

3. EDUCATIONAL AND PROFESSIONAL HISTORY**CV****Dr. A. N. THANOS PAPANICOLAOU**

Associate Professor

Iowa Institute of Hydrosience and Engineering, IIHR

Department of Civil and Environmental Engineering

The University of Iowa

Iowa City, Iowa 52242

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Citizenship: US and Greek

INSTITUTIONS OF HIGHER EDUCATION ATTENDED:

Ph.D. Civil and Environmental Engineering, Virginia Tech (VPI&SU), Blacksburg, VA, 1997

M.Sc. Civil and Environmental Engineering, Virginia Tech (VPI&SU), Blacksburg, VA, 1993

Undergraduate Five-year Degree in Civil Engineering, Aristotle University of Thessaloniki, Greece, 1990

PROFESSIONAL AND ACADEMIC POSITIONS:

Director of Graduate Studies- Water Resources/Hydraulics Group, 8/08 - present

Program Coordinator- Water Resources/Hydraulics Group, 8/07 To 8/08

Associate Professor, Department of Civil and Environmental Engineering, The University of Iowa, IIHR-Hydrosience and Engineering, 8/03 to Present

Associate Director of the NSF/IGERT Center of Multiphase Environmental Research, College of Engineering, 6/02 -8/03

Associate Professor, Department of Civil and Environmental Engineering, Washington State University, 2/03 -6/03

Assistant Professor, Department of Civil and Environmental Engineering, Washington State University, 8/97 -2/03

Research Assistant, Department of Civil Engineering, Virginia Tech, 1/94-7/97

Teaching Assistant, Department of Civil Engineering, Virginia Tech, 8/91-12/93

HONORS, AWARDS, RECOGNITIONS & OUTSTANDING ACHIEVEMENTS:

ASCE Walter Huber Award, 2008

Robert and Virginia Wheeler Faculty Fellow in engineering, 2007-present

Iowa Obermann Center of excellence research award 2005-2006

Elected Board Member of the International Fluvial Hydraulics–River Flow 2006-present

Received International grant to Turkey from the UI committee on Travel of International Programs (April 20 2005).

Honorable Member of the Bedload Research International Cooperative (BRIC), 2005.

Best Graduate and Professional & Mentor Award, Washington State University, 2001-2002

Leon Luck Award-Best Performance Professor In The Department Of Civil And Environmental Engineering, Washington State University, 1999-2000

Who's Who in America, Marquis, 5th Edition, 2000-present

WSU Internationalization Grant Award, 1999-2000

Award from the International Foundation Alexander S. Onassis, 1994-1997

Award from the N.A.T.O. Science Fellowships Program, 1990-1992

Award from the United States Geological Survey Research, 1993-1996

National Dean's List, 1992-1997

Lifetime Member of the National Civil Engineering Honor Society, Chi Epsilon

Award from the Technical Chamber of Greece, 1988-1989

First Individual Overall, Aristotle University of Thessaloniki, Greece, 1990

RESEARCH INTERESTS:

- Sediment Fingerprinting Techniques using Stable isotopes
- River Mechanics and Geomorphology
- Bedforms in Gravel Bed Streams and Bed Pattern Recognition
- Sediment Transport of Cohesive and non- Cohesive Sediments
- Watershed Processes Integration, Sensor Technology and Cyber-infrastructure
- Numerical Modeling of the Erosion Processes in a Watershed
- Water/Soil Quality in a Watershed
- Numerical Modeling of Turbulent Fluid-Flow and Sediment Transport Phenomena
- Image Analysis and Advanced Experimental Methods
- Gully Formation and Evolution
- Saturated Conductivity spatial patterns
- The Role of Antibiotics on Sediment Entrainment

SPEAKER INVITATIONS (representative):

Invited to teach the Master Class of Rehabilitation of Rivers during the 2008 River Flow Conference, September 3-5, 2008.

Invited on 2007 CUASHI regional meeting this fall that will be held in Chicago on Friday, October 12.

Invited on 2006 to give a presentation for the US Environmental Protection Agency EPA, region 7.

Invited on 2006 to participate in the North-Central GSA Meeting.

Invited on Aug. 2006 to submit a paper during the American Geophysics Union (AGU) meeting for recent progress in community initiatives for environmental science.

Invited on Feb. 2006 to give a seminar at the Dept. of Geology and Atmosphere Science at the Iowa State University

Invited Speaker at the Water Quality USEPA Research Laboratory, Cincinnati, Ohio, 2006

Invited on Sept., 2006 from the University of Granada, Spain to be a part of its research team on the criteria of internationality in water quality research.

Invited on Oct., 2006 to give a seminar at Colorado State University, Dept. of Geomorphology.

Invited on Sept. 2006 to visit the Southwest Watershed Research Center, Tucson.

Invited to participate in a San Diego GEON project, January 27-28, 2005.

Invited to give a presentation at the SAFL, University of Minnesota seminar, February , 2005.

Invited to participate in the HIS Symposium, Austin Texas, 2005.

Keynote Speaker at the 6th ICHE conference, Australia, 2004.

Invited Speaker to the Sensors for Environmental Observatories Workshop organized by the NSF, November 30 - December 2, 2004, The University of Washington.

Invited Speaker at the 42nd Annual ASCE Environmental and Water Resources Design Conference, ISU, March 25th, 2004.

Invited to give a seminar at the USGS headquarters, Reston, VA, April 19-20 2005.

Invited to participate in the 14th Conference of the International Soil Conservation Organization on Morocco at 2005.

Invitation to Participate In The 2nd U.S.-Chinese Joint Workshop on Sediment Transportation, sponsored by the National Science Foundation and the National Natural Science Foundation of China, July 2002.

Invitation to Visit and Lecture at The University Of Newcastle, UK, January 2001.

SCHOLARSHIPS (representative):

ASCE to participate in the EXCEED program, 2001

Scholarship from the International Foundation Alexander S. Onassis, 1994-1997

Scholarship from the N.A.T.O. Science Fellowships Program, 1990-1992

Scholarship from the United States Geological Survey Research, 1993-1996

Scholarship from the Technical Chamber of Greece, 1988-1989

PROFESSIONAL SERVICE (representative):

Overall coordinator for sessions on sediment transport and fluvial processes, IAHR 33rd Congress, scheduled for Vancouver during August 10-14 2009

Invited Member of the Watershed Management Technical Committee (WMTC) of the American Society of Civil Engineers/Environmental and Water Resources Institute, for 2010 with a tentative location in Minneapolis/St. Paul.

2009 AGU 3 Sessions convener: Earth Surface: Processes and Landscapes Posters; Feedbacks Between Ecological, Geomorphic, and Hydrologic Systems Across Multiple Scales; Extreme

Runoff Processes.

