

## BIBLIOGRAPHY

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- [Adachi 1960a] I.Adachi "Quantitative measurement of aberration by Ronchi test",  
Atti.Fond.Giorgio Ronchi Contrib.Ist.Naz.Ottica **15** 461-483 (1960)
- [Adachi 1960b] I.Adachi "Quantitative measurement of aberration by Ronchi test",  
Atti.Fond.Giorgio Ronchi Contrib.Ist.Naz.Ottica **15** 550-585 (1960)
- [Adachi 1963] I.Adachi "The diffraction theory of the Ronchi test",  
Atti.Fond.Giorgio Ronchi Contrib.Ist.Naz.Ottica **18** 344-349 (1963)
- [Ai 1987] C.Ai and J.C.Wyant "Effect of piezoelectric transducer  
nonlinearity on phase shift interferometry" Appl.Opt. **26** 1112-1116 (1987)
- [Alcalá 1994] N.Alcalá-Ochoa, A.Dávila and J.E.A.Landgrave "The Ronchi digital  
test" Optica Pura y Aplicada **27** 181-188 (1994)

BIBLIOGRAPHY

- [Arasa 1996] J.Arasa, L.Guisasola, S.Royo, N.Tomàs, M.Vera "Dispositivo para la obtención de mapas topográficos de potencia en lentes oftálmicas" Ver y Oir **103** 105-109 (1996)
- [Arasa 1997] J.Arasa, S.Royo, and C.Pizarro "Aplicación de los métodos de desplazamiento de fase a señales no sinusoidales mediante la obtención de los términos más significativos del espacio de Fourier en la generación del patrón de intensidades de referencia" Actas V Reunión Nacional de Óptica, 281-282 (1997)
- [Arasa 1997b] J.Arasa, S.Royo, C.Pizarro and J.Caum "Influencia de la estabilidad local de la señal en la aplicación de técnicas de detección de fase a deflectometría Ronchi" Actas V Reunión Nacional de Óptica, 267-268 (1997)
- [Arasa 1998] J.Arasa, S.Royo and C.Pizarro "Toroidal surface profilometries through Ronchi deflectometry: Constancy under rotation of the sample" Proc.SPIE **3491** 909-915 (1998)
- [Aziz 1998] D.J.Aziz "Interferometric measurement of surface roughness in engine cylinder walls" Opt.Eng. **37** 1429-1436 (1998)
- [Bennet 1989] J.M.Bennett and L.Mattsson *Introduction to Surface Roughness and Scattering* (Optical Society of America, Washington DC, 1989)
- [Bennett 1993] J.M.Bennett, V.Elings and K.Kjoller "Recent developments in profiling optical surfaces" Appl.Opt. **32** 3442-3447 (1993)
- [Berry 1996] M.V.Berry and S.Klein "Integer, fractional and fractal Talbot effects" J.Mod.Opt. **43** 2139-2164 (1996)
- [Caber 1993] P.J.Caber "Interferometric profiler for rough surfaces" Appl.Opt. **32** 3438-3441 (1993)
- [Calatroni 1993] J.E.Calatroni, P.Sandoz, and G.Tribillon "Surface profiling by means of double spectral modulation" Appl.Opt. **32** 30-37 (1993)
- [Canabal 1998] H.Canabal, J.A.Quiroga and E.Bernabeu "Automatic processing in Moiré deflectometry by local fringe direction calculation" Appl.Opt. **37** 5894-5900 (1998)
- [Cao 1994] G.Cao and X.Yu "Accuracy analysis of a Hartmann-shack wavefront sensor operated with a faint object" Appl.Opt. **33** 2331-2335 (1994)
- [Carretero 1993] L.Carretero, C.González, A.Fimia and I.Pascual "Application of the Ronchi test to intraocular lenses: a comparison of theoretical and measured results" Appl.Opt. **32** 4132-4137 (1993)

