Conjugate phase plate use in analysis of the frequency response of imaging systems designed for extended depth of field
J Ojeda-Castañeda, JEA Landgrave, CM Gómez-Sarabia
Applied optics 47 (22), E99-E105

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Optical characteristics of Alvarez variable-power spectacles
H Radhakrishnan, WN Charman - … and Physiological Optics, 2017 - Wiley Online Library
6 days ago - Purpose To establish the optical performance of currently available Alvarez variable-power spectacles in relation to their possible utility for ametropes and presbyopes.
Methods Two commercial designs of variable-power (variable-focus) spectacles were
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Myths concerning Woodward's ambiguity function: analysis and resolution
C Baylis, L Cohen, D Eustice… - IEEE Transactions on …, 2016 - ieeexplore.ieee.org
6 days ago - Abstract: Woodward's ambiguity function measures the ability of a radar signal
to simultaneously measure the range of an object via time delay and its velocity using Doppler shift. The ambiguity function is a foundational staple in radar signal processing. Six
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Aberration analysis of optimized Alvarez–Lohmann lenses
A Grewe, M Hillenbrand, S Sinzinger - Applied optics, 2014 - osapublishing.org
In this paper aberrations in Alvarez–Lohmann lenses are analyzed, and a semi-analytical strategy for compensation is derived. An x–y polynomial model is used to describe the aberrations and classify them into static and dynamic components. The lenses are
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Tunable wavefront coded imaging system based on detachable phase mask: Mathematical analysis, optimization and underlying applications
H Zhao, J Wei - Optics Communications, 2014 - Elsevier
Abstract The key to the concept of tunable wavefront coding lies in detachable phase masks.
Ojeda-Castaneda et al.(Progress in Electronics Research Symposium Proceedings, Cambridge, USA, July 5–8, 2010) described a typical design in which two components with
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Bandwidth Tunable Wave-front Coded Imaging System
H Zhao, J Wei - Computational Optical Sensing and Imaging, 2014 - osapublishing.org
In traditional wave-front coded imaging system, the physical form of phase mask could not be
modified dynamically and therefore the defocus invariance characteristic is pre-determined.
Recently, the concept of tunable wave-front coding turns up [1-5]. In [1], Jorge Ojeda-Castaneda
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Computational Optics
JI Brent, M Barnum, S Corrales, N Ding, K Green… - 2012 - arizona.openrepository.com
Many aerospace sensor platforms have a fixed opto-mechanical layout due to harsh environmental conditions. This design decision results in tight opto-mechanical tolerances.
Computational optics is a technology that is currently used in the commercial market, but has

Tunable apodizers and tunable focalizers using helical pairs
J Ojeda-Castaneda, S Ledesma, CM Gomez-Sarabia
Photonics Letters of Poland 5 (1), 20-22

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Diffractive array optics tuned by rotation
A Grewe, P Fesser, S Sinzinger - Applied Optics, 2017 - osapublishing.org
In this work, we apply the Alvarez–Lohmann principle for varifocal lenses to diffractive off-axis elements tuned by rotation. Two methods to combine multiple elements into arrays are
presented. Further, we show that inverse phase sections result from a 2π ambiguity of the
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8.

[HTML] Multi-color operation of tunable diffractive lenses
S Bernet, M Ritsch-Marte - Optics Express, 2017 - osapublishing.org
Abstract Rotationally tunable diffractive optical elements (DOEs) consist of two stacked diffractive optical elements which are rotated with respect to each other around their central
optical axis. The combined diffractive element acts as a highly efficient diffractive lens, which

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Bandwidth Tunable Wave-front Coded Imaging System
H Zhao, J Wei - Computational Optical Sensing and Imaging, 2014 - osapublishing.org
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Recently, the concept of tunable wave-front coding turns up [1-5]. In [1], Jorge Ojeda-Castaneda

Optical processor arrays for controlling focal length or for tuning the depth of field
JO Castaneda, CM Gómez-Sarabia
Photonics Letters of Poland 3 (1), 44-46