Coordinator/Initiator of the Clear Creek Watershed Initiative Project, 2005-present

Vice Chair of the ASCE Hydraulics and Waterways Council, ASCE, 2007-present

Member of the Iowa Water Center Advisory Council, 2006-present

National Chairman of the ASCE Sedimentation Committee, 2004-present

Member of the ASCE Watershed Council, ASCE, 2007-present

Member of the Critical Zone Observatory Consortium, 2007-present

Moderator/Organizer for Special Session on Cyber on infrastructure Watershed Management Conference , July 19-22, 2005 Williamsburg, VA

WATERS Modeling Committee, 2006-present

AGU member of the Sedimentation and Land-Use Dynamics, 2007-present

Cleaner Workshop Program for the UIOWA-Minnesota group, 2005

Co-organized a session for discrete and continuum modeling of granular systems in the McMat2005 Symposium, LSU, Louisiana.

Member of Scientific committee for IT HydroScience in the 7th International Conference on Hydroscience and Engineering (ICHE) on USA, September 10-13, 2006, PA.

Organized a symposium- meeting between IIHR members and the IDNR watershed group, 2005

Organized a session for IT HydroScience in the 7th International Conference on Hydroscience and Engineering on USA, September 10-13, 2006.

UI liaison person for the CUAHSI effort with the UI

Vice Chairman of a Sediment Transport Modeling Task Committee, Fluids Engineering Division, 2005-2007

Presented in the symposium organized by the NSF Cleaner Planning grant team, November 17-18, 2005.

NSF CLEANER member. The goal is to formulate ideas and the basis of the environmental research in the 21st century, 2004

NSF QUASHI member. The goal of the program is to develop new research ideas in the area of hydrologic research in the 21st century, 2003-present

Scientific Advisor/Representative for the Pacific Northwest of the National Center for Regional Sediment Management Research Program, developed by the Waterways Experimentation Station, U.S. Army Corps of Engineers, 2001-present

Workshop Organizer on Contaminated Sediments in coordination with the USACE and EWRI/ASCE October of 2004, Muscatine Iowa, 2004

Organized A Workshop/Seminar In Pullman, WA on July 21, 1999 in Coordination With The WSDOT and WDFW Salmon Technical Advisory Committee To Initiate A Discussion On Fish Passage Related Issues Focused on Culvert Hydraulic Research.

Panel Member of the Highway Transportation Research Board, 2002-2004

Scientific Advisor for the Clearwater River Basin Watershed program, 2003-present

Scientific Advisor for the Alaskas' largest fisheries Association CRAA, 2003-present

Scientific Advisor/Representative for the Pacific Northwest of the National Center for Regional Sediment Management Research Program, developed by the Waterways Experimentation Station, U.S. Army Corps of Engineers, 2001-present

Scientific Advisor for the EPA, Hudson River project, 1999

Chair of the ASCE Sedimentation Committee for the period, 2005-2006

Chair of the ASCE Hydraulics Probabilistic Modeling Committee for the period, 2003-2005

Vice Chair, ASCE Task Committee on Contaminated Sediments, 2002-2005

Vice Chair, ASCE Task Committee on Contaminated Sediments, 2002-2005

Vice Chair, ASCE/Engineering Mechanics Committee Task Committee on Sediment Modeling, 2005

Member of an ASCE Task committee on computational methods, 2004

Chair of a Session in Sediment Transport Session, Engineering Mechanics Conference, July 2003, ASCE

ASCE Task committee on Statistical Distributions, 2004

Member of the ASCE Fluids/Turbulent Committee, 2004-present

Participate in an International Project with the National Center for High-performance Computing in Taiwan, 2005

McMat2005 session organizer on sediment transport

Organize a highlight session on watershed management conference in Williamsburg, VA, 2005

Chair of a Session “Sediment Particle Motion”, U.S.-China 2nd Workshop, Milwaukee, WI, July 21-28, 2002

Session Organizer and Chair, “Mechanics of Sediment Transport” for the 2001 Mechanics and Materials Conference, ASME/ASCE/SES, San Diego, CA, June 27-29, 2001

Chair of a Session “Mechanics of Sediment Transport” for the 2000 Joint Conference on Water Resources Engineering and Water Resources Planning and Management, Minneapolis, MN, July 30-August 2, 2000

Chair for the Krikos Restoration International Conference, Thassos, Greece, July 3-6, 2000

Chair of a session, “Cohesive Sediments”, for the 1999 International Water Resources Engineering Conference, Seattle, WA, July 24-29, 1999

EDITORIAL SERVICE:

Associate Editor of the *Journal of Hydraulic Engineering*, ASCE, 2003 - present.

Associate Editor of the *Journal of Hydrologic Engineering*, ASCE, 2007- present.

Associate Editor of the International Journal for Sediment Research, 2007-present

Co-Editor of the ASCE Monograph on Dam Removal, 2005 -present, Papanicolaou and Barkdoll

Guest Editor for the *Journal of Hydraulic Engineering*, ASCE organizing a special issue on Sediment Transport Processes in the Yangtze River, 2005-present.

Guest Editor for the *Journal of Hydraulic Engineering*, ASCE organizing a special issue on Probabilistic methods in Hydraulic/Sediment Engineering, April Issue of 2002, Vol. 128, No. 4.

PEER REVIEWER:

Grant Proposals

- National Science Foundation (NSF) Grant Proposals, 1999-present
- Environmental Protection Agency, 1999-present
- National Institutes for Water Resources/United States Geological Survey, 2002
- American Petroleum Fund, American Chemical Society, 2000-present
- Reviewer for the Swiss National Science (www.snf.ch) Foundation, 2007-present
- National Cooperative Highway Research Program, 2001
- Reviewer for the CREST program, NOAA, 2004
- Reviewer for the National USDA program, 2004-present
- Reviewer for the USBR (Chuck Hennig, Research Director), 2005-present
- Reviewer of the Seed Grant Proposals organized by the Center of Global and Regional

Environmental Research (CGRER), 2006

Journal Papers

- Journal of Geophysical Research, AGU 2007-present
- Journal of Environmental Quality, 2007-present
- Journal of Hydrologic Engineering, ASCE 2002-present
- Journal of Water Resources Research, 2000-present
- Journal of Hydraulic Engineering, ASCE, 1994-present
- Journal of Hydraulic Research, 1999-present
- Journal of Computing in Civil Engineering, ASCE, 1998-1999
- Journal of Environmental Engineering, ASCE, 2000-present
- Journal of Coastal Engineering, ASCE, 1998-1999
- Journal of Engineering Mechanics, ASCE, 1998-present
- Journal of Irrigation and Drainage, ASCE, 1998-present
- Journal of Computer-Aided Civil and Infrastructure Engineering, Blackwell, 1998-1999
- International Journal of Sediment Research, 1999-present
- Journal of the American Water Resources Research, 2001-present
- Journal of Environmental Modelling and Software, Australia, 2003-present
- Canadian Journal of Civil Engineering, 2003-present
- Environmental Science & Technology, 2003-present
- Journal of Structural Engineering, ASCE, 2003-present
- Advances in Water Research, Elsevier 2004-present
- Iranian Journal of Civil Engineering, 2002-present
- Journal of Experiments in Fluids, 2005-present
- Reviewer for Environmental Science and Technology, 2005-present.
- Reviewer for the Journal of Environmental Fluid Mechanics, 2005-present
- Journal of Hydrology, Elsevier 2005-present
- Reviewer for Geomorphology, Elsevier 2005-present
- Journal of River Research and Applications, 2005-present.
- Reviewer for the Iowa Academy Journal, 2005-present.
- Bedload Research International Cooperative (BRIC), 2007-present
- Reviewer for Nonlinear Processes in Geophysics, 2007

MONOGRAPH CHAPTERS:

Co-Editor of the ASCE Monograph on Dam Removal, 2005 -2008, Papanicolaou and Barkdoll

Chapter on Science Requirements for Sediments (Appendix A) by Papanicolaou, A.N., Schnoor, J. Paola, C. January 28, 2008, part of the Science, Education, and Design Strategy for the WATER and Environmental Research Systems Network, Waters Network.

