



## “Planck 2009”

12<sup>th</sup> of the series “From the Planck Scale to the ElectroWeak Scale”

*Padova, May 25-29, 2009*

### *Programme*

#### *Poster Session*

*Please see the link on the conference homepage*

#### **Monday, May 25, 2009 (morning)**

##### **Centro Altinate - San Gaetano**

*(Chair: S.Pokorski, Warsaw Univ.)*

08:00-09:00	<i>Registration</i>
09:00-09:15	<i>Opening</i>
09:15-10:15	<b>A. Pomarol</b> (UAB, Barcelona) <i>Models for the Fermi scale</i>
10:15-10:45	<b>J. Weninger</b> (CERN) <i>Status of the LHC machine</i>
10:45-11:15	<b>Coffee Break</b>
	<i>(Chair: J.R. Espinosa, IFAE Barcelona)</i>
11:15-11:45	<b>G. Isidori</b> (INFN, Frascati) <i>Theory and Phenomenology of Heavy Vectors in Higgsless Models</i>
11:45-12:15	<b>B. Grinstein</b> (UC San Diego) <i>A Lee-Wick Extension of the Standard Model</i>
12:15-12:45	<b>A. Falkowski</b> (Rutgers Univ) <i>Higgs was at LEP - supersymmetric models with double protection</i>

12:45-14:30 **Lunch Break** (free)

## **Monday, May 25 (afternoon)**

### **Centro Altinate - San Gaetano**

*(Chair: R. Barbieri, SNS Pisa)*

14:30-15:30 **L. Ristori** (Fermilab and INFN, Pisa)  
*Recent results from the Tevatron*

15:30-16:00 **M. Mangano** (CERN)  
*The road from the SM to new physics at the LHC*

16:00-16:30 **H.-C. Cheng** (UC Davis)  
*Invisible particle mass determination at hadron colliders*

16:30-17:00 **Coffee Break**

*(Chair: F. Feruglio, Padova Univ.)*

17:00-17:30 **T. Gherghetta** (Univ. Melbourne)  
*EWSB with composite  $W, Z$  bosons*

17:30-18:00 **M. Quiros** (ICREA/IFAE, Barcelona)  
*Stabilizing soft walls*

18:00-18:30 **K. Dienes** (Univ. of Arizona)  
*A New Approach to Flavor*

### **Physics Department**

18:45-19:15 **Aperitivo (front Garden)**

19:15-20:30 **Movie "Chandra" (Aula A)**

## **Tuesday, May 26 (morning)**

### **Centro Altinate - San Gaetano**

*(Chair: I. Antoniadis, CERN)*

09:00-10:00 **A. Uranga** (CSIC Madrid & CERN)  
*String phenomenology*

10:00-10:30 **A. Hebecker** (Univ. Heidelberg)  
*A Realistic Unified Gauge Coupling from the Micro-Landscape of Orbifold GUTs*

10:30-11:00 **Coffee Break**

(Chair: E. Dudas, Ecole Polytechnique Paris)

- 11:00-11:30 **M. Serone** (SISSA)  
*An effective description of the landscape*
- 11:30-12:00 **M. Ratz** (T.U. Munich)  
*From strings to the MSSM*
- 12:00-12:30 **H.-P. Nilles** (Univ. Bonn)  
*Cross checks for unification*
- 12:30-14:30 **Lunch Break** (free)

## Tuesday, May 26 (afternoon)

### Physics Department

#### Parallel Session A, Aula A-Rostagni

(Chair: A. Romanino, SISSA)

- 14:30-14:50 **I. Masina** (Univ. Ferrara and INFN)  
*Collider Phenomenology of a Fourth Lepton Family in Technicolor Models*
- 14:50-15:10 **S. Kraml** (LPSC Grenoble)  
*Phenomenology of supersymmetric gauge-Higgs unification*
- 15:10-15:30 **B. Grzadkowski** (University of Warsaw)  
*Pragmatic approach to the little hierarchy problem*
- 15:30-15:50 **K. Tuominen** (University of Jyvaskyla)  
*Lattice Studies of Walking Technicolor*
- 15:50-16:10 **M. Perez-Victoria** (University of Granada)  
*The Unhiggs Boson*
- 16:10-16:30 **A. Delgado** (University of Notre Dame)  
*Fermions in the soft-wall*

#### Parallel Session B, Aula C

(Chair: L. Covi, DESY)

- 14:30-14:50 **M. Trapletti** (U. Paris XI & Ecole Polytechnique)  
*Gauge vs Gravity mediation in string model building*
- 14:50-15:10 **C. Scrucca** (EPFL)  
*Metastable  $dS$  vacua in  $N=2$  gauged supergravity*
- 15:10-15:30 **C. Gross** (Hamburg Univ.)  
*De Sitter vacua in no-scale string models without uplifting*
- 15:30-15:50 **G. Panico** (Bonn University)  
*Nucleons from 5D Skyrmions*

