

CURRICULUM VITAE

Alexander V. Idesman

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Education:

1989 Ph.D. in Continuum Mechanics, Institute of Problems of Strength, Kiev, USSR.

1982 M.S. (Honors) in Mechanical Engineering, Kiev Institute of Technology, Kiev, USSR.

Publications: 121 scientific publications, including 1 patent.

Professional Experience

September 2016 – present	Professor, Texas Tech University, Lubbock, Department of Mechanical Engineering;
September 2008 – August 2016	Associate Professor, Texas Tech University, Lubbock, Department of Mechanical Engineering;
June 2015 – August 2015	Air Force Summer Faculty Fellowship (AFRL/MN EGLIN AF BASE, Florida);
May 2014 – July 2014	Air Force Summer Faculty Fellowship (AFRL/MN EGLIN AF BASE, Florida);
May 2012 – July 2012	Air Force Summer Faculty Fellowship (AFRL/MN EGLIN AF BASE, Florida);
July 2009 – June 2010	Faculty Development Leave, AFRL/MN EGLIN AF BASE, Florida
May 2008 – July 2008	Air Force Summer Faculty Fellowship (AFRL/MN EGLIN AF BASE, Florida);
May 2007 – July 2007	Air Force Summer Faculty Fellowship (AFRL/MN EGLIN AF BASE, Florida);
June 2006 – August 2006	Air Force Summer Faculty Fellowship (AFRL/MN EGLIN AF BASE, Florida);
September 2000 – August 2008	Assistant Professor, Texas Tech University, Lubbock, Department of Mechanical Engineering;
August 1995 – August 2000	Senior Research Associate, Univ. of Hannover, Dep. of Civil Engineering, Institute of Structural & Computational Mechanics, Hannover, Germany;
September 1991– August 1995	Associate Research Professor, Consultant (1995–present), Leader of research group, Institute for Superhard Materials of the Ukrainian Academy of Sciences, Kiev, Ukraine;
March 1982 – September 1991	Engineer, Junior Researcher, Researcher, Institute for Superhard Materials of the Ukrainian Academy of Sciences, Kiev, Ukraine;

Research Experience:

Development of new numerical methods with optimal accuracy for partial differential equations, new finite element algorithms and computer codes for wave propagation, structural dynamics and heat transfer problems, for nonlinear problems with finite thermal, elastic and plastic strains, for nonlinear problems with martensitic phase transitions (steels, shape memory alloys), for linear viscoelastic problems; Numerical simulation of different engineering problems

Courses Taught

Computational Mechanics I and II
Elasticity
Plasticity
Analysis of Engineering Systems II
Engineering Mechanics I and II
Dynamics

Member:

USACM (U.S. Association for Computational Mechanics)
GAMM (Society of Applied Mathematics & Mechanics)
ASME (American Society of Mechanical Engineers)
SEM (Society for Experimental Mechanics)

Reviewer for:

Int. J. Plasticity
Computational Mechanics
Computational Physics
Computer Methods in Applied Mechanics and Engineering
Computers and Structures
Computer Modeling in Engineering & Sciences
Computational Materials Science
Computers and Mathematics with Applications
Int. J. Solids and Structures
Int. J. for Numerical Methods in Engineering
Reports on Progress in Physics
J. Mechanics & Physics of Solids
Journal of Physics: Condensed Matter
Journal of Applied Physics
Journal of Sound and Vibration
Wave Motion
Journal of Mechanics-Based Design of Structures and Machines
Modeling and Simulation in Materials Science and Engineering
Engineering Computations
Material Research
Materials Science and Engineering
Finite Elements in Analysis and Design
Structural Stability and Dynamics
Mechanics Based Design of Structures and Machines
Journal of Aircraft
John Wiley & Sons, Inc. (Textbook on Mechanics of Materials)

Reviewer for:

Proposals of the DOE (the Office of Basic Energy Sciences), April, 2013.

