



# Physics

## Authors and titles for Jun 2011, skipping **first 150**

[ total of 690 entries: [1-25](#) | ... | [76-100](#) | [101-125](#) | [126-150](#) | [151-175](#) | [176-200](#) | [201-225](#) | [226-250](#) | ... | [676-690](#) ]  
[ showing 25 entries per page: [fewer](#) | [more](#) | [all](#) ]

[151] [arXiv:1106.1855](#) [[pdf](#), [ps](#), [other](#)]

### **Perturbation Theory for PT-Symmetric Sinusoidal Optical Lattices at the Symmetry-Breaking Threshold**

[H. F. Jones](#)

Comments: Some references corrected

Subjects: **Optics (physics.optics)**

[152] [arXiv:1106.1881](#) [[pdf](#), [ps](#), [other](#)]

### **Inductively Coupled Augmented Railgun**

[Thomas B. Bahder](#), [William C. McCorkle](#)

Comments: 7 pages, 7 figures

Subjects: **Classical Physics (physics.class-ph)**

[153] [arXiv:1106.1915](#) [[pdf](#)]

### **Abstract art grandmasters score like class D amateurs**

[M.V. Simkin](#)

Journal-ref: Significance, Web exclusive articles, June 29, 2011

Subjects: **Popular Physics (physics.pop-ph)**; Applications (stat.AP)

[154] [arXiv:1106.1931](#) [[pdf](#), [other](#)]

### **Ordering of small particles in one-dimensional coherent structures by time-periodic flows**

[Dmitri Pushkin](#), [Denis Melnikov](#), [Valentina Shevtsova](#)

Journal-ref: Phys. Rev. Lett. 106, 234501 (2011)

Subjects: **Fluid Dynamics (physics.flu-dyn)**; Chaotic Dynamics (nlin.CD)

[155] [arXiv:1106.1946](#) [[pdf](#)]

### **Development of front-end readout electronics for silicon strip detectors**

[Yi Qian](#), [Hong Su](#), [Jie Kong](#), [Cheng-Fu Dong](#), [Xiao-Li Ma](#), [Xiao-Gang Li](#)

Comments: This article has been submitted to Chinese Physics C

Subjects: **Instrumentation and Detectors (physics.ins-det)**; High Energy Physics - Experiment (hep-ex)

[156] [arXiv:1106.1963](#) [[pdf](#), [ps](#), [other](#)]

# Predicting Zonal Flows -- A Comprehensive Reynolds-Stress Response-Functional from First-Principles-Plasma-Turbulence Computations

Niels Guertler, Klaus Hallatschek

Subjects: Plasma Physics (physics.plasm-ph)

[157] [arXiv:1106.1981](#) [pdf, ps, other]

## Full orbit simulations of collisional impurity transport in spherical tokamak plasmas with strongly-sheared electric fields

C. G. Wrench, E. Verwichte, K. G. McClements

Comments: 16 pages, 6 figures, submitted to Nuclear Fusion

Subjects: Plasma Physics (physics.plasm-ph)

[158] [arXiv:1106.1988](#) [pdf, ps, other]

## Tensorial form and matrix elements of the relativistic nuclear recoil operator

E. Gaidamauskas, C. Nazé, P. Rynkun, G. Gaigalas, P. Jönsson, M. Godefroid

Comments: 22 pages, no figures, submitted to J. Phys. B

Subjects: Atomic Physics (physics.atom-ph)

[159] [arXiv:1106.2001](#) [pdf, other]

## Nonlocal Nonlinear Optics in cold Rydberg Gases

S. Sevinçli, N. Henkel, C. Ates, T. Pohl

Comments: 5 pages, 5 figures

Subjects: Atomic Physics (physics.atom-ph); Quantum Gases (cond-mat.quant-gas); Optics (physics.optics)

[160] [arXiv:1106.2007](#) [pdf, other]

## The emergence of complex patterns in online human communication

Joachim Mathiesen, Pernilly Yde, Mogens H. Jensen

Comments: 9 pages, 4 figures

Subjects: Physics and Society (physics.soc-ph); Human-Computer Interaction (cs.HC); Social and Information Networks (cs.SI)