BOOK REVIEWS:

Stochastic Hydraulics by Z. Y. Wang and S. X. Hu, A.A. Balkema, Rotterdam, The Netherlands, 2000,

900 pages.

Manual 54 “Sedimentation Engineering” (Vol. 2), EWRI/ASCE
Chapter “Scour of Earth Materials, Including Rock” by G. Annandale, 2002, 50 pages.

Advanced Fluid Mechanics, edited by Prof. Maurizio Brocchini (University of Genoa, Italy).
Chapter 4: Scalar dispersion within canopies: New Challenges and Frontiers by D. Poggi, A. Porporato, L. Ridolfi & G.G. Katul

PROFESSIONAL SOCIETIES:

Member of the American Society of Civil Engineers (ASCE)
Member of the Soil and Water Conservation Society (SWCS)
Member of the International Association for Sedimentology (IAS)
Member of the American Society for Engineering Education (ASEE)
Member of the American Geophysical Union (AGU)
Member of the International Association for Hydraulic Research (IAHR)
Member of the American Water Resources Association (AWRA)
Member of the American Association for the Advancement of Science (AAAS)
Member of the Greek Society of Civil Engineers
Member of the Greek Engineering Chamber
Member of the Society for Imaging Science and Technology
Member in the Clear Creek Watershed Enhancement Board, 2005.
Member of CGER for global/multidisciplinary efforts in the Midwest as of May 2005.
Member of the ASCE watershed council, 2004-2008

Impact of Research:

1. **Invited** Speaker: American Geophysical Union In San Francisco, Ca (1998), And The Advanced Imaging Society In San Francisco, Ca (1998).
2. **Invited** Speaker: 10th Annual Meeting Organized By The British Geomorphological Society Hosted At The University of Newcastle (January of 2001)
3. **Invited** Speaker Seminar: Central Washington University (CWU), Department of Geological Sciences (October 2002).
4. **Invited** Speaker Seminar: University of Illinois, Urbana-Champaign, Department of Civil And Env. Engineering (March 2001).
5. **Invited** Speaker Seminar: National Tilth Lab, Iowa State University (March 2004).
6. **Invited** Speaker Seminar: Department of Occupational and Environmental Health, The University of Iowa, College of Public Health(October 14th 2003).

7. **Invited** Speaker Seminar: Department of Geography, The University of Iowa, College of Public Health (February 2004).
 8. **Invited** Speaker in the CGER Advisory Board Meeting, December 2, 2004, IMU
 9. **Invited** Speaker Seminar: In the South Florida Water District, The University of Iowa, (December 9, 2004).
 10. **Invited** Speaker Seminar: University of Minnesota, SAFL, Department of Civil And Env. Engineering. (February 2005).
 11. **Invited** Speaker in the Hydrologic Ontologies Workshop at the San Diego Supercomputer Center, sponsored by the NSF (January 2005).
 12. **Invited** Speaker in the Mechanical Engineering Graduate Seminar, October 4, 2007.
 13. **Invited** Speaker in the National Science Foundation (NSF), Hydrological Sciences April 12, 2007.
 14. **Invited** Speaker CUAHSI regional meeting, October 12, 2007.
 15. **Invited** Speaker at the University of Wyoming, September 21, 2007
 16. **Invited** Participant for the NSF Hydrologic Synthesis Group, February 22nd, 2008
 17. **Invited** Speaker at the University of Nebraska, Lincoln, February 29th, 2008
- Several Articles Have Been Published In Several Newspapers in IA, WA, NY, and CA related to my Research Activities.
 - The Saratogian, NY
 - The Record, NY
 - WSU Week faculty and news (WTC award)
 - Sontek Soundings News, CA
 - Civil Eng. 1999 magazine
 - CougNews, 2000
 - Seattle Daily Journal of Commerce, WA, 2002
 - Newsdays, NY, 2002
 - Iowa Engineering view for undergraduates-2004
 - Atlantic News telegraph-2005
 - Marengo paper, 2006
 - Gazette, IA, 2007
 - The Daily Iowan, 2008
 - Gazette, IA, 2008
 - Chicago Tribune, IL, 2008
 - IAHR newsletter, 2008
 - Erevna Greek Newspaper, 2008

- Interview with the History Channel, 2004

CURRENT GRADUATE ADVISEES (11):

- | | |
|--------------------------------|--|
| 1) Dimitrios Dermissis, Ph.D. | Watershed Erosion Processes, Expected in July 2011 |
| 2) Ozan Abaci, Ph.D. | Integrated Watershed and River Corridor Modeling, Expected Sep. 2009 |
| 3) Achilleas Tsakiris, Ph.D. | Watershed scaling effects, Expected in July 2012 |
| 4) Yi-Jia (Derek) Chang, Ph.D. | Infiltration and Runoff, Expected in 2013 |
| 5) John Thomas, M.Sc. | Headcut erosion in deep channels and gullies, Expected in 2009 |
| 6) Ben Clark, M.Sc. | Infiltration Patterns in An Agriculture Watershed, 2008 |
| 7) Tim Lauth, M.Sc. | Bedload transport and RFID tracers, 2009 |
| 8) Phil Ellis, M.Sc. | Upland and In-stream Modeling, 2009 |
| 9) Fabienne Bertrand, M.Sc. | Bank Erosion, Expected in 2010 |
| 10) Kevin Denn, M.Sc. | Stable Isotopes, 2010 |
| 11) Matt Zager 2008, M.E. | Non-thesis option student |

CURRENT POSTDOCTORAL ASSOCIATES (2)

Dr. Elhakeem, 2004-present

Dr. Wilson, 2006-present

FORMER GRADUATE ADVISEES (23):

- | | |
|--------------------------|---|
| 1. Adam Schuyler M.Sc. | The Evolution of Cluster BedForms in Gravel-Bed Streams, 2000 |
| 2. Edward Wicklein M.Sc. | A Numerical Model For The Study of Sediment Transport in Steep Mountain Streams, 2000 |
| 3. Adam Maxwell M.Sc. | Geomorphologic Characteristics of High Gradient Gravel Bed Streams, 2000 |
| 4. Robert Hilldale M.Sc. | Fluvial Erosion of Cohesive Banks Considering Turbulence and Secondary Flow, 2001 |