Conferences, symposiums and seminars during last fifteen years

a) Mini-symposium organizer

1. The organizer (along with Dr. H. Gravenkamp) of the mini-symposium “Advances in Numerical Methods for Linear and Non-linear Dynamics and Wave Propagation” at the 15th World Congress on Computational Mechanics (WCCM-APCOM 2022), Yokohama, Japan, July 31- August 5, 2022.
2. The organizer of the mini-symposium “Advances in Numerical Methods for Linear and Non-linear Dynamics and Wave Propagation” at the 15th U.S. National Congress on Computational Mechanics (USNCCM16), Chicago, USA, July 25-29, 2021.
3. The organizer (along with Drs. H. Gravenkamp and E Atroshchenko) of the mini-symposium “Advances in Numerical Methods for Linear and Non-linear Dynamics and Wave Propagation” at the 14th World Congress on Computational Mechanics (WCCM 2018), Paris, France, July 19- 24, 2020.
4. The organizer of the mini-symposium “Advances in Numerical Methods for Linear and Non-linear Dynamics and Wave Propagation” at the 15th U.S. National Congress on Computational Mechanics (USNCCM15), Austin, USA, July 28- August 1, 2019.
5. The organizer of the mini-symposium “Advances in Numerical Methods for Linear and Non-linear Dynamics and Wave Propagation” at the 7th ECCOMAS Thematic Conference on Computational Structural Dynamics and Earthquake Engineering, Crete, Greece, June 24-26, 2019.
6. The organizer of the mini-symposium “Advances in Numerical Methods for Linear and Non-linear Dynamics and Wave Propagation” at the 13th World Congress on Computational Mechanics (WCCM 2018), New York, USA, July 22-27, 2018.
7. The organizer of the mini-symposium “Advances in Numerical Methods for Linear and Non-linear Dynamics and Wave Propagation” at the 6th European Conference on Computational Mechanics (Solids, Structures and Coupled Problems) (ECCM 6) and the 7th European Conference on Computational Fluid Dynamics (ECFD 7) jointly organized in Glasgow, UK, 11-15 June, 2018.
8. The organizer (along with Prof. I. Stanciulescu) of the mini-symposium “Advances in Numerical Methods for Linear and Non-linear Dynamics and Wave Propagation” at the 14th U.S. National Congress on Computational Mechanics (USNCCM14), Montreal, Canada, July 17-20, 2017.
9. The organizer of the mini-symposium “Advances in Numerical Methods for Linear and Non-linear Dynamics and Wave Propagation” at the 6th ECCOMAS Thematic Conference on Computational Structural Dynamics and Earthquake Engineering, Rhodes Island, Greece, June 15-17, 2017.
10. The organizer of the mini-symposium “Advances in Numerical Methods for Linear and Non-linear Dynamics and Wave Propagation” at the 7th European Congress on Computational Methods in Applied Sciences and Engineering, Crete, Greece, June 5-10, 2016.
11. The organizer of the mini-symposium “Advances in Numerical Methods for Linear and Non-linear Dynamics” at the 5th ECCOMAS Thematic Conference on Computational Structural Dynamics and Earthquake Engineering, Crete, Greece, May 25-27, 2015.
12. The organizer (along with Prof. G. Hulbert) of the mini-symposium “Advances in Numerical Methods for Linear and Non-linear Dynamics” at the 13th U.S. National Congress on Computational Mechanics (USNCCM13), San Diego, California, July 26-30, 2015.

13. The organizer (along with Prof. G. Hulbert) of the mini-symposium “Advances in Numerical Methods for Linear and Non-linear Dynamics” at the 11th World Congress on Computational Mechanics (WCCM XI), Barcelona, Spain, July 20-25, 2014.
14. The organizer (along with Prof. G. Hulbert) of the mini-symposium “Advances in Numerical Methods for Linear and Non-linear Dynamics” at the 12th U.S. National Congress on Computational Mechanics (USNCCM12), Raleigh, North Carolina, July 22-25, 2013.
15. The organizer of the mini-symposium “Advances in Numerical Methods for Linear and Non-linear Dynamics” at the 4th ECCOMAS Thematic Conference on Computational Structural Dynamics and Earthquake Engineering, Kos, Greece, June-12-14, 2013.
16. The organizer (along with Prof. G. Hulbert) of the mini-symposium “Advances in Numerical Methods for Linear and Non-linear Dynamics” at the 3rd ECCOMAS Thematic Conference on Computational Structural Dynamics and Earthquake Engineering, Corfu, Greece, May-25-28, 2011.
17. One of the organizers of the mini-symposium “Computational Methods for Solid-Solid Phase Transformations” at the ninth U.S. National Congress on Computational Mechanics (USNCCM IX), San Francisco, USA, July 23-26, 2007.

