Past Division Chairs

2011	T.E. Tezduyar	1982	R.C. Diprima	1954	N.M. Newmark
2010	Z. Suo	1981	R.M. Christensen	1953	D. Young
2009	D.J. Inman	1980	R.S. Rivlin	1952	R.E. Peterson
2008	K. Ravi-Chandar	1979	R. Skalak	1951	L.H. Donnell
2007	T.N. Farris	1978	F. Essenburg	1950	R.P. Kroon
2006	W.K. Liu	1977	Y.C. Fung	1949	M. Goland
2005	M.C. Boyce	1976	J. Miklowitz	1948	W.W. Murray
2004	P. Spanos	1975	B.A. Boley	1947	H.W. Emmons
2003	S. Kyriakides	1974	G. Herrmann	1946	J. Poritsky
2002	D. Krajcinovic	1973	J. Kestin	1945	J.N. Goodier
2001	T.J.R. Hughes	1972	P.M. Naghdi	1944	J.H. Keenan
2000	A. Needleman	1971	S. Levy	1943	J.H. Keenan
1999	L. Anand	1970	H.N. Abramson	1942	J.L. Dryden
1998	S.A. Berger	1969	S.H. Crandall	1941	J.P. Den Hartog
1997	C.T. Herakovich	1968	P.G. Hodge, Jr.	1940	J.P. Den Hartog
1996	T.A. Cruse	1967	R. Plunkett	1939	R. Eksergian
1995	J.W. Hutchinson	1966	M.V. Barton	1938	C.R. Soderberg
1994	L.B. Freund	1965	G.F. Carrier	1937	C.R. Soderberg
1993	D.B. Bogy	1964	D.C. Drucker	1936	E.O. Waters
1992	W.S. Saric	1963	E. Reissner	1935	J.A. Goff
1991	T. Belytschko	1962	A.M. Wahl	1934	F.M. Lewis
1990	M.J. Forrestal	1961	A.M. Wahl	1933	J.M. Lessells
1989	S. Leibovich	1960	S.B. Batdorf	1932	G.B. Pegram
1988	T.L. Geers	1959	W. Prager	1931	A.I. Kimball
1987	J.R. Rice	1958	W. Ramberg	1930	S.P. Timoshenko
1986	M.M. Carroll	1957	H. Hetenyi	1929	G.M. Eaton
1985	J.D. Achenbach	1956	R.D. Mindlin	1928	G.M. Eaton
1984	C.R. Steele	1955	N. J. Hoff	1927	S.P. Timoshenko
1983	W.G. Gottenberg				

ASME
SETTING THE STANDARD
1880 2003

2011
International Mechanical Engineering Congress & Exposition

Applied Mechanics Division
Honors & Awards Banquet

Tuesday,November 15, 2011
Denver, Colorado

Ares J. Rosakis
Presiding 2011-2012 Chair
Applied Mechanics Division

2010-2011 EXECUTIVE COMMITTEE

Ares J. Rosakis, *Chair*
Kenneth M. Liechti, *Vice-Chair*
Lawrence A. Bergman, *Program Chair*
Huajian Gao, *Program Vice-Chair*
Peter Wriggers, *Secretary*

HONORS AND AWARDS COMMITTEES

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Tayfun E. Tezduyar, Ares J. Rosakis, Kenneth M. Liechti, Lawrence A. Bergman, Huajian Gao, Zhigang Suo, Daniel J. Inman, Krishnaswamy Ravi-Chandar, Thomas N. Farris, and Wing K. Liu.

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DANIEL C. DRUCKER MEDAL COMMITTEE

Tayfun E. Tezduyar, Ares J. Rosakis, Kenneth M. Liechti, Lawrence A. Bergman, Huajian Gao, Zhigang Suo, Daniel J. Inman, Krishnaswamy Ravi-Chandar, Thomas N. Farris, Wing K. Liu,James R. Barber, Thomas C.T. Ting, Albert S. Kobayashi, Alan Needlemanand Robert L. Taylor.