5. Kyle Strom M.Sc. Microforms in Gravel Bed Rivers, 2001
6. King Hong M.Sc. A Numerical Model for Self-Weight Consolidation of Soil, 2001
7. Lucy Petersmith, Ph.D. Restoration Approaches Using the FESWMS Model, 2003
8. Doug Knapp, M.Sc. Prediction of the Virtual Velocity of Gravel Particles, Dec.
2002
9. James Fox, M.Sc., Flow Characteristics around a Spur Dike, Dec. 2002
10. Lisa Kjos, M.Sc. Sediment Scour Measurements around a Spur Dike, Dec.
2002
11. Ahmed Bdour, Ph.D. Integrated Watershed and River Corridor Modeling,
Expected Sep. 2003
12. Adam Maxwell, Ph.D. Experimental Studies of the Fluidization Process
13. Scott Becker, M.Sc. Sediment sampling in the Palouse.
14. Casey Kramer, M.Sc Experimental Studies in the Hypereic Zone of Spawning Gravels,
Expected July 2005
15. Brandon Hobbs, M.Sc Numerical Modeling of the Spokane River, WA, Expected July
2005
16. James Fox, Ph.D. Identifying Sediment Sources Using Stable Isotopes, Expected
Aug. 2005
17. JT Sanford, M.Sc Knickpoint propagation
18. Kyle Strom, Ph.D. Gravel Bed Rivers
19. Brandon Billings, Ph.D. Fluidization
20. Brian Wardman, M.Sc. Flow around dikes
21. Achilleas Tsakiris, M.Sc. Definition of Cluster Microforms
22. Dimitrios Dermissis, M.Sc. Pollution of spawning gravels
23. R. Theregowda Stable Isotopes/ Soil Quality/Enrichment Ratios, Expected in
2007

FORMER UNDERGRADUATE RESEARCH ASSOCIATES (25):

- 1) Bryan Trent ABT Inc. Hydraulic Grate Testing
- 2) William Vanderwaal IDFG Fish For The Irrigation Div. Model
- 3) Adam Maxwell* IDFG Fish For The Irrigation Div. Model
- 4) Kyle Strom* Clusters Study—Calculation Of Sediment Transport Rates
In Gravel Bed Rivers
- 5) Rob Schurman Avista—Pressure Transducer Calibration
- 6) Lisa Scarr* ABT Inc. Hydraulic Grate Testing
- 7) Rob Hilldale* WSDOT—Design of Step Pool Morphology
- 8) J. P. Slagle Clusters Study—Calculation Of Sediment Transport Rates
In Gravel Bed Rivers
- 9) Z. Davidson* Clusters Study—Calculation of Sediment Transport Rates
In Gravel Bed Rivers
- 10) S. Crane* Clusters Study—Calculation of Sediment Transport Rates
In Gravel Bed Rivers
- 11) J. Filipy* USGS—Erosion Of Cohesive Sediment Beds
- 12) Doug Knapp* WTC—Development Of A New Instrument For Bedload
Transport
- 13) Tim Sullivan WSDOT/Clusters experiments
- 14) Stephen Lincoln ONR—Cleanup of Contaminated Sites
- 15) JT Sanford* NSF-clusters
- 16) Kip Kemak NOAA Isotope
- 17) Sandra White* Clusters
- 19) Ryan Asman* Work at MRERS
- 20) Ian Barclay Work with Clusters
- 21) Ricky Teed CCWSI
- 22) Tom Smith Isotopes

- | | |
|-------------------------|-----------------------|
| 23) Avery Bang* | Fluidization project |
| 24) Marc Wendell | HCA project |
| 25) Spencer Schoonover* | Clear Creek Watershed |

*** UNDERGRADUATES WHO WENT ON TO WORK AS GRADUATE STUDENTS**

Several of my Graduate and Undergraduate Research Assistants have received national and university-wide awards:

- 1) Lucy Petersmith (NRC, Ford Foundation Predoctoral Fellow, 1997-2000).
- 2) Adam Maxwell (WSU Orsborn Outstanding Graduate student Award and Kurtis Fellow).
- 3) Robert Hilldale (WSU Roberson Best M.Sc. Thesis Award and USBR Star Award).
- 4) Kyle Strom (NSF-IGERT Fellow).
- 5) Bryan Trent (Faculty Association for Scholarship and Research, Undergraduate and Scholarship Award, 1st place in a University-wide competition).
- 6) Jimmy Fox, Soil and Water Conservation Society.
- 7) Jimmy Fox, Best student paper in the College of Engineering, The University of Iowa, Wide Competition.
- 8) Tim Lauth, Ozan Abaci, Achilles Tsakiris and Dimitris Dermisis have received several travel awards from the Center of Global Research.
- 9) Dimitris Dermisis received the Paul C. and Sara Jane Benedict Fellowship for the study of Alluvial River Processes

FORMER POSTDOCTORAL ASSOCIATES (1)

Dr. Talebbeydokhti, 2001-02

2007 VISITING PROFESSORS:

S. Dey, IIT, India, 2006

M. Rinaldi, Italy, 2006

E. Abdelsalam, 2006-2007

GRADUATE COMMITTEE SERVICE (Un. of Iowa):

Yenory Chaves, 2004, Ph.D., Steve Scissons, 2003, M.Sc., Gokhan Kirkil, 2004, Joe Walter, 2004, Andy Craig, 2005, Atsuhiko Yorozuya 2005, Nathan Yonge 2006, A. McCoy, 2006, Vineet Yadav, 2007, David A. Bequeaith , 2007, J. Loperfido, 2008, Dongsu Kim, 2008, David Abraham, 2008.

GRADUATE COMMITTEE FOR STUDENTS FROM OTHER INSTITUTIONS:

Chris Cambell, (M.S.), (University of Idaho, Ag. Engineering), David Smith, Ph.D., (University of Hawaii, Ocean Engineering), Rajeev Misra, Ph.D. Indian Institute of Technology, Bombay

GRADUATE COMMITTEE SERVICE (WSU):

Arn Coombs, (M.Sc.), 1998, Seth Paul, (M.Sc.), 1999 (WSU, Biosystems Engineering), Abbas Al-Omari,

(Ph.D.), 1999, Tonja Koobe, (Ph.D.), 1999, Chris Cambell, (M.Sc.), 2000 (University of Idaho, Ag. Engineering), Ted Perkins, (M.Sc.), 2000, Pengfei Wang, (Ph.D.), 2000 (WSU, Mechanical Engineering), Eric Adams (M.Sc.), 2000, David Smith (Ph.D.), University of Hawaii (external member), Matthew Anway (Ph.D.) Graduate School Representative, Moayaad Shawaqfah, (Ph.D.) 2000, Eddie James, (Ph.D.) Graduate School Representative, 2000, Scott Peterson, (Ph.D), 2000, Erik Rowland, (M.Sc.), 2001, Hans Tritico (M.Sc.),2002, Sridhar Viamajala, 2002-University of Roorke, India, Lauren Bissey (geology), 2003 (M.Sc.), Gabriel Mancilla, 2003 (Ph. D. Bios)-Washington State Univ.