b) Semi-plenary lectures

1. Idesman, A., **Semi-plenary lecture at the 8th ECCOMAS Thematic Conference on Computational Methods in Structural Dynamics and Earthquake Engineering, Athens, Greece**, "A New Numerical Approach to the Solution of PDEs with Optimal Accuracy on Irregular Domains and Cartesian Meshes. Application to the Wave, Heat, Helmholtz, Poisson and Elasticity Equations," June 29, 2021.
2. Idesman, A., **Semi-plenary lecture at the 5th ECCOMAS Thematic Conference on Computational Methods in Structural Dynamics and Earthquake Engineering, Crete, Greece**, "Accurate modelling of elastic and acoustic wave propagation in homogeneous and heterogeneous materials," May 25-27, 2015.

c) Keynote lectures

1. Idesman, A., **Keynote lecture at the 16th U.S. National Congress on Computational Mechanics (USNCCM16), Chicago, USA**, "A New Numerical Approach to the Solution of PDEs with Optimal Accuracy on Irregular Domains and Cartesian Meshes. Application to the Wave, Heat, Helmholtz, Poisson and Elasticity Equations", July 27, 2021.
2. Idesman, A., **Keynote lecture at the 15th U.S. National Congress on Computational Mechanics (USNCCM15), Austin, USA**, "A New Numerical Approach to the Solution of PDEs with Optimal Accuracy on Irregular Domains and Cartesian Meshes", August 1, 2019.
3. Idesman, A., **Keynote lecture at the 7th ECCOMAS Thematic Conference on Computational Methods in Structural Dynamics and Earthquake Engineering, Crete, Greece**, "A New Numerical Approach to the Solution of PDEs with Optimal Accuracy on Irregular Domains and Cartesian Meshes," June 24, 2019.
4. Idesman, A., **Keynote lecture at the 13th World Congress on Computational Mechanics (WCCM 2018), New York, USA**, "A New Numerical Approach to the Solution of PDEs with Optimal Accuracy on Irregular Domains and Cartesian Meshes ", July 25, 2018.
5. Idesman, A., **Keynote lecture at the 6th European Conference on Computational Mechanics (Solids, Structures and Coupled Problems) (ECCM 6) and the 7th European Conference on Computational Fluid Dynamics (ECFD 7) jointly organized in Glasgow, UK**, "A New

Numerical Approach to the Solution of PDE with Optimal Accuracy on Irregular Domains and Cartesian Meshes", June 14, 2018.

6. Idesman, A., **Keynote lecture at the 14th U.S. National Congress on Computational Mechanics (USNCCM14), Montreal, Canada**, "A New Accurate Numerical Approach to Wave Propagation, Structural Dynamics and Heat Transfer Problems", July 17, 2017.
7. Idesman, A., **Keynote lecture at the 6th ECCOMAS Thematic Conference on Computational Methods in Structural Dynamics and Earthquake Engineering, Rhodes Island, Greece**, "Optimal reduction of numerical dispersion for wave propagation problems. Application to isogeometric elements.", June 15, 2017.
8. Idesman, A., **Keynote lecture at the 7th European Congress on Computational Methods in Applied Sciences and Engineering (ECCOMAS Congress 2016), Crete, Greece**, "Reduction of Numerical Dispersion for Wave Propagation Problems. Application to Isogeometric Elements and Finite Elements," June 7, 2016.
9. Idesman, A., **Keynote lecture at the 13th U.S. National Congress on Computational Mechanics (USNCCM13), San Diego, California**, "New High-Order Accurate Isogeometric Elements with Reduced Dispersion for Wave Propagation Problems ", July 29, 2015.
10. Idesman, A., **Keynote lecture at the 11th World Congress on Computational Mechanics (WCCM XI), Barcelona, Spain**, "Accurate modelling of wave propagation problems in homogeneous, composite and functionally graded materials", July 21, 2014.
11. Idesman, A., **Keynote lecture at the 12th U.S. National Congress on Computational Mechanics (USNCCM12), Raleigh, North Carolina**, "Finite element modeling of linear elastodynamics problems with explicit time-integration methods and linear elements with reduced dispersion. Comparative study of different finite element techniques", July 24, 2013.
12. Idesman, A., **Keynote lecture at the 3rd ECCOMAS Thematic Conference on Computational Methods in Structural Dynamics and Earthquake Engineering, Corfu, Greece**, "Accurate numerical solutions of structural dynamics and wave propagation problems based on new dispersion-reduction technique and new two-stage time-integration technique," May 25, 2011.

