

# Gruppo IV a Ts : 117 Ass=4 Dip+39 Univ+44 Stud+30 Postdoc (18 Incaricati)

## Linee di Ricerca

- 1-Campi e Stringhe
- 2-Fenomenologia
- 3-Fisica Nucleare e Adronica
- 4-Metodi Matematici
- 5-Fisica Astroparticellare
- 6-Fisica Statistica e Applicata

# DOTAZIONI 2015

- Missioni 18+8 k€
- Seminari 4.5
- Ospiti 7+3+4
- Inventariabile 7+3
- Consumo 1+1
- Licenze 1.5
- Manutenzione 1

# Stringhe e Campi

- FLAG (Casadio/Spallucci 5.6 (5))
- GAST (Grignani/Tanzini 6 (7))
- STEFI (Bianchi/Bonelli 8 (8.5))
- QGSKY (Esposito/Salucci 5.5 (5))
- SFT (Cappelli/Mussardo 27.8 (14))

Buchi Neri, Sistemi Integrabili, Teorie Topologiche,  
AdS/CFT, Rottura della Supersimmetria, Salvezza Asintotica,  
Teoria di Campo di Stringa.....

- Supercurrent multiplet correlators at weak and strong coupling  
Riccardo Argurio (Brussels U., PTM & Intl. Solvay Inst., Brussels), Matteo Bertolini (INFN, Trieste & SISSA, Trieste & ICTP, Trieste), Lorenzo Pietro (INFN, Trieste & SISSA, Trieste & Weizmann Inst.), Flavio Porri (INFN, Trieste & SISSA, Trieste), Diego Redigolo (Brussels U., PTM & Intl. Solvay Inst., Brussels). Oct 25, 2013. 31 pp.  
Published in **JHEP 1404 (2014) 123**

- On shape dependence of holographic mutual information in AdS4  
Piermarco Fonda (INFN, Trieste & SISSA, Trieste), Luca Giomi (Leiden U.), Alberto Salvio (Madrid, IFT & Madrid, Autonoma U.), Erik Tonni (SISSA, Trieste & INFN, Trieste). Nov 13, 2014. 44 pp.

- Vortex partition functions, wall crossing and equivariant Gromov-Witten invariants  
Giulio Bonelli (SISSA, Trieste & INFN, Trieste & ICTP, Trieste), Antonio Sciarappa, Alessandro Tanzini, Petr Vasko (SISSA, Trieste & INFN, Trieste). Jul 23, 2013. 44 pp.

Published in **Commun.Math.Phys.** **333 (2015)**  
**2, 717-760**

# Fenomenologia

- AAE (Strumia/Bertolini 13.4 (16))

Fisica oltre il Modello Standard, Grand' Unificazione,  
Modelli Supersimmetrici Spontaneamente rotti,  
Fisica del Sapore....

A. ROMANINO convener "What Next"

- [What Next: White Paper of the INFN-CSN1](#)  
[A. Andreazza \(INFN, Milan & Milan U.\)](#), [M. Anselmino \(INFN, Turin & Turin U.\)](#), [P. Azzi \(INFN, Padua\)](#), [W. Baldini \(INFN, Ferrara\)](#), [R. Barbieri \(Pisa, Scuola Normale Superiore & INFN, Pisa\)](#), [F. Bedeschi \(INFN, Pisa\)](#), [E. Bertuzzo \(Sao Paulo U.\)](#), [C. Biino \(INFN, Turin\)](#), [M. Bochicchio \(INFN, Rome\)](#), [W. Bonivento \(INFN, Cagliari\)](#) *et al.*. 2015.  
302 pp.

Published in **Frascati Phys.Ser. 60 (2015) 1-302**

[References](#) | [BibTeX](#) | [LaTeX\(US\)](#) | [LaTeX\(EU\)](#) |  
[Harvmac](#) | [EndNote](#)



- Present and Future K and B Meson Mixing Constraints on TeV Scale Left-Right Symmetry
- Stefano Bertolini (SISSA, Trieste & INFN, Trieste), Alessio Maiezza (Valencia U., IFIC), Fabrizio Nesti (Boskovic Inst., Zagreb & GSSI, Aquila). Mar 27, 2014. 15 pp.
- Published in **Phys.Rev. D89 (2014) 9, 095028**

- Enhancing the  $t\bar{t} H$  signal through top-quark spin polarization effects at the LHC  
S. Biswas (Rome U. & INFN, Rome), R. Frederix (CERN), E. Gabrielli (Trieste U. & NICPB, Tallinn & INFN, Trieste), B. Mele (INFN, Rome). Mar 7, 2014. 18 pp.