BIBLIOGRAPHY

- [Casas 1985] J.Casas *Óptica* (Coop.Artes Gráficas-Librería General, Zaragoza 1985)
- [Castellini 1994] C.Castellini, F.Francini and B.Toribilli "Hartmann test modification for measuring ophthalmic progressive lenses" *Appl.Opt.* **33** 4120-4124 (1994)
- [Caum 1997] J.Caum and M.Lupón "Fabricación de lentes oftálmicas", in *Tecnología Óptica: Lentes oftálmicas, diseño y adaptación* J.Salvadó and M.Fransoy , ed. (Edicions UPC,Barcelona 1997)
- [Choi 1995] J.Chi, G.M.Perera, M.D.Agarwal, R.P.Shukla, and M.V.Mantravadi "Wedge-plate shearing interferometers for collimation testing: use of a moiré technique" *Appl.Opt.* **34** 3628-3638 (1995)
- [Conchello 1997] J.A.Conchello, J.P.Heym, J.L.Wei and J.W.Lichtmann "Novel reflected light confocal profilometer" *Proc.SPIE* **2984** 101-112 (1997)
- [Cordero 1990] A.Cordero-Dávila, A.Cornejo-Rodríguez, and O.Cardona-Núñez "Null Hartmann and Ronchi-Hartmann tests" *Appl.Opt.* **29** 4618-4621 (1990)
- [Cordero 1992] A.Cordero-Dávila, A.Cornejo-Rodríguez and O.Cardona-Núñez "Ronchi and Hartmann tests with the same mathematical theory" *Appl.Opt.* **31** 2370-2376 (1992)
- [Cordero 1998] A.Cordero-Dávila, E.Luna-Aguilar, S.Vázquez-Montiel, S.Zárate-Vázquez and M.E.Percino-Zacarías "Ronchi test with a square grid" *Appl.Opt.* **37** 672-675 (1998)
- [Cornejo 1970] A.Cornejo-Rodríguez and D.Malacara "Ronchi test of aspherical surfaces, analysis, and accuracy", *Appl.Opt.* **9** 1897-1901 (1970)
- [Cornejo 1992] A.Cornejo-Rodríguez "Ronchi Test" in *Optical Shop Testing*, 2nd ed.,D. Malacara ,ed. (Wiley, New York,1992)
- [Creath 1987] K.Creath "Step height measurement using two-wavelength phase-shifting interferometry" *Appl.Opt.* **26** 2810-2816 (1987)
- [Creath 1988] K.Creath "Phase-shifting interferometry techniques" in *Progress in Optics* E.Wolf,ed. (Elsevier New York 1988) Vol **26** pp.357-373
- [Creath 1992] K.Creath and A.Morales "Contact and noncontact profilers" in *Optical Shop Testing*, 2nd ed.,D. Malacara ,ed. (Wiley, New York,1992)
- [Creath 1996] K.Creath and J.Schmit "N-point spatial phase measurement techniques for non-destructive testing" *Opt.Las.Eng* **24** 365-379 (1996)