d) Invited lectures

1. Idesman, A., "A New Numerical Approach to Solution of PDEs with Optimal Accuracy on Irregular Domains and Interfaces using Cartesian Meshes. Application to the Wave, Heat, Helmholtz, Poisson and Elasticity Equations.", **the seminar of Sandia**, Albuquerque, NM, USA, November 3, 2020.
2. Idesman A., "A New Numerical Approach to the Solution of Partial Differential Equations with Optimal Accuracy on Irregular Domains and Cartesian Meshes. Application to the wave, heat, Helmholtz and Poisson equations", **the seminar of the Department of Mathematics and Statistics of the Texas Tech University**, Lubbock, TX, October 30, 2019.
3. Idesman A., "A New Numerical Approach to the Solution of PDE with Optimal Accuracy on Irregular Domains and Cartesian Meshes. Application to the Wave and Heat Equations.", **the seminar of the Department of Mechanical Engineering of the Texas Tech University**, Lubbock, TX, September, 2018.
4. Idesman, A., "A New Accurate Numerical Approach to Wave Propagation, Structural Dynamics and Heat Transfer Problems", **the seminar at the Air Force Institute of Technology**, Dayton, OH, USA, April 12, 2018.

5. Idesman, A., " A New Accurate Numerical Approach t Wave Propagation, Structural Dynamics and Heat Transfer Problems ", **the seminar of the Universität Duisburg-Essen**, Essen, Germany, July 10, 2017.
6. Idesman, A., "A New Accurate Numerical Approach to Wave Propagation, Structural Dynamics and Heat Transfer Problems", **the seminar at Sandia**, Albuquerque, NM, USA, March 13, 2017.
7. Idesman, A., "A New Accurate Numerical Approach to Structural Dynamics and Wave Propagation Problems", **the seminar of the Institute of Thermomechanics, Academy of Sciences of the Czech Republic**, Prague, Czech Republic, June 23, 2016.
8. Idesman, A., "A New Accurate Numerical Approach to Structural Dynamics and Wave Propagation Problems", **the seminar of the Department of Mathematical Sciences, New Jersey Institute of Technology**, NJ, USA, April 22, 2016.
9. Idesman, A., "A New Accurate Numerical Approach to Structural Dynamics and Wave Propagation Problems", **the seminar of the Aerospace Computational Design Laboratory, Massachusetts Institute of Technology, Cambridge**, MA, USA, April 21, 2016.
10. Idesman, A., "A New Accurate Numerical Approach to Structural Dynamics and Wave Propagation Problems", **the seminar of the US Army Engineer Research and Development Center**, Vicksburg, MS, USA, August 20, 2015.
11. Idesman, A., "A New Accurate Numerical Approach to Structural Dynamics and Wave Propagation Problems", **the seminar of the Air Force Research Lab**, Eglin, FL, USA, July 2, 2015.
12. Idesman A., "Accurate Modelling Of Wave Propagation Problems In Homogeneous, Composite And Functionally Graded Materials", **the seminar of the Department of Mechanical Engineering of the Stanford University**, Stanford, CA, March 31, 2015.
13. Idesman A., "Accurate Modelling Of Wave Propagation Problems In Homogeneous, Composite And Functionally Graded Materials", **the seminar of the Department of Civil and Environmental Engineering of the University of California, Berkeley**, CA, March 30, 2015.
14. Idesman, A., "Accurate Finite-Element Modelling of Elastodynamics Problems in Homogeneous, Composite and Functionally Graded Materials ", **the seminar of the ABAQUS**, Providence, RI, USA, October 10, 2014.
15. Idesman, A., "Accurate Numerical Solutions of Structural Dynamics and Wave Propagation Problems for Homogeneous, Composite and Functionally Graded Materials ", **the seminar of the Air Force Research Lab**, Eglin, FL, USA, June 21, 2014.
16. Idesman A., "Accurate Numerical Solutions of Structural Dynamics and Wave Propagation Problems for Homogeneous, Composite and Functionally Graded Materials", **the seminar of the U.S. Army Research Laboratory**, Aberdeen MD, May 20, 2014.
17. Idesman A., "Accurate Numerical Solutions Of Structural Dynamics And Wave Propagation Problems Based On New Dispersion-Reduction Technique And New Two-Stage Time-Integration Technique", **the seminar of the Department of Aerospace Engineering and Engineering Mechanics of the University of Texas at Austin**, Austin, TX, March 27, 2014.
18. Idesman, A., "Accurate Numerical Solutions of Wave Propagation Problems Based on New Dispersion-Reduction Technique and New Two-Stage Time-Integration Technique. Comparative Study of Different Finite Element Techniques", **the seminar of the U.S. Army Engineer Research and Development Center (ERDC)**, Hanover, New Hampshire, USA, August 7, 2013.
19. Idesman, A., "Accurate Numerical Solutions of Wave Propagation Problems Based on New Dispersion-Reduction Technique and New Two-Stage Time-Integration Technique. Comparative