WARNER T. KOITER MEDAL COMMITTEE

Tayfun E. Tezduyar, Ares J. Rosakis, Kenneth M. Liechti, Lawrence A. Bergman, Huajian Gao, Zhigang Suo, Daniel J. Inman, Krishnaswamy Ravi-Chandar, Thomas N. Farris, Wing K. Liu,Stelios Kyriakides, Richard D. James, C.T. Sun, Pierre Suquet and Raymond W. Ogden.

TIMOSHENKO MEDAL COMMITTEE

Tayfun E. Tezduyar, Ares J. Rosakis, Kenneth M. Liechti, Lawrence A. Bergman, Huajian Gao, Zhigang Suo, Daniel J. Inman, Krishnaswamy Ravi-Chandar, Thomas N. Farris, Wing K. Liu, Zdenek P. Bazant, Sia Nemat-Nasser, Thomas J.R. Hughes, Kenneth L. Johnson and Grigory I. Barenblatt.

PROGRAM

Welcome and Introduction

Recognition

SERVICE AWARD PLAQUE
Tayfun E. Tezduyar

PAST AMD CHAIRS ATTENDING

JOURNAL OF APPLIED MECHANICS

Editor: Robert M. McMeeking

Outgoing Associate Editors: **Younane Abousleiman, Matthew Begley, Jian Cao, Yonggang Huang, Sridhar Krishnaswamy, Thomas Shield**

Incoming Associate Editors: **Daining Fang, Bo Janzon, Nikolaos Aravas, John Lambros, Kenji Takizawa**

ASME FELLOWS

Marco Amabili, Nikolaos Aravas, H. Paul Barringer, Pinhas Z. Bar-Yoseph, Rebecca M. Brannon, Frederick W. Brust, Fu-Pen Chiang, Xin-Lin Gao, Tariq A. Khraishi, Thomas E. Lacy, Hassan Mahfuz, Ernian Pan, Catalin R. Picu, Michael B. Prime, M. K. Ramasubramanian, Jack C. Roberts, William W. Schultz, Mark Shannon, Alexander A. Spector

PRESENTATION OF AMERICAN ACADEMY OF MECHANICS AWARDS
President: K. Ravi-Chandar

Presentation of Awards

THOMAS J.R. HUGHES YOUNG INVESTIGATOR AWARD
Markus Buehler and Ioannis Chasiotis

TED BELYTSCHKOAPPLIED MECHANICS AWARD
Ken P. Chong and David K. Gartling

THOMAS K. CAUGHEY DYNAMICS AWARD
Philip Holmes

DANIEL C. DRUCKER MEDAL
John W. Rudnicki

WARNER T. KOITER MEDAL
James G. Simmonds

TIMOSHENKO MEDAL
Alan Needleman

Thomas J.R. Hughes Young Investigator Award

Markus Buehler
Associate Professor
Department Environmental Engineering
Massachusetts Institute of Technology

Exceptional contributions in computational mechanics of biological materials and structures, focused on deformation and failure in the context of both normal physiological, mechanically extreme and disease states through the utilization of atomistic, molecular, coarse-grained and continuum methods.