BIBLIOGRAPHY

- [De Groot 1995] P.De Groot "Derivation of algorithms for phase-shifting interferometry using the concept of a data-sampling window" *Appl.Opt.* **34** 4723-4730 (1995)
- [Ding 1996] Z.Ding, G.Wang and Z.Wang "Microscopic interferometer for surface roughness measurement" *Opt.Eng.* **35** 2956-2961 (1996)
- [Dorsch 1994] R.G.Dorsch, G.Häusler, and J.M.Herrmann "Laser triangulation: fundamental uncertainty in distance measurement" *Appl.Opt.* **33** 1306-1314 (1994)
- [Dragoset 1986] R.A.Dragoset, R.D.Young, H.P.Layer, S.R.Mielczareck, E.C.Teague and R.J.Celotta "Scanning tunneling microscope applied to optical surfaces" *Opt.Let.* **11** 560-562 (1986)
- [Eisner 1998] M.Eisner, N.Lindlein, and J.Schwider "Confocal microscopy with a refractive microlens-pinhole array" *Opt.Let.* **23** 748-749 (1998)
- [Farcy 1997] R.Farcy and R.Damaschini "Triangulating laser profilometer as a three-dimensional space perception for the blind" *Appl.Opt.* **36** 8227-8232 (1997)
- [Fieguth 1994] P.W.Fieguth and D.H.Staelin "High accuracy profiler that uses depth from focus" *Appl.Opt.* **33** 686-689 (1994)
- [Freischlad 1990] K.Freischlad and C.L.Koliopoulos "Fourier description of phase-shifting interferometry" *J.Opt.Soc.Am. A* **7** 542-551 (1990)
- [Gasvik 1995] K.J. Gasvik *Optical Metrology* (Wiley , West Sussex,1995)
- [Genii 1992] Genesee Optics Software v1.5 Reference Manual, pp.7.37 (1992)
- [González 1987] R.C.González and P.Wintz *Digital Image Processing* (Addison-Wesley, New York, 1987)
- [Gozheil 1992] I.Ghozeil "Hartmann and other screen tests" in *Optical Shop Testing*, 2nd ed.,D. Malacara ,ed. (Wiley, New York,1992)
- [Goodman 1968] J.W.Goodman *Introduction to Fourier Optics* (McGraw-Hill, New York, 1968)
- [Greivenkamp 1987] J.E.Greivenkamp "Sub-Nyquist interferometry" *Appl.Opt.* **26** 5245-5252 (1987)
- [Greivenkamp 1992] J.E.Greivenkamp and J.H.Bruning "Phase shifting interferometry" in *Optical Shop Testing*, 2nd ed., D.Malacara, ed. (Wiley, New York, 1992)
- [Halioua 1985] M.Halioua and H.C.Liu "Optical three-dimensional sensing by phase measuring profilometry" *Opt.Las.Eng.* **11** 185-215 (1989)

BIBLIOGRAPHY

- [Hibino 1997] K.Hibino, D.I.Farrant, B.K.Ward, and B.F.Oreb "Dynamic range of Ronchi test with a phase-shifted sinusoidal grating" *Appl.Opt.* **36** 6178-6189 (1997)
- [Hill 1995] S.L.Hill, K.M.Booth, B.Bury, and J.O.Gray "Two dimensional ranging using multidetection" *Proc.7th Conf. Sensors and their Appl.* 160-165 (1995)
- [Huntley 1989] J.M.Huntley "Noise immune phase unwrapping algorithm" *Appl.Opt.* **28** 3268-3270 (1989)
- [Jalie 1980] M.Jalie *The principles of ophthalmic lenses* (Association of British Dispensing Opticians, London 1980)
- [Joenathan 1994] C.Joenathan "Phase-measuring interferometry: new methods and error analysis" *Appl.Opt.* 4147-4155 (1994)
- [Jones 1989] R.Jones and C.Wykes *Holographic and Speckle Interferometry* (Cambridge University Press, Cambridge,1989)
- [Kafri 1985] O.Kafri and I.Glatt "Moiré deflectometry: a ray deflection approach to optical testing" *Opt.Eng.* **24** 944-960 (1985)
- [Keren 1989] E.Keren, A.Livnat and I.Glatt "Moiré deflectometry with pure sinusoidal gratings" *Opt.Let.* **10** 167-169 (1985)
- [Kinstaetter 1988] K.Kinstaetter, A.W.Lohmann, J.Schwider and N.Streibl "Accuracy of phase-shifting interferometry" *Appl.Opt.* **27** 5082-5089 (1988)
- [Kong 1995] I.B.Kong and S.W.Kim "General algorithm of phase-shifting interferometry by iterative least-squares fitting" *Opt.Eng.* **34** 183-188 (1995)
- [Laguarta 1998] F.Laguarta, I.Al-Khatib and R.Artigas "Laser profiler based on the depth from focus principle" *J.Opt.* **29** 236-240 (1998)
- [Latimer 1992] P.Latimer and R.Crouse "Talbot effect reinterpreted" *Appl.Opt* **31** 80-89 (1992)
- [Lulli 1996] A.Lulli, P.Zanetta, A.C.Lucia and F.Casagrande "Contrast variations in white light speckle interferometry with application to 3D profilometry" *Opt.Comm.* **124** 550-557 (1996)
- [Maatta 1997] K.Maatta and J.Kostamovaara "High accuracy liquid level meter based on pulsed time of flight principle" *Proc.SPIE* **3100** 268-177 (1997)
- [Malacara 1974] D.Malacara and A.Cornejo "Null Ronchi test for aspherical surfaces" *Appl.Opt.* **13** 1778-1780 (1974)