CURRENT UNIVERSITY SERVICE (representative):

College of Engineering (COE) Curriculum committee,	2006-2007
College CRAG committee	2007-present

ABET, Participated in the University of Iowa Engagement Corps group.

High School recruitment for the college of Engineering, Involved with the Cooperative Education and Internship Program; Assist with the IIHR qualifying exam (open channel flow)

PEER-REVIEWED JOURNAL PUBLICATIONS:

1. Diplas, P. and **Papanicolaou, A. N.** (1997). Batch Analysis of Slurries in Zone Settling Regime, *Journal of Environmental Engineering, ASCE*, Vol. 123, No. 7, p. 659.
2. **Papanicolaou, A. N.** and Diplas, P. (1999). Numerical Solution of a Non - Linear Model for Self -Weight Solids Settlement, *Journal of Applied Mathematical Modeling, Elsevier Science*, Vol. 23, No. 5, p. 345.
3. **Papanicolaou, A. N.**, Diplas, P., Balakrishnan, M., and Dancey, C.L. (1999). Computer Vision Techniques for Sediment Transport, *Journal of Computing in Civil Engineering, ASCE*, Vol. 13, No.2, p. 71.
4. **Papanicolaou, A.N.**, and Barber, M. E. (1999). Effectiveness of Grate Orientation in Flow Channels, *Journal of Experimental Techniques*, Vol. 23, No. 2, *SEM*, p. 21.
5. **Papanicolaou, A. N.** (1999). Pick-up Probability for Sediment Entrainment, *Journal of Hydraulic Engineering, ASCE*, Vol. 125, No. 7, p. 788.
6. **Papanicolaou, A.N.**, and Maxwell, A. (2000). Hydraulic Performance of Fish Bypass-Pools for Irrigation Diversion Channels, *Journal of Irrigation and Drainage Engineering, ASCE*, Vol. 33, No.2, p. 171.
7. **Papanicolaou, A. N.** (2000). The Role of Near-Bed Turbulence in the Inception of Particle Motion, *International Journal of Fluid Dynamics*, Vol. 4, Article 2., p. 100.
8. Dancey, C.L., Balakrishnan, M., Diplas, P., and **Papanicolaou, A. N.** (2000). The Spatial Inhomogeneity of Turbulence above a Fully-Rough Packed-Bed in Open Channel Flow, *Journal of Experiments in Fluids, Springer-Verlag*, Vol. 29, p. 402.
9. Schuyler, A. and **Papanicolaou, A. N.** (2000). Image Analysis Technique to Track the Evolution of Sediment Clusters, *Journal of Experimental Techniques*, September/October 2000, Vol. 24, No. 5, *SEM*, p. 31.
10. **Papanicolaou, A. N.**, Diplas, P., Balakrishnan, M., and Dancey, C.L. (2001). The Role of Near-

bed Turbulence Structure in the Inception of Sediment Motion, *Journal of Engineering Mechanics*, ASCE, Vol. 127, No. 3, p. 211.

11. Maxwell, A. and **Papanicolaou, A. N.** (2001). Step-Pool Morphology in High-Gradient Countersunk Culverts, *International Journal of Sediment Research*, Vol. 16, No. 3, p. 380.
12. Hotchkiss, R., Barber, M., and **Papanicolaou, A. N.** (2001). Hydraulic Engineering Education: Evolving to Meet Needs, *Journal of Hydraulic Engineering*, ASCE, Vol. 127, p. 1036.
13. Maxwell, A. and **Papanicolaou, A.N.**, Barber, M., and Hotchkiss, R (2001). Step-Pool Morphology in High-Gradient Countersunk Culverts, *Transportation Research Record*, No. 1743, p. 49.
14. **Papanicolaou, A.N.**, Diplas, P., Evaggelopoulos, N., and Fotopoulos, S. (2002). A Stochastic Incipient Motion Criterion for Spheres under Various Packing Conditions, *Journal of Hydraulic Engineering*, ASCE, Vol. 128, No. 4, p. 20.
15. **Papanicolaou, A.N.** and Talebbeydokhti, N. (2002). Turbulent Open-Channel Flow in Circular Corrugated Culverts, *Journal of Hydraulic Engineering*, ASCE, Vol. 128, No. 5, p.127.
16. **Papanicolaou, A. N.** and Hilldale, R. (2002). Turbulence Characteristics in a Gradual Channel Transition, *Journal of Engineering Mechanics*, ASCE, Vol. 128, No. 9, p. 948.
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OTHER PEER-REVIEWED PUBLICATIONS:

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2. **Papanicolaou, A.** and Diplas, P. The Role of Clusters in the Entrainment of Sediment. Published at the Proceedings of the International Conference: Protection and Restoration of the Environment IV, August 1998, Halkidiki, Greece, p. 211.
3. **Papanicolaou, A.**, Diplas, P., Dancey, C.L, and Balakrishnan, M. Coupling Between the Incipient Motion of Spherical Roughness Elements and Turbulent Flow. Published at the International Symposium, IAHR, River, Coastal, and Estuarine Morphodynamics, September 6-10 1999, Genova, Italy, p. 23.
4. Diplas, P., **Papanicolaou, A.**, and Kanellopoulos, P. A Unified Criterion for the Initiation of Motion of Sediment Particles. Published at the Advances in Hydro-Science and -Engineering, Vol. III, Proceedings of the 3rd International Conference on Hydro-Science and -Engineering, Brandenburg University of Technology at Cottbus, Cottbus/Berlin, Germany, August 31-September 3, 1998.
5. **Papanicolaou, A.** Forum Article: Stochastic Considerations in Hydraulics-A Call for Papers. *Journal of Hydraulic Engineering*, December 1999, p. 1229.
6. Dancey, C., Diplas, P., **Papanicolaou, A.**, and Bala, M. The Threshold of Motion Condition and the Effect of Sediment Availability. Submitted to the 2nd IAHR Symposium on River, Coastal, and Estuarine Morphodynamics, September 10-14, 2001, Obihiro, Japan.
7. Strom, K., **Papanicolaou, A. N.**, and Odeh, M. Formation of Cluster Microforms and Effects on Bedload Transport. Paper published in the proceedings of the IAHR International Conference on Fluvial Hydraulics, Louvain-la-Neuve, September 4-8, 2002, Belgium.
8. **Papanicolaou, A. et al.** Forum Article: Computational Modeling of Sediment Transport Processes, Task Committee of Computational Modeling of Sediment Transport Processes, *Journal of Hydraulic Engineering*, July 2004, Vol. 130, No. 7, p. 597.
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13. **Papanicolaou, A.** Discussion on the paper “Changes in Basin-scale sediment supply and transfer in a rapidly transformed New Zealand landscape” presented by M. Page et al. in the 6th Gravel-Bed Rivers conference, St. Jakob, Austria, 2007
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INVITED PAPERS/PRESENTATIONS (Speaker underlined):