Markus J. Buehler is an Associate Professor in the Department of Civil and Environmental Engineering at the Massachusetts Institute of Technology, where he directs the Laboratory for Atomistic and Molecular Mechanics. Since 2010 he serves as the Director of the MIT-Germany program and as group leader of the Mechanics and Materials group in the Department of Civil and Environmental Engineering at MIT. Before joining MIT in 2005 he served as the Director of Multiscale Modeling and Software Integration at Caltech's Materials and Process Simulation Center. He received a Ph.D. in Chemistry from the Max Planck Institute for Metals Research after obtaining a M.S. in Engineering Mechanics from Michigan Tech, and undergraduate studies in Chemical and Process Engineering at the University of Stuttgart. Buehler's research focuses on bottom-up simulation of structural and mechanical properties of biological, bioinspired and synthetic materials across multiple scales, with a specific focus on materials failure from a nanoscale and molecular perspective. His work has identified the core principles that link atomistic-level chemical structures to functional scales by understanding how biological materials achieve superior mechanical properties through the formation of hierarchical structures. His research has demonstrated that the chemical composition of biological materials plays a minor role in achieving functional properties. Rather, the way components are connected at distinct length-scales defines what material properties can be achieved, how they can be altered, and how they fail in disease states and physiologically extreme conditions. Buehler's research uses the study of materials failure as a tool to elucidate the design principles of how functional material properties are achieved and how they are lost, which has resulted in the development of biologically inspired materials.

Buehler has published more than 170 articles on computational materials science, authored one monograph, and given hundreds of invited, keynote and plenary talks. He was cited as one of the top engineers in the United States between the ages of 30-45 through invitation to the 2007 National Academy of Engineering-Frontiers in Engineering Symposium of the National Academy of Engineering. Buehler received the 2007 National Science Foundation CAREER Award, the 2008 United States Air Force Young Investigator Award, the 2008 Navy Young Investigator Award, and the 2008 DARPA Young Faculty Award. In 2009, his work was recognized by the Presidential Early Career Award for Scientists and Engineers (PECASE). He recently received the Harold E. Edgerton Faculty Achievement Award for exceptional distinction in teaching and in research or scholarship, the highest honor bestowed on young MIT faculty. Other major awards include the Rossiter W. Raymond Memorial Award (American Institute for Mining Engineering), the Sia Nemat Nasser Award (ASME), the Leonardo da Vinci Award (ASCE), and the Stephen Brunauer Award (American Ceramic Society). Buehler serves as an Editorial Board member of several journals including: BioNanoScience (as founding Editor-in-Chief), PLoS ONE, International Journal of Applied Mechanics (as Executive Editor), ActaMechanicaSinica, Journal of the Mechanical Behavior of Biomedical Materials, Journal of Engineering Mechanics, Journal of Nanomechanics and Micromechanics, and the Journal of Computational and Theoretical Nanoscience.

The Young Investigator Award was established in 1998 and renamed the Thomas J.R. Hughes Young Investigator Award in 2008. The Award recognizes special achievements in Applied Mechanics for researchers under the age of 40.

Thomas J.R. Hughes Young Investigator Award

Ioannis Chasiotis
Willett Faculty Scholar of Engineering
University of Illinois at Urbana Champaign

In recognition of outstanding contributions to the understanding of the mechanics of fracture of polycrystalline andnanocrystalline thin films, and the time dependent mechanics of nanoscale polymeric fibers with pioneering full-fieldexperimental methods based on Atomic Force Microscopy and MEMS.

Professor Ioannis Chasiotis is a Willett Faculty Scholar of Engineering at the University of Illinois at Urbana Champaign, which he joined as an Assistant Professor in 2005. Currently, he is an Associate Professor of Aerospace Engineering and an affiliate of the Beckman Institute for Advanced Science and Technology. He received his Ph.D. and M.S. degrees in Aeronautics from the California Institute of Technology under the advising of Professor Wolfgang Knauss in 2002 and 1998, respectively, and a Diploma in Chemical Engineering from the Aristotle University of Thessaloniki in Greece in 1996.

His research focuses on experimental deformation and fracture mechanics of thin films for MEMS and nanoscale structures and their composites. He has carried out pioneering work in the areas of experimental full-field measurements at the nanoscale, and the strain rate mechanics of nanocrystalline metal thin films and polymeric nanofibers with focus on rate dependent mechanisms of inelastic material behavior.