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Diffractive array optics tuned by rotation
A Grewe, P Fesser, S Sinzinger - Applied Optics, 2017 - osapublishing.org
In this work, we apply the Alvarez–Lohmann principle for varifocal lenses to diffractive off-axis elements tuned by rotation. Two methods to combine multiple elements into arrays are
presented. Further, we show that inverse phase sections result from a 2π ambiguity of the

Tuning field depth at high resolution by pupil engineering
J Ojeda-Castañeda, CM Gómez-Sarabia
Advances in Optics and Photonics 7 (4), 814-880

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Image enhancement by spatial frequency post-processing of images obtained with pupil filters
I Estévez, JC Escalera, QP Stefano, C Iemmi… - Optics …, 2016 - Elsevier
The use of apodizing or superresolving filters improves the performance of an optical system
in different frequency bands. This improvement can be seen as an in.

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Dependence of depth of focus on spherical aberration of optical systems
A Mikš, J Novák - Applied Optics, 2016 - osapublishing.org
This paper presents a theoretical analysis and computation of aberration coefficients of the
third and fifth order of transverse spherical aberration of an optical system, which generates
a ray bundle with a diameter of a geometric-optical circle of confusion smaller than a

12.

Engineering of apodizer filters in the optical imaging using a set of phase plates
O Palillero-Sandoval… - Optical …, 2016 - opticalengineering.spiedigitallibrary. …
Abstract. A numerical study of the performance of a set of phase masks and apodizer filters,
which are able to extend the depth of field (DOF) in the imaging system, are presented using
a test object with different levels of gray. The ambiguity function is used to display which of

13.

Transverse modulational instability of periodic light patterns in photorefractive strontium barium niobate crystal
A Apolinar-Iribe, N Korneev, V Vysloukh, CM Gómez-Sarabia
Optics letters 27 (23), 2088-2090

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Photorefractive writing and probing of anisotropic linear and nonlinear lattices
R Allio, D Guzmán-Silva, C Cantillano… - Journal of …, 2015 - iopscience.iop.org
Abstract We study experimentally the writing of one-and two-dimensional photorefractive lattices, focusing on the often overlooked transient regime. Our measurements agree we with theory, in particular concerning the ratio of the drift to diffusion terms. We then study the

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Temporal modulation instability, transition to chaos in non-feedback biased photorefractive media
MA Sharif, M Borjkhani, B Ghafary - Optics Communications, 2014 - Elsevier
Abstract This paper surveys the theoretical dynamic model of chaotic regime in optical delayed feedback system; chaotic control parameters of optical input intensity and externally
applied bias electric field are investigated. It is also shown that quasi-periodic state identified

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[PDF] SBN-空气界面基于纵向调制失稳的二维孤子阵列
康慧珍, 刘瑞雪, 杨熹, 邵伟伟, 张天浩 - 2014 - paper.edu.cn
Kang Huizhen, Liu Ruixue, Yang Xi, Shao Weiwei, Zhang Tianhao (School of Physics,the MOE
Key Lab of Weak Nonlinear Photonics,and Tianjin Key Laboratory of Photonics Materials and
Technology for Information Science,Nankai University,Tianjin,300071,China) Abstract: Applying

Tunable Gaussian mask for extending the depth of field
J Ojeda-Castaneda, E Yépez-Vidal, E García-Almanza, ...
Photonics Letters of Poland 4 (3), 115-117

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Bandwidth Tunable Wave-front Coded Imaging System
H Zhao, J Wei - Computational Optical Sensing and Imaging, 2014 - osapublishing.org
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Recently, the concept of tunable wave-front coding turns up [1-5]. In [1], Jorge Ojeda-Castaneda

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Photonics Letters of Poland 3 (1), 44-46

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Diffractive array optics tuned by rotation
A Grewe, P Fesser, S Sinzinger - Applied Optics, 2017 - osapublishing.org
In this work, we apply the Alvarez–Lohmann principle for varifocal lenses to diffractive off-axis elements tuned by rotation. Two methods to combine multiple elements into arrays are
presented. Further, we show that inverse phase sections result from a 2π ambiguity of the

