

# George Papanicolaou

Department of Mathematics  
Stanford University  
Stanford CA 94305  
Phone: (650)7232081 Fax: (650)7254066  
Internet: papanicolaou@stanford.edu  
URL: <http://math.stanford.edu/~papanico>

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Birth Date: January 23, 1943. Married, with three children.

Birthplace: Athens, Greece. U.S. Citizen.

## Education

Ph.D 1969, M.S 1967, Mathematics, New York University, Courant Institute, B.E.E 1965, Union College, Schenectady N.Y.

## Employment

New York University, Courant Institute: Assistant Professor, 1969-1973, Associate Professor, 1973-1976, Professor, 1976-1993. Director, Division of Wave Propagation and Applied Mathematics, Courant Institute 1979-1993. Professor, Stanford University, 1993-1997. Robert Grimmett Professor of Mathematics, 1997-present.

## Visiting Member

INRIA, Rocquencourt, France, 12/74-2/75, and Observatoire de Nice France, 3/75. Also, INRIA, Rocquencourt, France 9/76-1/77. Visiting Associate Professor: Cornell University (Spring term), 1976-77. Visiting Scientist: Exxon Research Corp. 10/83-1/84. Visiting Professor: Univ. of Paris Dauphine 3/84. Visiting Member: Institute for Advanced Study, Princeton, 9/90-5/92. Gordon Moore Distinguished Scholar, Caltech 9/03-5/04. Institute for Advanced Study, Hong Kong University of Science and Technology 11-12/08. W. Romberg Guest Professor Heidelberg University, 07/10. Schlumberger Visiting Professor Institut des Hautes Études Scientifiques, Paris, 10/10.

## Honors and Awards

Alfred P. Sloan Fellow, 1974-1976. John Simon Guggenheim Fellow 1983-1984. Invited speaker, International Congress of Mathematicians, 1986. Honorary Doctor of Science, University of Athens, 1987. Invited speaker, International Congress of Mathematical Physics, 1994. Invited Plenary speaker, International Congress of Mathematicians, 1998. Fellow of the American Academy of Arts and Sciences, 2000. Member of the U.S. National Academy of Sciences, 2000. Sackler distinguished

visitor, Tel Aviv University, 2000. Lighthill Lecture of British Mathematical Council, 2002. Invited plenary speaker SIAM 50th anniversary meeting, 2002. Invited plenary speaker International Congress of Industrial and Applied Mathematics, 2003. Invited plenary speaker, German Mathematical Union, 2004. SIAM von Neumann Prize 2006, SIAM Fellow, 2009. William Benter Prize in Applied Mathematics 2010. Josiah Willard Gibbs Lecture of the American Mathematical Society 2011. Doctor Honoris Causa, University of Paris VII, 2011.

#### Five Recent Publications in Imaging

"Enhanced Statistical Stability in Coherent Interferometric Imaging", (with L. Borcea, J. Garnier, and C. Tsogka). *Inverse Problems*, Volume 27 (2011) 085004 33pp.

"Coherent Interferometric Imaging, Time Gating and Beamforming", (with L. Borcea, J. Garnier, and C. Tsogka). *Inverse Problems*, Volume 27 (2011) 065008 17pp.

"Signal to Noise Ratio estimation in passive correlation-based imaging", (with J. Garnier, A. Semin and C. Tsogka). *SIAM J. Imaging Sci.* 6-2 (2013), pp. 1092-1110.

"Correlation based virtual source imaging in strongly scattering media", (with J. Garnier). *Inverse Problems*, vol 28, (2012), 075002 (32pp).

"Robust imaging of localized scatterers using the singular value decomposition and  $l_1$  minimization", (with A. Chai, and M. Moscoso). *Inverse Problems* 29 (2013) 025016 (28pp).

#### Five Other Relevant Publications

"Filtering random layering effects in imaging", (with Liliana Borcea, F. Gonzalez del Cueto and Chrysoula Tsogka). *SIAM Journal on Multiscale Model. Simul.* Vol 8 (2010) pp. 751-781.

"Passive Sensor Imaging Using Cross Correlations of Noisy Signals in a Scattering Medium", (with Josselin Garnier). *SIAM J. Imaging Sci.* Volume 2, Issue 2, pp. 396-437 (2009).

"Spatial focusing and intersymbol interference in multiple input single output time reversal communication systems", (with A. Kim, P. Kyritsi, P. Blomgren). *IEEE J. Ocean Engineering*, 33, (2008), 341-355.

"Edge illumination and imaging of extended reflectors", (with Liliana Borcea and Fernando Guevara Vasquez). *SIAM Journal on Imaging Sciences*, vol 1 (2008), pp. 75-114.

"Identification of Green's Functions Singularities by Cross Correlation of Noisy Signals", (with Claude Bardos and Josselin Garnier). *Inverse Problems*, vol 24 (2008), 015011 (26pp).