He is a recipient of a Presidential Early Career Award for Scientists and Engineers (PECASE), the SES Young Investigator Medal, the Journal of Strain Analysis Lecture from the Society for Experimental Mechanics, the NSF-CAREER Award, the ONR Young Investigator Award, the Xerox Award for Faculty Research from the University of Illinois, several journal and conference best paper awards, the Founder's Prize from the American Academy of Mechanics, and the Charles Babcock Memorial Award from the California Institute of Technology. Professor Chasiotis has been very active in professional societies as the Chair of various technical committees and organizer/co-organizer of conference symposia and tracks. Since 2006 he has served as an Associate editor of the Journal of Experimental Mechanics.

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Ted Belytschko Applied Mechanics Award

Ken P. Chong
Engineering Advisor and Director
Mechanics and Materials
National Science Foundation

In recognition of his role as an educator, a journal editor and promoter of Mechanics,particularly in emerging areas

Prof. KEN P. CHONG, P.E.earned his Ph.D. in Mechanics from Princeton University. He has been the Engineering Advisor and Director of Mechanics and Materials for the past 21 years at the National Science Foundation [NSF]. He was the Interim Division Director at NSF in 2005. Currently he is associated with NIST and the George Washington University, writing a text book; editing an Elsevier structures journal, a new Taylor & Francis journal of Smart and Nano Materials and a Spon book series; serving on university boards, doing lectures, research, consulting, etc. *He specializes in solid-mechanics/materials, nano-mechanics, and structural mechanics, including nano-technology, green engineering and sustainability.*At NSF in addition to managing 120 university research projects in mechanics/materials, he has been involved in the development of civil infrastructure systems, model-based simulation, non-destructive evaluation, structural control, durability and accelerated tests, life-cycle engineering, nano science and engineering, and other initiatives; established the NSF Summer Institute on Nano Mechanics/Materials at Northwestern University; co-created a new NSF program in Nano- & Bio-Mechanics and founded the Engineering Distinguished Lecture Series involving numerous Nobel laureates and distinguished speakers.

After he graduated from Princeton he was a senior research engineer at the National Steel Corp. for 5 years, during which he worked on building systems and pioneered the R&D of architectural sandwich-panel. Prior to joining NSF, he was a professor and chair of solid mechanics/structures at the University of Wyoming for 15 years; developed new semi-circular fracture specimens for brittle materials; built up graduate programs, experimental and computer facilities; developed new research programs funded by ERDA, DOE, DOD, NSF, AMF, etc and new courses; established joint seminars with Rocky Mountain universities. His experimental research on sweet spots in the 70's changed the design of tennis rackets. He has published 200 plus technical papers and authored several books including 2 textbooks onmechanics by Wiley, currently in 3rd and 2nd editions.

He has given 50 keynote lectures, received awards including the fellow of AAM, ASME, SEM, USACM and ASCE; Edmund Friedman Professional Recognition Award; Honorary Doctorate, Shanghai Univ.; Distinguished Member, ASCE; NCKU Distinguished Alumnus Award; ASME 2011 Ted Belytschko Applied Mechanics Award, and the NSF highest Distinguished Service Award. He has been a visiting professor at MIT, U. of Washington – Seattle, U. of Houston, Dalian U. of Technology, Tsinghua U.; honorary professor at U. of Hong Kong, HK PolyU, Shanghai U. and others. He was invited by the founding President Prof. C. W. Woo as an academic consultant for the Hong Kong Univ. of Science & Technology, 1988-89, involved in the planning and design of the major modern research university. The university is now ranked No. 17 in technology globally in the recent *Times Higher Education Supplement.* He delivered the Mindlin Lecture at Columbia University in 2005 and the Sadowsky Lecture at RPI in 2006.

The Applied Mechanics Award was established in 1988 and renamed the Ted Belytschko Applied Mechanics Award in 2008.The Award is given to an outstanding individual for significant contributions in the practice of engineering mechanics; contributions may result from innovation, research, design, leadership or education.