Study of Different Finite Element Techniques", **the seminar of the Naval Undersea Warfare Center**, Newport, RI, USA, August 6, 2013.

20. Idesman, A., "Accurate Numerical Solutions of Wave Propagation Problems Based on New Dispersion-Reduction Technique and New Two-Stage Time-Integration Technique. Comparative Study of Different Finite Element Techniques", **the seminar of the Los Alamos National Laboratory**, Los Alamos, NM, USA, June 25, 2013.
21. Idesman, A., "Accurate Numerical Solutions of Wave Propagation Problems Based on New Dispersion-Reduction Technique and New Two-Stage Time-Integration Technique", **the seminar of the Ruhr University**, Bochum, Germany, January 7, 2013.
22. Idesman A., "Accurate Numerical Solutions Of Structural Dynamics And Wave Propagation Problems Based On New Dispersion-Reduction Technique And New Two-Stage Time-Integration Technique", **the seminar of the Department of Mechanical Engineering of the Texas Tech University**, Lubbock, TX, February 6, 2012.
23. Idesman, A., "Accurate Numerical Solutions Of Structural Dynamics And Wave Propagation Problems Based On New Dispersion-Reduction Technique And New Two-Stage Time-Integration Technique", **the seminar of the Air Force Research Lab**, Eglin, FL, USA, June 21, 2012.
24. Idesman, A., "A New Numerical Approach to Accurate Time Integration of Structural Dynamics and Wave Propagation Problems," **the seminar of Sandia**, Albuquerque, NM, USA, October 27, 2011.
25. Idesman, A., "A New Numerical Approach to Accurate Time Integration of Structural Dynamics and Wave Propagation Problems," **the seminar of the National Institute of Standards and Technology**, Gaithersburg, MD, USA, July 13, 2011.
26. Idesman, A., "A New Numerical Approach to Accurate Time Integration of Structural Dynamics and Wave Propagation Problems," **the seminar of the Naval Undersea Warfare Center**, Newport, RI, USA, June 14, 2011.
27. Idesman, A., "Accurate Numerical Solutions of Structural Dynamics and Wave Propagation Problems Based on New Dispersion-Reduction Technique and New Two-stage Time-integration Technique", **the seminar of the Dortmund University**, Dortmund, Germany, May 23, 2011.
28. Idesman, A., "A New Numerical Approach to Accurate Time Integration of Structural Dynamics and Wave Propagation Problems", **the seminar of the Naval Surface Warfare Center**, Panama City, FL, USA, March 4, 2010.
29. Idesman A., "A New Fast, Accurate and Non-oscillatory Numerical Approach for Wave Propagation Problems in Solids", **the seminar of the U.S. Army Research Laboratory**, Aberdeen MD, April 15, 2008.
30. Idesman A., "A New High-Order Accurate Method and a New Solution Strategy for Transient Dynamics Problems. Application to Hopkinson Pressure Bar", **the seminar of the Air Force Research Lab**, Eglin, FL, July, 2008.
31. Idesman A., "A New Fast, Accurate And Non-Oscillatory Numerical Approach for Wave Propagation Problems in Solids", **the seminar of the Department of Mechanical Engineering of the Texas Tech University**, Lubbock, TX, November 5, 2008.
32. Idesman A., "A New Fast, Accurate And Non-Oscillatory Numerical Approach for Wave Propagation Problems in Solids", **the seminar of the Department of Aerospace Engineering of the Texas A&M University**, College Station, TX, November 13, 2008.