Published in **JHEP 1407 (2014) 020**

# Metodi Matematici

- BELL (Zanghi/Bassi 8 (6))
- QUANTUM (Pascazio/Benatti 5 (4))

Fondamenti della Meccanica Quantistica, Modelli  
del Collasso della Funzione d'onda.....

- [Beyond Quantum Mechanics? Hunting the 'Impossible' Atoms --- Pauli Exclusion Principle Violation and Spontaneous Collapse of the Wave Function at Test](#)  
[K. Piscicchia](#), [C. Curceanu](#) ([INFN, Rome](#) & [Enrico Fermi Ctr., Rome](#)), [S. Bartalucci](#) ([INFN, Rome](#)), [A. Bassi](#) ([Trieste U. & INFN, Trieste](#)), [S. Bertolucci](#) ([CERN](#)), [C. Berucci](#) ([INFN, Rome](#) & [Stefan Meyer Inst. Subatomare Phys.](#)), [A.M. Bragadireanu](#) ([INFN, Rome](#) & [Bucharest, IFIN-HH](#)), [M. Cargnelli](#) ([Stefan Meyer Inst. Subatomare Phys.](#)), [A. Clozza](#), [L. De Paolis](#) ([INFN, Rome](#)) *et al.*. Jan 19, 2015. 6 pp.

Published in **Acta Phys.Polon. B46 (2015) 1, 147-152**

- Entanglement in fermion systems and quantum metrology

F. Benatti (INFN, Trieste & Trieste U.), R. Floreanini (INFN, Trieste), U. Marzolino (Ljubljana U.). Mar 5, 2014. 12 pp.

Published in **Phys.Rev. A89 (2014) 3, 032326**

# Fisica Astroparticellare

- TASP ( Lisi /Petcov 4.3 (6.5))
- INDARK ( Bartolo /Viel 15.25 (11.5))
- QUAGRAP ( Amelino Camelia/Liberati 9 (6))

Materia Oscura ed Energia Oscura, Fisica dei Neutrini, Stelle di Neutroni e Onde Gravitazionali, Gamma Ray Bursts, Teorie Alternative Della Gravita', Gravita' Emergente....

- Predicting the values of the leptonic CP violation phases in theories with discrete flavour symmetries

S.T. Petcov (SISSA, Trieste & INFN, Trieste & Tokyo U., IPMU). May 23, 2014. 24 pp.

Published in **Nucl.Phys. B892 (2015) 400-428**

- Indirect Detection Analysis: Wino Dark Matter Case Study  
Andrzej Hryczuk (Munich, Tech. U.), Ilias Cholis (Fermilab), Roberto Iengo (SISSA, Trieste), Maryam Tavakoli (IPM, Tehran), Piero Ullio (SISSA, Trieste & INFN, Trieste). Jan 23, 2014.  
38 pp.  
Published in **JCAP 1407 (2014) 031**



- [Particle dark matter searches outside the Local Group](#)  
[Marco Regis](#), [Jun-Qing Xia](#), [Alessandro Cuoco](#),  
[Enzo Branchini](#), [Nicolao Fornengo](#), [Matteo Viel](#). Mar 19, 2015. 6 pp.  
Published in **Phys.Rev.Lett. 114 (2015) 24, 241301**

- Observational rotation curves and density profiles versus the Thomas–Fermi galaxy structure theory  
H.J. de Vega (Paris, LPTHE & Paris Observ.), P. Salucci (INFN, Trieste & SISSA, Trieste), N.G. Sanchez (Paris Observ.). Sep 9, 2013. 11 pp.  
Published in **Mon.Not.Roy.Astron.Soc. 442 (2014) 3, 2717-2727**

# FISICA STATISTICA E APPLICATA

- Discosynp (Del Giudice/Budinich 1.7 )

- TOTALE BUDGET GRUPPO IV PER 2015:  
59 DOT +78.5 IE= 137.5 k€ , DI CUI 114.5 k€  
PER MISSIONI

PER IL 2016 ....