Ted Belytschko Applied Mechanics Award

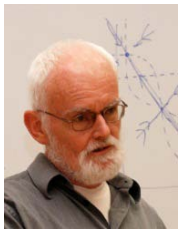
David K. Gartling
Consultant
Engineering Sciences Center
Sandia National Laboratories

For his internationally regarded contributions to computational mechanics andpioneering developments in the application of the finite element method to fluid dynamics

Dr. David K. Gartling is currently a consultant to the Engineering Sciences Center at Sandia National Laboratories, Albuquerque, New Mexico. Previously, he was a Senior Scientist/Engineer in the Engineering Sciences Center; he retired from Sandia in 2009. He earned his B.S. and M.S. in Aerospace Engineering at the University of Texas at Austin and completed the diploma course at the von Karman Institute for Fluid Dynamics in Brussels, Belgium. After completion of his Ph.D. in Aerospace Engineering at the University of Texas at Austin, he joined the technical staff at Sandia National Laboratories. Dr. Gartling was a Visiting Associate Professor in the Mechanical Engineering Department at the University of Sydney, Australia under a Fullbright Fellowship, and later he was a Supervisor in the Fluid and Thermal Sciences Department at Sandia National Laboratories. Dr. Gartling has published numerous papers dealing with finite element model development and finite element analysis of heat transfer and fluid dynamics problems of practical importance. He has also co-authored a book on finite element methods with J. N. Reddy. He is presently a member of several professional societies, and has served on the editorial board of several archival journals, including the International Journal of Computational Engineering Science and Communications in Applied Numerical Methods. He was the co-editor of the International Journal for Numerical Methods in Fluids from 2002 to 2009. He is a Fellow of ASME.

The Applied Mechanics Award was established in 1988 and renamed the Ted Belytschko Applied Mechanics Award in 2008.The Award is given to an outstanding individual for significant contributions in the practice of engineering mechanics; contributions may result from innovation, research, design, leadership or education.

Thomas K. Caughey Dynamics Award



Philip Holmes
Eugene Higgins Professor
Mechanical and Aerospace Engineering,
Professor of Applied and
Computational Mathematics
Princeton University

In recognition of his scholarly work in Nonlinear Dynamics and Vibrations. His work revolutionized engineering nonlinear dynamics and vibrations, bridging the gap between Applied Mathematics and Engineering through the application of powerfulconcepts and methodologies of nonlinear dynamics to engineering practice

Philip Holmes was born in England in 1945 and educated at theUniversities of Oxford and Southampton. He taught at Cornellfrom 1977 to 1994, when he moved to Princeton University, where he is Eugene Higgins Professor of Mechanical and AerospaceEngineering, Professor of Applied and Computational Mathematics, anda member of Princeton's Neuroscience Institute. He currently works on the neuromechanics of animal locomotion and on the neurodynamics of decision making. He has co-authored over two hundred scientificpapers, two books on dynamical systems and one on low-dimensionalmodels of turbulence, and `Celestial Encounters' - an historicalaccount of the origins of chaos theory. He is a former GuggenheimFellow, a Fellow of the American Academy of Arts and Sciences, aFellow of the American Physical Society, a Fellow of the Society for Industrial and Applied Mathematics, and an Honorary Memberof the Hungarian Academy of Sciences. He holds the 2009 Lyapunov Award of the American Society of Mechanical Engineers. He has alsopublished four collections of poems (Anvil Press, London).

The Thomas K. Caughey Dynamics Award was established in 2008 and is conferred in recognition of an individual who has made significant contributions to the field of nonlinear dynamics through practice, research, teaching, and/or outstanding leadership.

Warner T. Koiter Medal

James G. Simmonds
Professor emeritus
Department of Civil
and Environmental Engineering
University of Virginia

For rigorous, seminal contributions to linear and nonlinear theories in solid mechanics with special emphasis on plates and shells; for an extensive body of journal publications and books on solid mechanics and applied mathematics.