33. Idesman A., "A New High-Order Accurate Method and a New Solution Strategy for Transient Dynamics Problems. Application to Hopkinson Pressure Bar", **the seminar of the Air Force Research Lab**, Eglin, FL, July, 2007.

Presentations at conferences

1. Idesman, A., "A New Numerical Approach to Solution of PDEs with Optimal Accuracy on Irregular Domains and Interfaces using Cartesian Meshes. Application to the Wave, Heat, Helmholtz, Poisson and Elasticity Equations", **the 14th World Congress on Computational Mechanics (WCCM 2018)**, (online).
2. Idesman, A., "An Advanced Numerical Approach for Wave Propagation Problems in Isotropic and Anisotropic Inhomogeneous Materials. Application to High-frequency Pulse Propagation in the Hopkinson Pressure Bar", **the AFOSR Computational Mathematics Program Review Meeting**, Arlington, VA, August 15, 2019.
3. Idesman, A., "A New Numerical Approach to the Solution of PDEs with Optimal Accuracy on Irregular Domains and Cartesian Meshes ", **the eXtended Discretization Methods (Thematic Conference of the European Community in Computational Methods in Applied Sciences)**, Lugano, Switzerland, **July 3-5**, 2019.
4. Idesman, A., "An Advanced Numerical Approach for Wave Propagation Problems in Isotropic and Anisotropic Inhomogeneous Materials. Application to High-frequency Pulse Propagation in the Hopkinson Pressure Bar", **the AFOSR Computational Mathematics Program Review Meeting**, Arlington, VA, August 16, 2018.
5. Idesman, A., "An Advanced Numerical Approach for Wave Propagation Problems in Isotropic and Anisotropic Inhomogeneous Materials. Application to High-frequency Pulse Propagation in the Hopkinson Pressure Bar", **the AFOSR Computational Mathematics Program Review Meeting**, Arlington, VA, August 16, 2017.
6. Idesman, A., Bhuiyan, A. "Accurate Finite Element Modeling of Stresses for Stationary Cracks Under Impact Loading", **the 53rd Annual Technical Meeting of the Society of Engineering Science (SES)**, Maryland, USA, 2-5 October 2016.
7. Idesman, A., "A New Fast, Accurate and Non-Oscillatory Numerical Approach for Wave Propagation Problems in Solids: Application to High-Frequency Pulse Propagation in the Hopkinson Pressure Bar", **the AFOSR Computational Mathematics Program Review Meeting**, Arlington, VA, August 9, 2016.
8. Idesman, A., "A New Fast, Accurate and Non-Oscillatory Numerical Approach for Wave Propagation Problems in Solids: Application to High-Frequency Pulse Propagation in the Hopkinson Pressure Bar", **the AFOSR Computational Mathematics Program Review Meeting**, Arlington, VA, August 3, 2015.
9. Idesman, A., "Accurate Finite Element Modeling of Stresses for Stationary Cracks Under Impact Loading", **the IV International Conference on Computational Modeling of Fracture and Failure of Materials and Structures**, 3-5 June 2015, Cachan, France.
10. Idesman, A., "Accurate solutions of wave propagation problems under impact loading by the standard, spectral and isogeometric high-order finite elements. Comparison and prediction of accuracy of different space-discretization techniques, **the 5th ECCOMAS Thematic Conference on Computational Methods in Structural Dynamics and Earthquake Engineering**, Crete, Greece, May 25-27, 2015.