1. **Papanicolaou, A.** Image Analysis Techniques for Sediment Transport. Presented at the Advanced Imaging Strategies, October 11-15, 1998. Advanced Imaging Executive Conference Series, San Francisco, CA.
2. **Papanicolaou, A.**, P. Diplas, M. Balakrishnan, C. L. Dancey. Linking of Turbulence with the Entrainment of Sediment. Presented at the American Geophysical Union Meeting, December 6-10, 1998, San Francisco, CA.
3. **Papanicolaou, A.** Stochastic Considerations on Sediment Transport. Presented at the 3rd International Symposium on Environmental Hydraulics, Tempe, Arizona, USA, December 5-8, 2001.
4. Invited by the British Geomorphological Society at the University of Newcastle, UK, January 2001.
5. Invited Speaker Seminar: University Of Illinois, Urbana-Champaign, Department Of Civil And Env. Engineering, March 2001.
6. Invited Presentation at the 2nd U.S.-Chinese Joint Workshop on Sediment Transportation, sponsored by the National Science Foundation and the National Natural Science Foundation of China, July 2002
7. Invited Speaker Seminar: Central Washington University (CWU), Department of Geological

Sciences, October 2002.

8. Invited Speaker Seminar: IIHR/MRERS 1st symposium on Large River Systems, October 2003.
9. Keynote Speaker at the 6th IICHE conference, Brisbane, Australia, May 30-June 3, 2004
10. Invited Speaker Seminar: IIHR/MRERS 2nd symposium on Large River Systems, October 2004.
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12. K. B. Strom and A. N. Papanicolaou. *Automated Grain Size Extraction from Digital Images*. presented to the U.S. Bureau of Reclamation Sedimentation and River Hydraulics Group, Denver, CO, 2005.

TECHNICAL REPORTS:

1. **Papanicolaou, A.** and Vanderwaal, W. The Hydraulic Performance of Vee-Shaped Fish Screens for Irrigation Diversion Channels. Report prepared for the Idaho Fish and Game (IDFG), Pullman, WA, August 1998.
2. **Papanicolaou, A.** and Trent, B. Hydraulic Testing of Grates for Different Orientations. Report prepared for the ABT, Inc., Pullman, WA, January 1998.
3. **Papanicolaou, A.** Report of the Hudson River PCBs Site-Modeling Approach. Report No. 3-12 for the Environmental Protection Agency (EPA), Pullman, WA, November 1998.
4. **Papanicolaou, A.**, Hotchkiss, R., and Wicklein, E. Critical Review of the Existing State of the Art Sediment Transport Models. Report 99-02 for the Pacific Northwest National Laboratories (PNNL), Pullman, WA, August 1999.
5. **Papanicolaou, A.** and Maxwell, A. Equilibrium Geomorphologic Conditions for High Gradient Bed Streams. Report # WA-RD 479.1 prepared for the Washington Department of Transportation (WSDOT), Pullman, WA, January 2000.
6. **Papanicolaou, A.** and Strom, K. Hydraulic Design of the Nine Mile Hydro Electric Development, AVISTA Corps., Pullman, WA, September 2000.
7. **Papanicolaou, A.** and Hildale, R. Erosion of Streams with Cohesive banks. Report prepared for the United States Geological Survey (USGS), Pullman, WA, March 2001.
8. Cichosz, T. Saul, D., Davidson, A. Warren, W., Rollins, D., Willey, J. Tate, T. **Papanicolaou, A.** and Juul, S. Clearwater Subbasin Summary. For Nez Perce Tribe as Part of Northwest Power Planning Council's Fish and Wildlife Program.
9. **Papanicolaou, A.** and Bdour, A. Newsome Creek: Hydrology and Sediment Transport. Report prepared for the United States Forest Service, Nez Perce, Grangeville, Idaho, Pullman, WA,

June 2001, EWAS.

10. **Papanicolaou, A.** The Role of Turbulence and Sediment Availability in Sediment Erosion Processes. Report prepared for the United States Geological Survey (USGS), Pullman, WA, March 2002.
11. **Papanicolaou, A.**, Knapp, D., Strom, K., and Hobbs, B. Bedload Measurements and Testing of the Gravel Transport Sensor, Report prepared for the Washington Technology Center, Pullman, WA, June 2002.
12. **Papanicolaou, A.** and K. Strom. Bed stability around the east caisson of the Tacoma Narrows Bridge. Technical report, Parsons Engineering, 2003.
13. **Papanicolaou, A.**, Kjos, L., Fox, J. Investigation of Flow and Local Scour Characteristics around a Partially Submerged WSDOT Barb, Report prepared for the Washington Department of Transportation (WSDOT), Pullman, WA, August 2003.
14. **Papanicolaou, A.** and Fox, J. Tracing Sediment Sources by Using Stable Carbon and Nitrogen Isotopes. Report prepared for the Seagrant Office, NOAA, Washington DC, Iowa City, June 2004.
15. **Papanicolaou, A.** and Strom, K. Grain Size Analysis of Beach Sediment in Rich Passage Washington, August 3, 2004. A Report prepared for Pacific International Engineering, Iowa City, October 25, 2004.
16. **Papanicolaou, A.**, Elhakeem, M. and JT. Sanford. A Hydrologic and Morphologic Analysis of the Black Lake, Alaska, Chignik Regional Aquaculture Association (CRAA), Bellingham, WA 98225, January, 2006.
17. **Papanicolaou, A.** and Dermissis, D. Field Investigation of Hydraulic Structures facilitating Fish Abundance and Passage through Bridges in Western Iowa Streams, TR-521, Report submitted to the Iowa Highway Research Board (IHRB), February 2006.
18. **Papanicolaou, A.** Hydraulic And Geomorphic Controls On The Evolution Of Cluster Bedforms In Gravel-Bed Streams, Report for NSF Award Number EAR 0331485, December 2006.
19. **Papanicolaou, A.** and Ely, L. Hydraulic and Geomorphic Controls On The Evolution Of Cluster Bedforms In Gravel-Bed Streams U.S. Geological Survey Grant No. 02HQGR0139, September 2006.
20. **Papanicolaou, A.** and Elhakeem, M. Evaluation of the Existing Shallow Water Habitat Areas in the Upper Missouri River. A Report prepared for the Iowa Department of Natural Resources (IDNR) and the Nebraska Fish and Game, August, 2006.
21. **Papanicolaou, A.** The Channeling of Young Marine Sediments. A Report prepared for ONR, Arlington, VA, August 2006.