- 15:50-16:10 **M. Zagermann** (MPI for Physics, Munich)  
*On Type IIA Cosmology From Geometric Fluxes*
- 16:10-16:30 **P. Brax** (IPHT Saclay)  
*Facing Dark Energy in Supergravity*

16:30-17:00 **Coffee Break**

**Parallel Session A, Aula A-Rostagni**  
(Chair: T. Gherghetta, Univ. Melbourne)

- 17:00-17:20 **G. Burdman** (Fermilab/Univ of Sao Paulo)  
*Electroweak Symmetry Breaking from Fermion  
Condensation in AdS<sub>5</sub>*
- 17:20-17:40 **V. Rentala** (UC Berkeley/ IPMU, Japan)  
*RS graviton spin determination using azimuthal angular  
dependence*
- 17:40-18:00 **B. Bellazzini** (Cornell Univ.)  
*The super-little Higgs with non decoupling D-terms*
- 18:00-18:20 **B. Gripaios** (CERN)  
*Beyond the Minimal Composite Higgs Model*
- 18:20-18:40 **L. Vecchi** (SISSA)  
*Discriminating between a light composite Higgs and a  
dilaton*

**Parallel Session B, Aula C**  
(Chair: H.-P. Nilles, Bonn Univ.)

- 17:00-17:20 **A. Ibarra** (TU Munich)  
*Cosmic-ray signatures of dark matter decay*
- 17:20-17:40 **R. Ziegler** (SISSA)  
*Tree-level soft masses from SO(10)*
- 17:40-18:00 **L. Calibbi** (SISSA)  
*Gauge coupling unification, the GUT scale, and magic  
fields*
- 18:00-18:20 **J. Schmidt** (DESY)  
*Heterotic GUT vacua and their exact superpotentials*
- 18:20-18:40 **T. Jones** (Liverpool Univ.)  
*Anom. Mediated Susy Breaking: spectra, sum rules and  
flavour violation*

**Centro Altinate - San Gaetano**

- 19:00-19:30 **Aperitivo (1st floor, Entrance to the Exhibition)**
- 19:30-20:30 **Guided Tour “The Future of Galileo”**



(Chair: J.E. Kim, Seoul Nat. Univ.)

- 11:00-11:30 **Y. Nomura** (UC Berkeley)  
*Dark Matter Signals*
- 11:30-12:00 **N. Weiner** (New York Univ.)  
*Cosmic Ray Signals from Dark Matter*
- 12:00-12:30 **L. Randall** (Harvard Univ.)  
*Flavor From Extra Dimensions*
- 12:30-14:30 **Lunch Break** (free)

## Thursday, May 28 (afternoon)

### Physics Department

#### Parallel Session A, Aula A-Rostagni

(Chair: A. Strumia, Univ. Pisa)

- 14:30-14:50 **F. Takahashi** (Univ. of Tokyo, IPMU)  
*Dark Matter as a probe into the early universe*
- 14:50-15:10 **E.J. Chun** (KIAS)  
*Sub-GeV  $U(1)$  dark sector in GMSB models*
- 15:10-15:30 **J.E. Kim** (Seoul National University)  
*White dwarf axions, PAMELA data, and flipped-SU(5)*
- 15:30-15:50 **S. West** (Royal Holloway U. London)  
*WIMPonium and Boost Factors for Indirect DM Detection*
- 15:50-16:10 **R. Catena** (SISSA)  
*The Galactic halo: a study from the Dark Matter detection perspective*
- 16:10-16:30 **S. Rajendran** (Stanford)  
*Astrophysical Probes of Unification*

#### Parallel Session B, Aula C

(Chair: A. Riotto, CERN & INFN Padova)

- 14:30-14:50 **B. Garbrecht** (Madison Univ.)  
*Low Scale Leptogenesis from Non-Leptonic CP-Phases*
- 14:50-15:10 **B. Feldstein** (Boston Univ.)  
*Spont. Lorentz Violation, Negative Energy and the 2nd Law of Thermodynamics*
- 15:10-15:30 **A. Notari** (CERN)  
*Cosmological Effect of Large Voids: an alternative to Dark Energy?*

- 15:30-15:50 **A. Anisimov** (DESY)  
*Nonequilibrium Dynamics of Scalar Fields in a Thermal Bath*
- 15:50-16:10 **P. Creminelli** (ICTP)  
*Sachs-Wolfe at second order: the CMB bispectrum on large scales*
- 16:10-16:30 **S. Kasuya** (Kanagawa University)  
*Axion isocurvature fluctuations with extremely blue spectrum*
- 16:30-17:00 **Coffee Break**

