Review of ALICE Results</i>
10h45-11h30	Eugeni Grauges Pous (Barcelona, Spain): <i>Testing the Standard Model with rare decays at the LHCb</i>

### 11h30-12h00 Morning Tea

12h00-12h45	Sahal Yacoob (Durban, South Africa): <i>Review of Results from the Tevatron</i>
12h45-13h30	Domenica Elia (Bari, Italy): <i>Strangeness in ALICE</i>

### 13H30-14H30 LUNCH

### Afternoon: Parallel Session IV : BSM, SUSY, Exotics

**Chairman: Sahal Yacoob (Durban, South Africa)**

14h30-15h00	Simon Viel (Vancouver, Canada): <i>Search for Exotics Heavy resonances with the ATLAS detector</i>
15h00-15h30	Kai Yi (Iowa, USA): <i>Search for Single and Pair Production of Dijet Resonances with the CMS Detector</i>

### 15h30-16h00 Afternoon Tea

16h00-16h30	Flavia Dias (Sao Paulo, Brazil): <i>Search for Exotic Resonances in Diboson Final States with the CMS Detector</i>
16h30-17h00	Ruth Poettgen (Mainz, Germany): <i>Searches for Physics beyond the Standard Model in Monojets and Monophotons events with the ATLAS detector</i>

### Afternoon: Parallel Session V: Quarkonia

**Chairman: Grazyna Odyniec (Berkeley, USA)**

14h30-15h00	Chris Powell (LBNL, UCT): <i>Quarkonium Production at STAR</i>
15h00-15h30	Jesus Guillermo Contreras (Mexico): <i>J/Psi Production in the ALICE detector</i>

### 15h30-16h00 Afternoon Tea

16h00-16h30	Tomas Jakoubek (Prague): <i>Production of beauty and quarkonia in ATLAS</i>
16h30-17h00	Fabrizio Palla (Pisa, Italy): <i>Latest Results for the D0-mu mu and Bs -&gt; mu mu decays from CMS</i>

### Afternoon: Parallel Session VI: Standard Model Higgs

**Chairman: Arnaud Ferarri (Uppsala, Sweden)**

14h30-15h00	Leonardo di Matteo (Milano-Bicocca, Italy): <i>Search for Higgs decaying to WW at CMS</i>
15h00-15h30	Ada Farilla (Rome, Italy): <i>Search for the Standard Model Higgs Boson in the H to bb and tautau decay modes with the ATLAS detector</i>

### 15h30-16h00 Afternoon Tea

16h00-16h30	German David Carillo Montoya (Wits, South Africa): <i>Search for the Standard Model Higgs Boson in the H to WW and ZZ decay modes with the ATLAS Detector.</i>
16h30-17h00	Jonathan Hays (London, UK): <i>Property measurements of the Higgs-like Boson from CMS</i>

### Afternoon Plenary Session

**Chairman: Helmut Oeschler (Darmstadt, Germany)**

17h00-17h45	Grazyna Odyniec (Berkeley, USA): <i>Beam Energy Scan (BES) at STAR</i>
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### 18h30 Dinner

### Evening After Dinner Session on Education

20h30-21h00	Ketevi Assamagan (Johannesburg, BNL): <i>The African School of Fundamental Physics and its Applications</i>
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## Wednesday, 5 December

### Morning: Plenary Sessions Chairman: Andre Peshier (Cape Town)

10h00-10h45	Anton Andronic (GSI, Germany): <i>Quarkonia in the ALICE detector</i>
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10h45-11h30	Zvi Citron (Weizmann, Israel): <i>Heavy Ion Physics with ATLAS</i>
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### 11h30-12h00 Morning Tea

12h00-12h45	Andree Robichaud-Veronneau (Oxford, UK): <i>Search for Physics beyond the Standard Model with the ATLAS Detector</i>
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12h45-13h30	Chris Hill (Ohio, USA) : <i>New Results from CMS</i>
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### 13H30-14H30 LUNCH