22. **Papanicolaou, A.**, Abaci, O. and Theregowda, R. A Sediment Composite Fingerprinting Tool: A Field-based Quantification Method of the Sediment Origin Within A Water Environment Coupled with A Watershed Model Simulation. A Report prepared for IDNR, Des Moines, IA, June 2006.
23. Woldt, W., Beck, B. Kumar, P., and **Papanicolaou, A.N.** WATERS Network Modeling community Report. A Report Prepared For The CLEANER/QUASHI project, 2007.
24. **Papanicolaou, A.N.**, and Elhakeem, M. Design Procedures and Field Monitoring of Submerged Barbs for Streambank Protection. A Report prepared for IHRB-IDOT, Ames, IA, June 2007.
25. **Papanicolaou, A.N.**, and Elhakeem, M. First Estimation of the Runoff Curve Number in the State of Iowa via Direct Rainfall Simulator Measurements. A Report prepared for Iowa NRCS-USDA, Des Moines, IA, December 2007.
26. **Papanicolaou, A.N.**, and Burras, C.L., M. Elhakeem, and C. Wilson Phase I: Field and Laboratory Investigation of Infiltration on Different Geomorphic Surfaces in a Watershed and Under Different Land Uses. A Report prepared for NRCS-National Soil Survey Center, USDA, Lincoln, NE, September 2008.

CONFERENCE PAPERS (underlined name indicates presenter at conference):

1. **Papanicolaou, A.**, Diplas, P., Balakrishnan, M., and Dancey, C.L. The Role of Turbulent Stresses on the Initiation of Sediment Motion. Published in the Proceedings of the ASCE Hydraulics Engineering Sessions at Water Forum, August 1998, Memphis TN, pp. 1338-1343.
2. **Papanicolaou, A.**, and Diplas, P. Non-Linear Settlement of Solids Due to their Self-Weight. Published in the Proceedings of the ASCE Hydraulics Engineering Sessions at Water Forum, August 1998, Memphis, TN, pp. 1326-1331.
3. Dancey, C. L., Balakrishnan. M., Diplas, P., and **Papanicolaou, A.** Correlation between the Incipient Motion of a Spherical Roughness Element and Fluid Velocity in a Turbulent Open Channel Flow. Published in the Proceedings of the ASCE Hydraulics Engineering Sessions at Water Forum, August 1998, Memphis, TN, pp. 1344-1349.
4. **Papanicolaou, A.** A Discussion on the Incipient Motion Criteria. Presented at the Conference and Annual Meeting of the Society for Ecological Restoration: Turning the Tide, October 28-30, 1998, Tacoma, WA.
5. **Papanicolaou, A.**, Muhunthan, B., and Diplas, P. Numerical Model for Non-Linear Self-Weight Consolidation of Soils. Presented at the 35th Annual Technical Meeting, Society of Engineering Science (SES), September 27-30, 1998, Pullman, WA.
6. **Papanicolaou, A.** and Vanderwaal, W.. Hydraulic Design of Fish Passages. Presented at the Conference and Annual Meeting of the Society for Ecological Restoration: Turning the Tide,

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8. **Diplas, P.**, **Papanicolaou, A.**, Dancey, C. L., and Balakrishnan. The Role of Clusters in the Entrainment of Sediment. Published at the International Krikos Conference, Protection and Restoration of the Environment IV, July 1998, Thessaloniki, Greece.
9. **Maxwell, A.**, **Papanicolaou, A.**, and Vanderwaal, W.. Hydraulic Modeling of a Vee-Shaped Fish Screen. Published at the proceedings of the 3rd International Ecohydraulics IAHR Conference, 1999, Salt Lake City, UT.
10. **Schuyler, A.**, **Papanicolaou, A.**, and Wicklein, E. The Role of Particle Specific Gravity in the Evolution of Clusters. Accepted for publication at the proceedings of the 3rd International Ecohydraulics IAHR Conference, 1999, Salt Lake City, UT.
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14. Barber, M., **Papanicolaou, A.**, and **Hotchkiss, R.** Hydraulic Engineering Education at Washington State University: Past, Present, and Future. Published in the Proceedings of the International Water Resources Engineering Conference, ASCE, August 1999, Seattle, WA (CD version).
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19. Petersmidth, L. and **Papanicolaou, A.** Sediment Erosion Control and Restoration Measures for the Spokane River, WA. Paper published in the 5th International Krikos Restoration Conference Proceedings, July 3-6, 2000, Thassos, Greece, pp. 403-410.
20. Schuyler, A and **Papanicolaou, A.** The Evolution of Clusters: The Role of Specific Gravity. Paper published in the 5th International Krikos Restoration Conference Proceedings, July 3-6, 2000, Thassos, Greece, pp. 395-402.
21. Maxwell, A. and **Papanicolaou, A.** Modeling of a Fish Bypass-Pool. Paper published in the 5th International Krikos Restoration Conference Proceedings, July 3-6, 2000, Thassos, Greece, pp. 307-314.
22. **Papanicolaou, A.** and Schuyler, A. Coherent Structures Responsible for the Formation of Microforms in Gravel Bed Streams. Paper published in the Proceedings of the 14th Engineering Mechanics Conference, May 21-24, 2000, Austin, TX, (CD version).
23. **Papanicolaou, A.** The Role of Near-Bed Turbulence in the Inception of Sediment Motion. Paper published in the Proceedings of the 14th Engineering Mechanics Conference, May 21-24, 2000, Austin, TX, (CD version).
24. Schuyler, A. and **Papanicolaou, A.** The Effects of Cluster Bedforms on the Longitudinal Velocity. Paper published in the Proceedings of the 2000 ASCE Water Resources Engineering and Water Resources Planning and Management Conference, Minneapolis, MN, July-August 2000 (CD version).
25. Petersmidth, L. and **Papanicolaou, A.** Sediment Erosion Control and Restoration Measures for the Spokane River, WA. Paper published in the Proceedings of the 2000 ASCE Water Resources Engineering and Water Resources Planning and Management Conference, Minneapolis, MN, July-August 2000 (CD version).
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27. Maxwell, A. and **Papanicolaou, A.** Geometric Characteristics of Step-Pool Streams. Paper published at the 2000 ASCE Water Resources Engineering and Water Resources Planning and Management Conference, Minneapolis, MN, July-August 2000 (CD version).
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COURSES TAUGHT:

1. Mechanics of Sediment Transport (book: H. Chang/or J. Bridge)
2. Water Quality (book: Novotny and Olem)
3. Open Channel Flow (book: S. Jain/or H. Chaudhry)
4. Advanced Topics in Cohesive Sediments (book: Winterwerp)
5. Mechanics of Fluids (book: F. White/or Sabersky)
6. Soils (book: Budhu/or Schaertzi and Anderson))
7. Contaminated sediments (books: D. DiTorro and Raudkivi)
8. Graduate seminar in Water Resources (invited speakers)

PRINCIPAL INVESTIGATOR or COLLABORATOR (selected projects over the past 4 years, 2004-2008)