BIBLIOGRAPHY

- [Malacara 1981] D.Malacara and Z.Malacara "Diamond tool generation of toroidal surfaces" Appl.Opt. **10** 975 (1981)
- [Malacara 1990] D.Malacara "Analysis of the interferometric Ronchi test", Appl.Opt. **29** 3633-3637 (1990)
- [Malacara 1992] D.Malacara ed. *Optical Shop Testing* (Wiley, New York,1992)
- [Malacara 1992b] D.Malacara and S.L.DeVore "Interferogram evaluation and wavefront fitting" in *Optical Shop Testing*, 2nd ed.,D. Malacara ,ed. (Wiley, New York,1992)
- [Malacara 1998] D.Malacara, M.Servín and Z.Malacara *Interferogram analysis for data testing* (Marcel Dekker,New York 1998)
- [Menchaca 1986] C.Menchaca and D.Malacara "Toroidal and spherocylindrical surfaces" Appl.Opt. **25** 3008-3009 (1986)
- [Meyers 1992] W.Meyers and H.P.Stahl "Contouring of a free oil surface" Proc.SPIE **1755** 84-94 (1992)
- [Mobsby 1974] E.Mobsby "A Ronchi null test for paraboloids" Sky Telesc. **48** 325-330 (1974)
- [Murty 1973] M.V.R.K.Murty and A.Cornejo "Sharpening the fringes in the Ronchi test" Appl.Opt. **12** 2230-2231 (1973)
- [Nakano 1985] Y.Nakano and K.Murata "Talbot interferometry for measuring the focal length of a lens" Appl.Opt. **24** 3162-3163 (1985)
- [Omura 1988] K.Omura and T.Yatagai "Phase measuring Ronchi test" Appl.Opt. **27** 523-528 (1988)
- [Oreb 1994] B.F.Oreb and R.G.Dorsch "Profilometry by phase-shifted Talbot images" Appl.Opt. **33** 7955-7962 (1994)
- [Patorski 1980] K.Patorski "Production of binary amplitude gratings with arbitrary opening ratio and variable period" Opt.Las.Tec. 267-270 (1980)
- [Pfeifer 1995] T.Pfeifer, B.Wang, J.Evertz and R.Tutsch "Phase-shifting Moiré deflectometry" Optik **98** 158-162 (1995)
- [Pfund 1998] J.Pfund, N.Lindlein and J.Schwider "Misalignment effects of the Shack-Hartmann sensor" Appl.Opt. **37** 22-27 (1998)
- [Phillion 1997] D.W.Phillion "General methods for generating phase shifting interferometry algorithms" Appl.Opt. **36** 8098-8115 (1997)
- [Quiroga 1994] J.A.Quiroga and E.Bernabeu "Phase unwrapping algorithm for noisy phase map processing" Appl.Opt. **33** 6725-6731 (1994)