### Afternoon: Parallel Session VII: BSM, SUSY, Exotics Chairman: Mathieu Arousseau (Johannesburg, South Africa)

14h30-15h00	Alessandra Fanfani (Pisa, Italy): <i>Studies of Exotic Quarkonium States at CMS</i>
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15h00-15h30	Valerio Consorti (Freiburg, Germany): <i>Inclusive searches for squarks and gluinos with the ATLAS detector.</i>
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### 15h30-16h00 Afternoon Tea

16h00-16h30	Nicola De Filippis (Bari, Italy): <i>Search for the standard model Higgs at CMS in teh 4 Lepton Channel.</i>
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16h30-17h00	Mark Hodgkinson (Sheffield): <i>Searches for natural supersymmetry with the ATLAS detector</i>
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### Afternoon: Parallel Session VIII: Heavy Ion Collisions Chairman: Francesco Bossu (iThemba LABS, South Africa)

14h30-15h00	Zinhle Buthelezi (iThemba LABS, South Africa): <i>Summary of ALICE at LHC results from heavy flavour measurements in p-p and Pb-Pb collisions at LHC energies</i>
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15h00-15h30	Kyrre Skjerdal (Bergen, Norway): <i>Photoproduction of Rho-0 in Ultra-Peripheral Nuclear Collisions at ALICE</i>
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### 15h30-16h00 Afternoon Tea

16h00-16h30	Dirk Rischke (Frankfurt, Germany): <i>The long-wavelength limit of the Boltzmann equation: recent insights in deriving dissipative relativistic fluid dynamics</i>
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16h30-17h00	Helmut Oeschler (Darmstadt, Germany): <i>Hadronic Resonance Production in pp and Pb-Pb collisions at the LHC with the ALICE experiment</i>
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### Afternoon: Parallel Session IX and Student Session Chairman: Alan Cornell (WITS, South Africa)

14h30-15h00	William Buttinger (Cambridge, UK): <i>ATLAS measurements of vector bosons and diboson production.</i>
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15h00-15h30	Vitaliano Ciulli (Florence, Italy): <i>Electroweak results from CMS</i>
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### 15h30-16h00 Afternoon Tea

16h00-16h30	Franco Simonetto (Padova, Italy): <i>First Direct Observation of Time Reversal Violation in the B System and new CPV Results from BABAR.</i>
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16h30-17h00	Ammar Abdalgabar (WITS, South Africa) <i>Evolution of Yukawa Coupling and Quark Flavor Mixings in 5D MSSM</i>
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	Catherine Hsu (WITS, South Africa): <i>Z' Boson Decay to Di-Muon final States</i>
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	Doomnull Unwuchola (UJ, South Africa): <i>Baryon-Omega Meson Electroproduction</i>
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### Afternoon Plenary Session Chairman: Helmut Satz (Bielefeld, Germany)

17h00-17h45	Krzysztof Redlich (Wroclaw, Poland): <i>Phase Structure of Strongly Interacting Matter</i>
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### 18:30 Dinner

## Thursday, 6 December

### Morning: Plenary Sessions Chairman: Howard Gordon (BNL, USA)

10h00-10h45	Alexander Sorin (JINR, Dubna): <i>The NICA Project</i>
10h45-11h30	Helmut Oeschler (Darmstadt, Germany): <i>Strangeness from GeV to TeV</i>

### 11h30-12h00 Morning Tea

12h00-12h45	Olaf Steinkamp (Zurich, Switzerland): <i>CP violation at LHCb</i>
12h45-13h30	Killian Rosbach (Geneva, Switzerland): <i>Standard Model and Top Physics with ATLAS</i>

### 13H30-14H30 LUNCH

### Afternoon: Parallel Session X Chairman: Danish Azmi (Cape Town, South Africa)

14h30-15h00	Uri Maor (Tel Aviv, Israel): <i>Does <math>p</math>-<math>p</math> soft scattering attain saturation at the TeV scale?</i>
15h00-15h30	Xin Shi (Taiwan): <i>Studies on B hadron production, spectroscopy and decays at CMS</i>