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Published by
A Grewe, S Sinzinger, P Feßer - osapublishing.org
Phase plates, which realize a tunable optical function due to a relative lateral displacement
are well known since the patents of Adolf W. Lohmann and Luis W. Alvarez [1, 2]. They described eg cubic phase plate pairs positioned in a way that their optical functions

Hyper Gaussian windows with fractional wavefronts
J Ojeda-Castaneda, S Ledesma, CM Gomez-Sarabia
Photonics Letters of Poland 5 (1), 23-25

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GG Gregory, AJ Davis… - Proc. of SPIE …, 2015 - proceedings.spiedigitallibrary.org
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Multiple-frame photography for extended depth of field
J Ojeda-Castañeda, E Yepez-Vidal, CM Gómez-Sarabia
Applied optics 52 (10), D84-D91

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Image enhancement by spatial frequency post-processing of images obtained with pupil filters
I Estévez, JC Escalera, QP Stefano, C Iemmi… - Optics …, 2016 - Elsevier
The use of apodizing or superresolving filters improves the performance of an optical system
in different frequency bands. This improvement can be seen as an in.

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A non-mechanical zoom lens fabricated from liquid crystal reactive mesogens
K Gao, A Bhowmik, C McGinty… - SPIE Organic …, 2016 - proceedings.spiedigitallibrary.org
abstract A low f/# lens and zoom lens system based on Pancharatnam phase are presented.
The design, fabrication, and characterization of these devices are shown. The unique characteristics of these devices is made possible by the use of azo-dye photoalignment to

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Temporal Lau effect: Noncoherent regeneration of periodic pulse trains
J Lancis, CM Gómez-Sarabia, J Ojeda-Castañeda, CR Fernández-Pousa, ...
Journal of the European Optical Society-Rapid publications 1

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[HTML] Temporal cloaking for data suppression and retrieval
JM Lukens, AJ Metcalf, DE Leaird, AM Weiner - Optica, 2014 - osapublishing.org
Recent research on time cloaking has revealed a fascinating approach to hide temporal events from an interrogating optical field, by opening up and subsequently closing intensity
gaps in a probe beam. Experiments thus far have demonstrated temporal cloaking of

Tunable focalizers: axicons, lenses, and axilenses
J Ojeda-Castaneda, CM Gómez-Sarabia, S Ledesma
SPIE Optical Engineering+ Applications, 883306-883306-6

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Efficient quantization of tunable helix phase plates
A Grewe, S Sinzinger - Optics Letters, 2016 - osapublishing.org
Helix phase plates are used in a variety of applications from optical trapping to astronomy.
Tunable helix phase plates based on the Alvarez–Lohmann principle allow variation of the
topological charge of the helix by rotating the phase plates with respect to each other around

Key concepts for extending the depth of field with high resolution
J Ojeda-Castañeda, CM Gómez-Sarabia
Opt. Lett 10, 520-522

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Engineering of apodizer filters in the optical imaging using a set of phase plates
O Palillero-Sandoval… - Optical …, 2016 - opticalengineering.spiedigitallibrary. …
Abstract. A numerical study of the performance of a set of phase masks and apodizer filters,
which are able to extend the depth of field (DOF) in the imaging system, are presented using
a test object with different levels of gray. The ambiguity function is used to display which of

Moire patterns: nonconventional applications

Jorge Ojeda-Castaneda ; Cristina M. Gomez-Sarabia ; Jose A. Soto-Sanchez, Proc. SPIE 4392, Optical Processing and Computing: A Tribute to Adolf Lohmann, 60 (July 6, 2001); doi:10.1117/12.432790.

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Multistage growth of monocrystalline ZnO nanowires and twin-nanorods: oriented attachment and role of the spontaneous polarization force
B Fan, Y Zhang, R Yan, J Fan - CrystEngComm, 2016 - pubs.rsc.org
Our understanding of crystal growth mechanisms has changed deeply in the past few decades. Particularly, the oriented attachment of intermediate nanoparticles has been accepted to be a crucial crystal growth mechanism that is distinct from the traditional one
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