11. Idesman, A., "A New Fast, Accurate and Non-Oscillatory Numerical Approach for Wave Propagation Problems in Solids: Application to High-Frequency Pulse Propagation in the Hopkinson Pressure Bar", **the AFOSR Computational Mathematics Program Review Meeting**, Arlington, VA, July 29, 2013.
12. Idesman, A., "Finite element modeling of linear elastodynamics problems with explicit time-integration methods and linear elements with reduced dispersion. Comparative study of different finite element techniques", **the 12th U.S. National Congress on Computational Mechanics (USNCCM12)**, Raleigh, North Carolina, July 24, 2013.
13. Idesman, A., "Finite element modeling of linear elastodynamics problems with explicit time-integration methods and linear elements with reduced dispersion. Comparative study of different finite element techniques used for elastodynamics", **the 4th ECCOMAS Thematic Conference on Computational Structural Dynamics and Earthquake Engineering**, Kos, Greece, June 12, 2013.
14. Idesman, A., "A New Fast, Accurate and Non-Oscillatory Numerical Approach for Wave Propagation Problems in Solids: Application to High-Frequency Pulse Propagation in the Hopkinson Pressure Bar", **the AFOSR Computational Mathematics Program Review Meeting**, Arlington, VA, July 30, 2012.
15. Idesman, A., "Accurate Numerical Solutions of Structural Dynamics and Wave Propagation Problems Based on New Dispersion-Reduction Technique and New Two-Stage Time-Integration Technique", **the AFOSR Research Opportunities Workshop**, Eglin, FL, USA, July 21, 2012.
16. Idesman, A., "A new post-processing procedure for the increase in the order of accuracy of the trapezoidal rule at time integration of linear elastodynamics problems," **the 3rd ECCOMAS Thematic Conference on Computational Methods in Structural Dynamics and Earthquake Engineering**, Corfu, Greece, May 28, 2011.
17. Idesman, A., Schmidt, M., Foley, J., "A New Numerical Approach to Accurate Time Integration of Structural Dynamics and Wave Propagation Problems," **the 16th US National Congress of Theoretical and Applied Mechanics**, State College, Pennsylvania, USA, June 30, 2010.
18. Idesman, A., "Use of Post-Processing to Increase the Order of Accuracy of Trapezoidal Rule at Time Integration of Linear Elastodynamics Problems," **the 16th US National Congress of Theoretical and Applied Mechanics**, State College, Pennsylvania, USA, June 30, 2010.
19. Idesman A., Schmidt M., Foley J. R., Tu Y., and Sierakowski R. L., "A New Fast, A new non-oscillatory numerical approach for structural dynamics and wave propagation in solids", **the IMAC XXVII Conference and Exposition on Structural Dynamics**, Orlando, Florida, February 9 -12, 2009.
20. Idesman A., "A New Numerical Approach to Accurate Time Integration of Structural Dynamics and Wave Propagation Problems", **the 10th U.S. National Congress on Computational Mechanics**, Columbus, Ohio, July 16 -19, 2009.
21. Idesman A., "A New Fast, Accurate and Non-Oscillatory Numerical Approach for Wave Propagation Problems in Solids", **the 8th. World Congress on Computational Mechanics (WCCM8) and the 5th. European Congress on Computational Methods in Applied Sciences and Engineering (ECCOMAS 2008)**, June 30 – July 5, 2008.
22. Idesman A., "A New High-Order Accurate Method and a New Solution Strategy for Transient Dynamics Problems", **the 17th US Army Symposium on Solid Mechanics**, Baltimore, Maryland, 04.02.07 - 04.05.07.