[161] [arXiv:1106.2009](#) [pdf, ps, other]

## Spin Hall effect of light in metallic reflection

N. Hermosa, A.M. Nugrowati, Andrea Aiello, J.P. Woerdman

Comments: improved figures;removed redundant discussion;change typo in eqn. 2b

Journal-ref: Opt. Lett. 36, 3200-3202 (2011)

Subjects: Optics (physics.optics)

[162] [arXiv:1106.2024](#) [pdf, ps, other]

## Periodicities in Aerosol Optical Depths

S. Ramachandran, Sayantan Ghosh, Amit Verma, Prasanta K. Panigrahi

Comments: 15 pages, 4 figure, Geophys. Res. Lett. draft format

Subjects: Atmospheric and Oceanic Physics (physics.ao-ph); Data Analysis, Statistics and Probability (physics.data-an)

[163] [arXiv:1106.2038](#) [pdf, ps, other]

# Folding and unfolding of a triple-branch DNA molecule with four conformational states

[Sandra Engel](#) (1), [Anna Alemany](#) (2,3), [Nuria Forns](#) (2,3), [Philipp Maass](#) (1), [Felix Ritort](#) (2,3) ((1)

Fachbereich Physik, Universität Osnabrück, Barbarastr., (2) Departament de Física Fonamental, Facultat de Física, Universitat de Barcelona, (3) CIBER-BBN Networking center on Bioengineering, Biomaterials and Nanomedicine, Spain)

Comments: 17 pages, 12 figures

Journal-ref: Philosophical Magazine, 91: 13, 2049 -- 2065

Subjects: **Biological Physics (physics.bio-ph)**; Statistical Mechanics (cond-mat.stat-mech)

[164] [arXiv:1106.2045](#) [[pdf](#), [other](#)]

## Metallo-dielectric core-shell nanospheres as building blocks for optical 3D isotropic negative-index metamaterials

[R. Paniagua-Domínguez](#), [F. López-Tejiera](#), [R. Marqués](#), [J. A. Sánchez-Gil](#)

Comments: 16 pages, 7 figures

Subjects: **Optics (physics.optics)**; Other Condensed Matter (cond-mat.other)

[165] [arXiv:1106.2051](#) [[pdf](#), [ps](#), [other](#)]

## Long-range interactions between ultracold atoms and molecules including atomic spin-orbit

[Maxence Lepers](#), [Olivier Dulieu](#) (Laboratoire Aimé Cotton, CNRS-Univ. Paris-Sud, Orsay, France)

Comments: Submitted to Phys. Chem. Chem. Phys., special issue on cold molecules

Subjects: **Chemical Physics (physics.chem-ph)**; Atomic Physics (physics.atom-ph); Quantum Physics (quant-ph)

[166] [arXiv:1106.2071](#) [[pdf](#)]

## Modulation Instability of Ultrashort Pulses in Quadratic Nonlinear Media beyond the Slowly Varying Envelope Approximation

[Amarendra K. Sarma](#), [Parvendra Kumar](#)

Journal-ref: Appl Phys B (2012) 106:289-293

Subjects: **Classical Physics (physics.class-ph)**; Optics (physics.optics)

[167] [arXiv:1106.2079](#) [[pdf](#), [ps](#), [other](#)]

## Time duration of the parametric x-ray radiation

[S. V. Anishchenko](#), [V. G. Baryshevsky](#), [A.A. Gurinovich](#)

Subjects: **Accelerator Physics (physics.acc-ph)**

[168] [arXiv:1106.2124](#) [[pdf](#)]

## Omni-tomography/Multi-tomography -- Integrating Multiple Modalities for Simultaneous Imaging

[Ge Wang](#), [Jie Zhang](#), [Hao Gao](#), [Victor Weir](#), [Hengyong Yu](#), [Wenxiang Cong](#), [Xiaochen Xu](#), [Haiou Shen](#), [James Bennett](#), [Yue Wang](#), [Michael Vannier](#)

Comments: 43 pages, 15 figures, 99 references, provisional patent applications filed by Virginia Tech