**Parallel Session A, Aula A-Rostagni**  
(Chair: P. Di Bari, Padova Univ.)

- 17:00-17:20 **L. Covi** (DESY)  
*Gravitino Dark Matter and the LHC*
- 17:20-17:40 **T. Hambye** (UL Brussels)  
*Hidden vector dark matter*
- 17:40-18:00 **M. Losada** (Univ. Antonio Narino)  
*Implications of non-renormalizable operators for baryogenesis and dark matter in the MSSM*
- 18:00-18:20 **A. Romagnoni** (LPT - Orsay)  
*(In)visible  $Z'$  and dark matter*
- 18:20-18:40 **M. Papucci** (IAS Princeton)  
*Pamela after Fermi*
- 18:40-19:00 **M. McCullough** (Oxford)  
*Inelastic Dark Matter, Non-Standard Halos and the DAMA/LIBRA Results*

**Parallel Session B, Aula C**  
(Chair: M. Ratz, T.U. Munich)

- 17:00-17:20 **E. Fernandez Martinez** (MPI für Physik)  
*Physics leading to large neutrino non-standard interactions*
- 17:20-17:40 **C. Biggio** (MPI Munich)  
*Neutrino mass hierarchies in the inverse seesaw model*
- 17:40-18:00 **S. Blanchet** (Maryland Univ.)  
*Testing Leptogenesis at the LHC in the type I see-saw*
- 18:00-18:20 **S. Trine** (TTP Karlsruhe)  
*Probing Yukawa unification with  $K$  and  $B$  mixing*
- 18:20-18:40 **C. Smith** (TTP Karlsruhe)  
*Supersymmetric Minimal Flavor Violation*

18:40-19:00 **B. Duling** (TU Munich)  
*Tree Level Rare Decays in a RS Model with Custodial Protection*

20:00 **Banquet at Palazzo della Ragione**

### **Friday, May 29 (morning)**

#### **Centro Altinate - San Gaetano**

*(Chair: A. Mazumdar, Lancaster Univ.)*

09:00-10:00 **S. Matarrese** (Univ. of Padova)  
*Cosmology*

10:00-10:30 **S. Dubovsky** (Stanford University)  
*Observing the String Axiverse through CMB polarization, CDM power spectrum and astrophysical black holes*

#### **Physics Department**

10:30-11:00 **Coffee Break**

#### **Parallel Session A, Aula A-Rostagni**

*(Chair: T. Hambye, UL Brussels)*

11:00-11:20 **E. Nardi** (Laboratori Nazionali di Frascati)  
*Some remarks on the problem of fermion masses*

11:20-11:40 **C. Hagedorn** (SISSA)  
*Phenomenological Imprints of Discrete Flavor Symmetries*

11:40-12:00 **M. Nagai** (TU Munich)  
*Flavored EDMs in SUSY models*

12:00-12:20 **E. Molinaro** (SISSA)  
*Interplay Between 'Low' and 'High' Energy CPV in Flavoured Leptogenesis*

12:20-12:40 **S. Lavignac** (IPhT Saclay)  
*Flavour violation in a predictive leptogenesis scenario*

#### **Parallel Session B, Aula C**

*(Chair: P. Creminelli, ICTP)*

11:00-11:20 **J. Noreña** (SISSA)  
*The Effective Theory of Quintessence: the  $w < -1$  Side Unveiled*

- 11:20-11:40 **Y. Farzan** (IPM Teheran)  
*Are small  $\nu$  masses unveiling the missing mass problem of the universe?*
- 11:40-12:00 **E. Trincherini** (SNS Pisa)  
*The Galileon as a local modification of gravity*
- 12:00-12:20 **M. Wick** (TU Munich)  
*Probing New Physics with  $b \rightarrow sll$  and  $b \rightarrow s \nu \nu$  transitions*
- 12:20-12:40 **S. Gori** (TU Munich)  
*Predictions for  $B_s$  mixing phase in Susy Flavor Models*
- 12:40-14:30 **Lunch Break** (free)

## **Friday, May 29 (afternoon)**

### **Centro Altinate - San Gaetano**

*(Chair: S. Davidson, Lyon Univ.)*

- 14:30-15:00 **N. Toro** (Stanford Univ.)  
*Searching for New Dark Forces with GeV-Scale Experiments*
- 15:00-15:30 **P. Ullio** (SISSA)  
*The contribution from single substructures to DM signals*
- 15:30-16:00 **G. Villadoro** (CERN)  
*de Sitter Entropy and the Volume of the Universe after Inflation*
- 16:00-16:30 **Coffee Break**
- (Chair: G. Costa, Padova Univ.)*
- 16:30-17:00 **V. Rychkov** (SNS and INFN, Pisa)  
*Some things are just not possible: CFT lessons for BSM phenomenology*
- 17:00-17:30 **A. Starinets** (Oxford University)  
*Holographic recipes for heavy-ion physics*
- 17:30-17:45 **Closing**

**End of the Conference**