James G. Simmonds was born on July 26, 1935, in Washington, D.C., and raised in Arlington, Virginia, where he attended public schools through the ninth grade. He then entered Episcopal High School in Alexandria where he was graduated in 1953. He attended MIT, receiving, simultaneously, his S.B. and S.M degrees in Aeronautical Engineering in 1958. From 1959 until 1962 he served in the USAF, on assignment to NASA, Langley. Honorably discharged, he entered the Mathematics Department at MIT from which he received his Ph.D. in Applied Mathematics in 1965. He subsequently was a post-doctoral fellow at both MIT and Harvard before joining the faculty at the University of Virginia (UVa) as an assistant professor. He was promoted to Associate Professor in 1968, to Full Professor in 1971, to the Quarles Chair in 1986, and to Chair of the Applied Mathematics Department in 1989.

Simmonds has held visiting professorships in Denmark, Holland, Israel, and France. He has authored or co-authored over 120 papers and three books, all in second editions, and has translated from the French a book on computational mechanics by Pierre Ladevèze. Presently, Simmonds is professor emeritus in the Department of Civil and Environmental Engineering at UVa.

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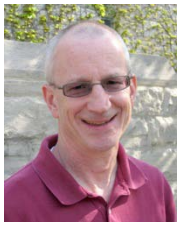
The Warner T. Koiter Medal, established in 1996, is bestowed in recognition of distinguished contributions to the field of solid mechanics with special emphasis on the effective blending of theoretical and applied elements of the discipline, and on a high degree of leadership in the international solid mechanics community.

Daniel C. Drucker Medal



John W. Rudnicki
Professor of Civil and Environmental
Engineering and Mechanical Engineering
Northwestern University

For providing a new fundamental understanding of deformation instabilities in brittle rocks and granular media, including their interactions with pore fluids, with applications to fault instability, quantification of energy radiation from earthquakes, and environment and resource-related geomechanics.

John W. Rudnicki was educated at Brown University (Providence, R.I.) receiving a bachelor's degree in engineering mechanics in 1973; and a master's degree and Ph.D. in solid mechanics in 1974 and 1977, respectively. Before coming to Northwestern University in 1981, he was a Research Fellow in Geophysics at the California Institute of Technology and Assistant Professor in the Department of Theoretical and Applied Mechanics, University of Illinois at Urbana-Champaign (1978). A Fellow of ASME, he received the Maurice A. Biot Medal (2006) from ASCE's Engineering Mechanics Division "for his fundamental contributions to the mechanics of porous media and its application to rock mechanics and geophysics" In 2008, he was awarded the Brown Engineering Alumni Medal. He has served on a variety of committees for the ASCE and ASME and panels for the National Science Foundation, U. S. Geological Survey, National Research Council and Department of Energy. He is recent past-chair of the Geosciences Council of the Basic Energy Sciences division of DOE and was a member of the Advisory Council of the Southern California Earthquake Center (2006 – 2010). He has held editorial positions, including associate editor for the Journal of Applied Mechanics and the Journal of Geophysical Research. He is currently on the editorial advisory board of the *International Journal for Numerical and Analytical Methods in Geomechanics and Mechanics.* Rudnicki has been on the Northwestern Associated Student Government's Faculty Honor Roll, was the McCormick School of Engineering and Applied Science Advisor of the Year (2008-09) and has developed a popular undergraduate course on the mechanics of sports.