### 15h30-16h00 Afternoon Tea

16h00-16h30	Jean Cleymans (UCT/iThemba LABS, South Africa): <i>The Tsallis Distribution at the LHC</i>
16h30-17h00	Tom Cornelis (Antwerp, Belgium): <i>Jet Physics and vector boson plus jet physics at CMS</i>

### Afternoon: Parallel Session XI Chairman: Trevor Vickey (WITS, South Africa)

14h30-15h00	Lucia Batkova (Bratislava, Slovakia): <i>Top quark properties with ATLAS</i>
15h00-15h30	Danilo Enoque Ferreira de Lima (Glasgow, UK): <i>Top quark production in ATLAS</i>

### 15h30-16h00 Afternoon Tea

16h00-16h30	Silvia Costantini (Ghent, Belgium): <i>Top Quark Production Cross Sections at CMS</i>
16h30-17h00	Bruce Mellado (Wits and Wisconsin): <i>The Physics case for the LHeC</i>

### Afternoon: Parallel Session XII Chairman: Simon Connell (Johannesburg, South Africa)

14h30-15h00	Mathieu Arousseau (Johannesburg, South Africa): <i>Higgs to four leptons searches at the LHC: constraints on Abelian hidden sector models.</i>
15h00-15h30	Alan Cornell (Wits, South Africa): <i>Renormalisation running of masses and mixings in Universal Extra-Dimensional Models</i>

### 15h30-16h00 Afternoon Tea

16h00-16h30	Federico de Guio (Milano-Bocacca, Italy): <i>Performance of the CMS Electromagnetic calorimeter and its Role for the Hunt for the Higgs Boson in the 2 gamma Channel</i>
16h30-17h00	Andre Peshier (Cape Town, South Africa) <i>Turning on the Charm</i>

### Afternoon Plenary Session Chairman: Helmut Oeschler (Darmstadt, Germany)

17h00-17h45	Sonia Kabana (Nantes, France): <i>Highlights from STAR</i>
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### 19:00 Conference Banquet Guest Speaker: Kobus de Wet, SANPARKS

## Friday, 7 December

### Morning: Plenary Sessions Chairman: William Horowitz (Cape Town, South Africa)

10h00-10h45	Krish Bharuth-Ram (Durban, South Africa): <i>Review of Results at ISOLDE</i>
10h45-11h30	Pradeep Sarin (Bhabha ARC, India): <i>Heavy Ion Physics from the CMS Collaboration</i>

### 11h30-12h00 Morning Tea

12h00-12h45	Ulrich Heinz (Ohio, USA): <i>Towards The Little Bang Standard Model</i>
12h45-13h30	Andrew Askew (Florida, USA): <i>Searches for the Supersymmetry with the CMS Detector</i>

### 13H30-14H30 LUNCH

### Afternoon: Parallel Session XIII Chairman: Danish Azmi (Cape Town, South Africa)

14h30-15h00	Sabine Kraml (Grenoble, France): <i>Implications of LHC Results for Supersymmetry</i>
15h00-15h30	Carsten Greiner (Frankfurt, Germany): <i>RHIC and LHC heavy ion collisions with pQCD Boltzmann transport</i>

### Afternoon Tea

16h00-16h30	Chiara Oppedisano (Torino, Italy): <i>Charged particle production in Pb-Pb and in p-Pb collisions in ALICE</i>
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### Afternoon: Parallel Session XIV Chairman: Trevor Vickey (WITS, South Africa)

14h30-15h00	Helen Hayward (Liverpool, UK): <i>Searches for supersymmetry in resonance production, R-parity violating signatures and events with long-lived particles with the ATLAS detector</i>
15h00-15h30	John Almond (Manchester, UK): <i>Search for Exotics: New Particles with the ATLAS detector</i>

### Afternoon Tea

16h00-16h30	Bob Kowalewski (Victoria, Canada): <i>Evidence for an excess of B to D(*) tau nu decays at BABAR</i>
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### Afternoon Plenary Session Chairman: Alexander Sorin (Dubna, Russia)

17h00-17h45	David Blaschke (Wroclaw, Poland): <i>QCD in Astrophysics</i>
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### 18h30 Dinner