BIBLIOGRAPHY

- [Rayces 1964] J.L.Rayces "Exact relation between wave aberration and ray aberration" Opt.Acta **11** 85-88 (1964)
- [Rea 1996] N.P.Rea, T.Wilson, and R.Juskaitis "Semiconductor laser confocal and interference microscopy" Opt.Comm. **125** 158-167 (1996)
- [Roddier 1990] F.Roddier "Variations on a Hartmann theme" Opt.Eng. **29** 1239-1242 (1990)
- [Ronchi 1964] V.Ronchi "Forty years of history of a grating interferometer" Appl.Opt. **3** 437-451(1964)
- [Royo 1998] S.Royo, J.Arasa, and C.Pizarro "Toroidal surface reconstruction using Ronchi deflectometry " Proceedings of the CLEO-Europe 1998, 202 (1998)
- [Royo 1999] S.Royo, J.Arasa, C.Pizarro and J.A.Fernández "Rough method for the measurement of topographies of toroidal reflective concave surfaces using the Ronchi test" First International Workshop on Optical Measurements, to be published (1999)
- [Sachs 1984] L.Sachs *Applied Statistics: A Handbook of Techniques* 2<sup>nd</sup> Ed. (Springer-Verlag, New York, 1984)
- [Schmit 1996] J.Schmit and K.Creath "Window function influence on phase error in phase-shifting algorithms" Appl.Opt. **35** 5642-5649 (1996)
- [Schmultz 1996] L.E.Schmultz and B.M.Levine "Hartmann sensors detect optical fabrication errors" Laser Focus World, April 111-117 (1996)
- [Schreiber 1997] H.Schreiber and J.Schwider "Lateral shearing interferometer based on two Ronchi phase gratings in series" Appl.Opt. **36** 5321-5324 (1997)
- [Schwider 1981] J.Schwider "Single sideband Ronchi test" Appl.Opt. **20** 2635-2642 (1981)
- [Servín 1996] M.Servín, D.Malacara, J.L.Marroquín, and F.J.Cuevas "New technique for ray aberration detection in Hartmanngrams based on regularized bandpass filters" Opt.Eng. **35** 1677-1683 (1996)
- [Song 1991] J.F.Song and T.V.Vorburger "Stylus profiling at high resolution and low force" Appl.Opt. **30** 42-49 (1991)
- [Spiridonov 1973] V.P.Spiridonov, A.A.Lopatkin *Tratamiento matemático de datos físico-químicos* (MIR, Moscow 1973)

BIBLIOGRAPHY

- [Stultz 1994] K.Stultz and H.P.Stahl "A discussion of techniques that separate orthogonal data produced by Ronchi cross-grating patterns" Proc.SPIE **2263** 226-232 (1994)
- [Su 1993] X.Y.Su, G. von Bally and D.Vukicevic "Phase stepping grating profilometry: utilization of intensity modulation analysis in complex object evaluation" Opt. Comm. **98** 141-150 (1993)
- [Surrel 1996] Y.Surrel "Design of algorithms for phase measurements by the use of phase stepping" Appl.Opt. **35** 51-60 (1996)
- [Surrel 1997] Y.Surrel "Design of phase detection algorithms insensitive to bias modulation" Appl.Opt. **36** 805-807 (1997)
- [Szulc 1997] A.Szulc "Null testing convex optical surfaces" Appl.Opt. **36** 6274-6277 (1997)
- [Thibault 1997] S.Thibault,E.F.Borra and S.Szapiel "A telecentric scanner for 3D profilometry of very large objects" Proc.SPIE **3100** 206-214 (1997)
- [Wan 1990] D.S.Wan and D.T.Lin "Ronchi test and a new phase reduction algorithm" Appl.Opt. **29** 3255-3265 (1990)
- [Wan 1993] D.S.Wan and M.W.Chang "Effects of grating spacing on the Ronchi test" Opt.Eng. **32** 1084-1090 (1993)
- [Van Wingerden 1991] J.van Wingerden, H.J.Frankena and C.Smorenburg "Linear approximation for measurement errors in phase-shifting interferometry" Appl.Opt. **30** 2718-2729 (1991)
- [Yatagai 1984] T.Yatagai "Fringe scanning Ronchi test for aspherical surfaces" Appl.Opt. **23** 3676-3679 (1984)
- [Yi 1997] J.Yi and S.Huang "Modified Fourier transform profilometry for the measurement of steep object shapes" Opt.Las.Eng **27** 493-505 (1997)