Rudnicki's research has been in the general area of inelastic behavior and failure of solids, particularly geomaterials. He has been especially interested in the development of localized deformation and in the effects of coupling between deformation and fluid diffusion in connection with applications to the mechanics of earthquakes, energy storage and recovery, disposal of toxic wastes and geological sequestration of CO_2. Among his early contributions is a paper, co-authored with J. R. Rice, titled "Conditions for the Localization of Deformation in Pressure-Sensitive Dilatant Materials." Published in the *Journal of the Mechanics and Physics of Solids* (Vol. 23, pp. 371-394) in 1975, Rudnicki and Rice were recognized for this work with the U.S. National Committee on Rock Mechanics' Award for Outstanding Research in Rock Mechanics (June 1977). The paper is now a classic, having been cited more than 1,000 times. Localization of deformation has been a persistent interest, and recently has focused on the formation of compaction bands. These are thin, roughly planar zones of local porosity reduction that form perpendicular to the maximum compressive stress and have been observed in porous sandstones in the field and laboratory. They are important for a variety of applications involving fluid injection and withdrawal, in particular, sequestration of CO_2, because they form barriers to fluid flow. In 1999, he co-chaired (with Wolfgang Wawersik) a U. S. Department of Energy Workshop on Research Needs for Terrestrial Sequestration of CO_2 and co-authored the resulting first in-depth report assessing basic research needs.

The Daniel C. Drucker Medal was established in 1997 and is conferred in recognition of distinguished contributions to the field of applied mechanics and mechanical engineering through research, teaching and service to the community over a substantial period of time.

Timoshenko Medal

Alan Needleman
Professor of Materials Science and Engineering
University of North Texas

For seminal contributions to the understanding of inelastic deformation and failure of materials.

Needleman received his bachelor's degree in mechanical engineering at the University of Pennsylvania, Philadelphia, in 1966. He earned his master's and Ph.D. degrees in engineering at Harvard University (Cambridge, Mass.) in 1967 and 1971, respectively. He holds honorary doctorates from the Technical University of Denmark, Lyngby; and Ecole Normale Supérieure de Cachan, France.

After spending five years in applied mathematics at the Massachusetts Institute of Technology (Cambridge, Mass.), Dr. Needleman joined the faculty at Brown University (Providence, R.I.) in 1975. He was the Florence Pirce Grant university professor from 1996 until his retirement from Brown in June 2009. Needleman is now professor of materials science and engineering at the University of North Texas, Denton.

His career has been intertwined with the rise of the field of computational solid mechanics. He has made many significant and lasting contributions, usually as the first to demonstrate that computational approaches are both feasible and likely to yield insight into physical phenomena. He has had extensive interactions with Viggo Tvergaard in Denmark and with Erik van der Giessen in the Netherlands, as well as productive interactions with many other colleagues in the U.S., France, England and other countries.

His specific contributions include the first finite element calculations of necking in tensile bars, the analysis of shear band localizations in realistic geometries (with Viggo Tvergaard), the first calculations of localized deformations in single crystals (with Bob Asaro), the development of finite element formulations with embedded cohesive surface constitutive relations, ductile failure analyses using constitutive relations modeling progressive cavitation in solids (with Viggo Tvergaard), and the development of numerical dislocation mechanics for investigating fundaments aspects of small scale plasticity (with Erik van der Giessen). Needleman's contributions in several of these areas have provided the basis for engineering tools that are used in a variety of industries.

Needleman has authored/co-authored nearly 300 archival journal publications and he has been recognized (Thomson Reuters) as a highly-cited author in both engineering and materials science. He has lectured around the world and has served on the editorial boards of numerous publications.

An ASME Fellow, Needleman was a member (1995-2000) of the Executive Committee of the Applied Mechanics Division and served as chair in 2000. He was associate editor of the *Journal of Applied Mechanics* (1998-2004). In 2006, he received the Society's Daniel C. Drucker Medal.

The Timoshenko Medal was established in 1957 and is conferred in recognition of distinguished contributions to the field of applied mechanics. Instituted by the Applied Mechanics Division, it honors Stephen P. Timoshenko, world-renowned authority in the field, and it commemorates his contributions as author and teacher.