23. Idesman A., “A New High-Order Accurate Method and a New Solution Strategy for Transient Dynamics Problems”, **the First International Conference on Computational Methods in Structural Dynamics and Earthquake Engineering –COMPdyn 2007**, Rethymno, Greece, 06.13.07 - 06.16.07.
24. Idesman A., “A new phase-field approach for the modeling of martensitic phase transitions at nano-scale”, **the 9th U.S. National Congress on Computational Mechanics**, San Francisco, CA, 2007.
25. The 7th World Congress on Computational Mechanics, Los Angeles, California, 2006
26. The 8th U.S. National Congress on Computational Mechanics (USNCCM8), Austin, Texas, 2005.
27. The 8th International Conference on Numerical Methods in Industrial Forming Processes, Columbus, Ohio, 2004
28. The 7th National Congress on Computational Mechanics, Albuquerque, New Mexico, 2003.
29. The PLASTICITY 2003 Conference, Quebec City, Canada, 2003.
30. The 2002 SES (Society of Engineering Science) Conference, State College, PA, 2002.
31. The 6th National Congress on Computational Mechanics, Dearborn, Michigan, 2001.

Conference Scientific Committees

1. The 8th ECCOMAS Thematic Conference on Computational Methods in Structural Dynamics and Earthquake Engineering, Athens, Greece, June 21-23, 2021
<https://2021.compdyn.org/content/scientific-committee> .
2. The 2nd International Conference on Advanced Modelling of Wave Propagation in Solids, Prague, Czech Republic, September 17-21, 2018
<https://wavemodelling2018.it.cas.cz/im/im/page/scientcommit> .

Grants and Awards (Amount credited to A. Idesman)

2021- 2022	Army Research Office ‘A new high-order accurate approach for modeling of wave propagation and heat transfer in heterogeneous materials’. PI: A. Idesman (\$73,255)	
2019- 2022	National Science Foundation ‘A new computational approach for wave propagation’. PI: A. Idesman (\$297,049)	
2016- 2019	Air Force Office of Scientific Research ‘An advanced numerical approach for wave propagation problems in isotropic and anisotropic inhomogeneous materials. Application to high-frequency pulse propagation in the Hopkinson Pressure Bar’. PI: A. Idesman (\$326,157)	
2015	Air Force Summer Faculty Fellowship	\$20.350
2012- 2015	Air Force Office of Scientific Research ‘A New Fast, Accurate and Non-Oscillatory Numerical Approach for Wave Propagation Problems in Solids. Application to High-Frequency Pulse Propagation in the Hopkinson Pressure Bar’. PI: A. Idesman (\$288,500)	
2014	Air Force Summer Faculty Fellowship	\$15.000

2012	Air Force Summer Faculty Fellowship	\$18,500
2012	Air Force Summer Faculty Fellowship (support for my PhD student Mr. Pham D.)	\$13,870
2009- 2010 (sabbatical)	Air Force Research Lab, Eglin, FL “Reduction of Numerical Dispersion of FEM for Wave Propagation in Solids”. PI: A. Idesman	\$101,000 (paid by AFRL, Eglin, FL)
2008	Air Force Summer Faculty Fellowship	\$16,000
2007	Office of Naval Research, “Fundamental Understanding and Improvement of Energetic Reactions of Aluminum Particles with Oxidizers and Metals” PI: V. Levitas and Co-PIs: M. Pantoya and A. Idesman (\$34,615)	
2007	High-pressure and high-temperature exploration of transition metal molecules: Research and education. PI: Y. Ma and Co-PI: A. Idesman (\$26,757).	
2007	Air Force Summer Faculty Fellowship	\$16,000
2007	Pi Tau Sigma, Best Mechanical Engineering Professor	
2006-2007	Texas Higher Education Coordinating Board, 2006 ADVANCED RESEARCH PROGRAM: “Multidisciplinary Research Program in Computation and Control of Biological Systems”. PI: W.P. Dayawansa and Co-PI: P. Seshaiyer from Department of Mathematics & Statistics, TTU and Co-PI: A. Idesman (\$37,000).	
2006	Air Force Summer Faculty Fellowship	\$15,930