<u>Contract Percentage or Grant Title</u>	<u>Sponsor</u>	<u>Start and End Date</u>	<u>Budget</u>	<u>Credit*</u>
1) Determination of Sediment Sources in ARS CEAP Benchmark Watersheds USDA (U.S. Department of Agriculture)			\$15,000	100%
2) Autonomous Measurements of Bridge Pier and Abutment Scour Using Motion-Sensing Radio Transmitters IHRB (Iowa Highway Research Board)		7/09	\$57,000	100%

3) Design Procedures and Numerical Modeling of a Combination of Submerged Barbs, Riprap Lining, and Iowa Vanes' Used for Streambank Protection of the Raccoon River, IA Near the Krause Family Property	Krause Kum and Go co.	8/09	\$28,482	100%
4) SGER: Transport of Sediments and Pollutants into the Terrestrial Regions of a Small Urban-Industrial City: The June 2008 Flood of Cedar Rapids, Iowa	U.S. NSF	7/09	\$99,168	50%
5) Development of Prototype Instrumentation for Ultra-High Resolution Measurement of Land Surface Relief	CGER (Center for Global Env. Research)		\$30,000	25%
6) Observations on the Movement of Bedload Using Motion-Sensing Radio Transmitters	CGER (Center for Global Env. Research)		\$26,800	100%
7) Iowa's Multiscale Carbon and Nitrogen Studies (IMCANS): Combining Remote and In-Situ Approaches in Agricultural Landscapes	Iowa Space Grant Consortium		\$379,972	100%
8) Impacts to the Land-Water-Human System of Rural Iowa from High-Intensity Continuous Maize Production	Leopold Center for Sustainable Agriculture	7/09	\$14,675	100%
9) Determination of Sediment Sources in ARS CEAP Benchmark Watersheds	USDA (U.S. Department of Agriculture)	9/30/08-9/30/09	\$28,625	100%
10) Hydropedological Investigations & Training on a Benchmark Catena: Performance of Semi-Automated Measurements of Ksat, via Different Sensors and Under Different Hydrologic and Land Management Conditions	USDA	9/30/08-9/30/09	\$95,927	100%
11) Experimental/Feasibility Study of a Radio Frequency Tracers for Monitoring Sediment Transport and Scour Around Bridges	IHRB	06/30/08	\$25,000	100%
12) Carver Trust Proposal Integration of National Research and Prog. Initiatives at LACMRERS		08/2007	\$1,100,000	20%

13) Field and Laboratory Investigation of Infiltration on Different Geomorphic Surfaces in a Watershed and Under Different Land Uses	USDA	9/30/2008	\$149,999	100%
14) Determination of Sediment Sources in ARS CEAP Benchmark Watersheds	USDA	6/30/2009	\$14,625	100%
15) Development of Stage-Discharge Relations for Ungaged Bridge Waterways in Western Iowa	Hungry Canyon Alliance (HCA)	10/13/2006-10/12/2009	\$70,000	100%
16) Bank Erosion	Obermann Center	7/1/2006-8/1/2006	\$18,000	100%
17) Large-Scale Environmental Research and Analysis Network of the Upper Mississippi River Basin(UMRB): Hydrology, Sediments, Nutrients and Emerging Chemical Contaminants	National Science Foundation (NSF)	2006-2007	\$98,963	10%
18) A Sediment Composite Fingerprinting Tool for the Clear Creek Watershed, IA	CGER (Center for Global Env. Research)	12/1/2006-	\$25,000	100%
19) Development of Stage-Discharge Relations for Ungaged Bridge Waterways in Western Iowa	IDOT (Dept. of Transportation)	10/1/2006- 9/30/2009	\$112,000	100%
20) Monitoring Subsurface Water Quality via the Use of Infiltrometer Sensor Technology	IDNR (Dept. of Natural Resources)	11/15/2006- 10/31/2008	\$54,000	100%
21) First Estimation of the Runoff Curve Number in the State of Iowa via Direct Rainfall Simulator Measurements	USDA	9/28/2005- 9/30/2007	\$138,576	100%
22) The Effects of Headcut and Knickpoint Propagation on Bridges in Iowa	HCA	9/1/2005- 8/31/2007	\$15,937	100%
23) The Effects of Headcut and Knickpoint Propagation on Bridges in Iowa	IDOT	9/1/2005- 8/31/2007	\$63,749	100%

24) Design Procedures and Field Monitoring of Submerged Barbs for Streambank Protection	IDOT	5/1/2005-10/31/2006	\$140,000	100%
25) Field Investigation of the Shallow Habitat in the Fremont and Otoe Counties of the Missouri River in Iowa and Nebraska	NGPC (Nebraska Game and Parks Commission)	1/1/2005-12/31/2005	\$15,000	100%
26) Field Investigation of the Shallow Habitat in the Fremont and Otoe Counties of the Missouri River in Iowa and Nebraska	IDNR	1/1/2005-12/31/2005	\$44,396	100%
27) Field and Laboratory Investigation of Hydraulic Structures Facilitating Fish Abundance and Passage through Bridges in Western Iowa Streams	IDOT	9/1/2004-12/31/2005	\$59,628	100%
28) Field and Laboratory Investigation of Hydraulic Structures Facilitating Fish Abundance and Passage through Bridges in Western Iowa Streams	HCA	9/1/2004-12/31/2005	\$59,627	100%
29) A Sediment Composite Fingerprinting Tool: A Field-Based Quantification Method of the Sediment Origin within a Water Environment - A Pilot Study	IDNR	7/1/2004-6/30/2005	\$59,537	100%
30) A Guide for Monitoring and Protecting Bridge-Waterways against Scour	IDOT	4/1/2004-12/31/2005	\$80,816	20%
31) Coupling a Two-Dimensional Hydrodynamic and Sediment Routing Model to Predict the Environmental Impacts of the Alec River System on the Black Lake System, Alaska	Alaska Chignik Regional Aquaculture Association (CRAA)	12/6/2003-12/5/2004	\$138,000	100%
32) Cause and Effect of Microventing in Under consolidated Sediment Beds	ONR (Office of Naval Research)	2/5/2004-1/30/2005	\$43,177	100%
33) The Use of Biogeochemical Fingerprinting for Sediment Source Identification in a Predominately Rural Catchment in Eastern Iowa	VP's office	2/2005	\$11,000	100%

34) Hydraulic and Geomorphic Controls on the Evolution of Cluster Bedforms in Gravel-Bed Streams	USGS	7/2005	\$110,583	100%
35) Hydraulic and Geomorphic Controls on the Evolution of Cluster Bedforms in Gravel-Bed Streams	U.S. NSF	7/2005	\$140,000	100%
36) Tracing Sediment Sources in Eastern Iowa by Using Stable Carbon and Nitrogen Isotopes: An Exploratory Research	ISWRI (Iowa State Water Research Institute)	3/1/2003-2/29/2004	\$10,000	100%
37) Sediment Identification and Origin in the Upper Mississippi River Watershed	USACE	10/2003	\$15,000	100%