Subjects: **Medical Physics (physics.med-ph)**; Computer Vision and Pattern Recognition (cs.CV); Numerical Analysis (math.NA); Applications (stat.AP)

[169] [arXiv:1106.2133](#) [[pdf](#), [other](#)]

## On the dynamics of unobserved Universe

**Stephane A. Bronoff**

Comments: 8 pages, 2 figures; theory formal structure presented in a logically isolated way; speculative items pushed into the discussions section

Subjects: **General Physics (physics.gen-ph)**

[170] [arXiv:1106.2134](#) [[pdf](#), [ps](#), [other](#)]

## Components in time-varying graphs

[V. Nicosia](#), [J. Tang](#), [M. Musolesi](#), [G. Russo](#), [C. Mascolo](#), [V. Latora](#)

Comments: 12 pages, 4 figures, 3 tables

Journal-ref: Chaos, 22, 023101 (2012)

Subjects: **Physics and Society (physics.soc-ph)**; Statistical Mechanics (cond-mat.stat-mech); Social and Information Networks (cs.SI)

[171] [arXiv:1106.2141](#) [[pdf](#)]

## A Low Cost Remote Sensing System Using PC and Stereo Equipment

[Joel F. Campbell](#), [Michael A. Flood](#), [Narasimha S. Prasad](#), [Wade D. Hodson](#)

Comments: Accepted for publication in American Journal of Physics

Journal-ref: American Journal of Physics, Vol 79, Issue 12, Dec 2011

Subjects: **Physics Education (physics.ed-ph)**; Instrumentation and Detectors (physics.ins-det)

[172] [arXiv:1106.2143](#) [[pdf](#)]

## Microburst nowcasting applications of GOES

[Kenneth L. Pryor](#)

Comments: 21 pages, 12 figures, GOES-R Algorithm Working Group 2011 Annual Meeting; 22 pages, 12 figures, addition of tables, text corrections; 22 pages, 9 figures, National Weather Association E-Journal of Operational Meteorology submission format

Subjects: **Atmospheric and Oceanic Physics (physics.ao-ph)**

[173] [arXiv:1106.2178](#) [[pdf](#), [ps](#), [other](#)]

## Consistency of certain constitutive relations with quantum electromagnetism

[S. A. R. Horsley](#)

Comments: 11 pages

Journal-ref: Phys. Rev. A 84, 063822 (2011)

Subjects: **Optics (physics.optics)**; Quantum Physics (quant-ph)

[174] [arXiv:1106.2209](#) [[pdf](#), [ps](#), [other](#)]

## Scintillation-only Based Pulse Shape Discrimination for Nuclear and Electron Recoils in Liquid Xenon

[K.Ueshima](#), [K.Abe](#), [K.Hiraide](#), [S.Hirano](#), [Y.Kishimoto](#), [K.Kobayashi](#), [Y.Koshio](#), [J.Liu](#), [K.Martens](#), [S.Moriyama](#), [M.Nakahata](#), [H.Nishiie](#), [H.Ogawa](#), [H.Sekiya](#), [A.Shinozaki](#), [Y.Suzuki](#), [A.Takeda](#), [M.Yamashita](#), [K.Fujii](#), [I.Murayama](#), [S.Nakamura](#), [K.Otsuka](#), [Y.Takeuchi](#), [Y.Fukuda](#), [K.Nishijima](#), [D.Motoki](#), [Y.Itow](#), [K.Masuda](#), [Y.Nishitani](#), [H.Uchida](#), [S.Tasaka](#), [H.Ohsumi](#), [Y.D.Kim](#), [Y.H.Kim](#), [K.B.Lee](#), [M.K.Lee](#), [J.S.Lee](#) the [XMASS Collaboration](#)

Comments: 25 pages, 15 figures

Subjects: **Instrumentation and Detectors (physics.ins-det)**; High Energy Physics - Experiment (hep-ex); Nuclear Experiment (nucl-ex)

[175] [arXiv:1106.2210](#) [[pdf](#), [ps](#), [other](#)]

# On the gravitational fields created by the electromagnetic waves

[A. Loinger](#), [T. Marsico](#)

Comments: 6 pages

Subjects: **General Physics** ([physics.gen-ph](#))

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