PAST HONOREES

Thomas J.R. Hughes Young Investigator Award

1998 Mary C. Boyce
1999 Huajian Gao
2000 Pedro Ponte-Castaneda
2001 Zhigang Suo
2002 *None Presented*
2003 L. Cate Brinson
2004 Kaushik Bhattacharya
2005 L. Mahadevan and George Haller
2006 Jian Ciao
2007 Assad Oberai
2008 Chad M. Landis
2009 Pradeep Sharma
2010 Harley T. Johnson

Ted Belytschko Applied Mechanics Award

1988 H. Norman Abramson
1989 Sam Levy
1990 Owen Richmond
1991 George Abrahamson
1992 William G. Gottenberg
1993 David Hibbit
1994 Siegfried S. Hecker
1995 Harry Armen
1996 Sheila Widnall
1997 Richard Skalak
1998 John Swanson
1999 Karl Pister
2000 Dick MacNeal
2001 Dan Mote
2002 David E. Newland
2003 John O. Hallquist
2004 Arthur W. Leissa
2005 Carl T. Herakovich
2006 Lewis T. Wheeler
2007 Oscar Dillon
2008 Choon Fong Shih
2009 Eugenio Oñate
2010 Yoichiro Matsumoto

Thomas K. Caughey Dynamics Award

2008 Ali H. Nayfeh
2009 Stephen H. Crandall
2010 Jerrold E. Marsden

Daniel C. Drucker Medal

1998 Daniel C. Drucker
1999 Ascher H. Shapiro
2000 Philip G. Hodge, Jr.
2001 Bruno A. Boley
2002 George J. Dvorak
2003 Leon M. Keer
2004 Frank A. McClintock
2005 Robert L. Taylor
2006 Alan Needleman
2007 Albert S. Kobayashi
2008Thomas C.T. Ting
2009 James R. Barber
2010 Rohan Abeyaratne

Warner T. Koiter Medal

1997 Warner T. Koiter
1998 Viggo Tvergaard
1999 Charles R. Steele
2000 Giulio Maier
2001 Wolfgang G. Knauss
2002 James K. Knowles
2003 David R.J. Owen
2004 Zenon Mróz
2005 Raymond W. Ogden
2006 Pierre Suquet
2007 C.T. Sun
2008 Richard D. James
2009 Stelios Kyriakides
2010 Nicolas Triantafyllidis

Timoshenko Medal

1957	Stephen P. Timoshenko	1983	Daniel C. Drucker
1958	Arpad L. Nadai	1984	Joseph B. Keller
1958	Sir Geoffrey Taylor	1985	Eli Sternberg
1958	Theodore von Karman	1986	George R. Irwin
1959	Sir Richard Southwell	1987	Ronald S. Rivlin
1960	Cornelius B. Biezeno	1988	George K. Batchelor
1960	Richard Grammel	1989	Bernard Budiansky
1961	James N. Goodier	1990	Stephen H. Crandall
1962	Maurice A. Biot	1991	Yuan-Cheng B. Fung
1963	Michael James Lighthill	1992	Jan D. Achenbach
1964	Raymond D. Mindlin	1993	John L. Lumley
1965	Sydney Goldstein	1994	James R. Rice
1966	William Prager	1995	Daniel D. Joseph
1967	Hillel Poritsky	1996	J. Tinsley Oden
1968	Warner T. Koiter	1997	John R. Willis
1969	Jakob Ackeret	1998	Olgierd C. Zienkiewicz
1970	James J. Stoker	1999	Anatol Roshko
1971	Howard W. Emmons	2000	Rodney J. Clifton
1972	Jacob P. Den Hartog	2001	Ted Belytschko

1973 Eric Reissner
1974 Albert E. Green
1975 Chia-Chiao Lin
1976 Erastus H. Lee
1977 John D. Eshelby
1978 George F. Carrier
1979 Jerald L. Ericksen
1980 Paul M. Naghdi
1981 John H. Argyris
1982 John W. Miles
2002 John W. Hutchinson
2003 Lambert B. Freund
2004 Morton E. Gurtin
2005 Grigory I. Barenblatt
2006 Ken L. Johnson
2007 Thomas J.R. Hughes
2008 Sia Nemat-Nasser
2009 Zdenek P. Bazant
2010 Wolfgang G. Knauss