

**CURRICULUM VITAE
COSTAS TSATSOULIS**

Vice Chancellor of Research and Graduate Studies
Missouri University of Science and Technology
Rolla, MO 65409

home address:

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ACADEMIC BACKGROUND

Education

Ph.D.	Purdue University, 1987, Electrical Engineering
M.S.	Purdue University, 1984, Electrical Engineering
B.A. with distinction	Purdue University, 1987, German
B.S. with distinction	Purdue University, 1983, Electrical Engineering

Academic Honors

Awarded B.A. in German with distinction
Awarded B.S. in Electrical Engineering with distinction
Dean's List
Eta Kappa Nu (HKN)
Golden Key

PROFESSIONAL EXPERIENCE

Sept. 2021- now	<ul style="list-style-type: none"> • Dean of Graduate Studies, Missouri University of Science and Technology • Professor, Department of Computer Science, Missouri University of Science and Technology
Sept. 2018 -Aug. 2021:	<ul style="list-style-type: none"> • Vice Chancellor of Research and Dean of Graduate Studies, Missouri University of Science and Technology • Professor, Department of Computer Science, Missouri University of Science and Technology
Jan. 2018 -Sept. 2018:	<ul style="list-style-type: none"> • Associate Vice President for International Research Partnerships, University of North Texas • Professor, Department of Computer Science and Engineering, University of North Texas
2015- 2016:	<ul style="list-style-type: none"> • Interim Dean, The Toulouse Graduate School, University of North Texas
Aug. 2008 -Sept. 2018:	<ul style="list-style-type: none"> • Dean, College of Engineering, University of North Texas • Professor, Department of Computer Science and Engineering, University of North Texas
Jan. 2004 -Jul. 2008:	<ul style="list-style-type: none"> • Chair, Department of Electrical Engineering and Computer Science, The University of Kansas
Aug. 2003 -Dec. 2003:	<ul style="list-style-type: none"> • Interim Chair, Department of Electrical Engineering and Computer Science, The University of Kansas
1999-2008:	<ul style="list-style-type: none"> • Professor, Department of Electrical Engineering and Computer Science, The University of Kansas
1997-2003:	<ul style="list-style-type: none"> • Director of the Intelligent Systems and Information Management Laboratory, Information Technology and Telecommunications Center (ITTC), The University of Kansas
Jul. 1995 -Dec. 1995:	<ul style="list-style-type: none"> • Visiting Scientist, Lockheed Artificial Intelligence Center, Lockheed-Martin Missiles and Space Company, Palo Alto, CA
1993-1999:	<ul style="list-style-type: none"> • Associate Professor, Department of Electrical Engineering and Computer Science, The University of Kansas
1992-1994:	<ul style="list-style-type: none"> • Vice President of Research, Data Discovery Inc., a Small Business performing work in Artificial Intelligence, information retrieval and intelligent databases

1990-1997:	<ul style="list-style-type: none"> • Director of the Intelligent Design Laboratory, Center for Excellence in Computer-Aided Systems Engineering, The University of Kansas
1988-1993:	<ul style="list-style-type: none"> • Assistant Professor, Department of Electrical and Computer Engineering, The University of Kansas

ADMINISTRATIVE POSITIONS

Missouri University of Science and Technology

Missouri University of Science and Technology is a public land grant and space grant University in the State of Missouri. Missouri S&T was founded in 1870 as the Missouri School of Mines (MSM), and in 1964 became the University of Missouri, Rolla (UMR). On January 1, 2008 UMR became known as Missouri University of Science and Technology or Missouri S&T for short. Known primarily for its engineering school, Missouri S&T also offers degrees in business and management systems, information science and technology, sciences, social sciences, humanities, and the arts. Missouri S&T is part of the University of Missouri System.

Missouri S&T offers 99 undergraduate and graduate degrees in 40 areas. It enrolls almost 6,500 undergraduate and 1,600 graduate students.

2018-now Vice Chancellor of Research and Graduate Studies

Research Leadership

The strategic goal of Missouri S&T is to double its research awards and expenditures in five years. Towards that goal the position of Vice Chancellor of Research (VCR) was created, elevated from Vice Provost, so as to report directly to the Chancellor.

Select accomplishments

- In FY2021 our R&D awards were \$43.9M, a 41.5% increase from FY18 when I joined S&T, and a record. Our *per capita* R&D awards for T/TT faculty grew by 62% to \$165,279. Our total external awards in FY21 were \$75M, in large part because of the CARES Act.
- Our FY21 R&D expenditures were \$32M, a 11.6% increase from FY18 when I joined S&T. Our *per capita* R&D expenditures for T/TT faculty grew by 28.1% to \$118,371. Our total external expenditures reached \$42.9M.
- We have received more than \$31M in research from DoD and DoE to perform research in steel. Our a 5-year \$20M Army grant, is the largest one for S&T since at least 2004.
- Received \$8.7M in Congressional plus ups to perform research in traumatic brain injury, steel for armaments, UAV security, and mine evacuations.
- Achieved success in technology transfer and innovation: FY21 royalty income was \$720,000.

Actions Leading to Success

Strategic Research Plan

Led a year-long effort to create a new research strategic plan, leading to our 2020-30 “*Research Roadmap*,” and which engaged almost 100 of our faculty. The process identified 9 “research constellations” across our campus which define our strengths and also our research aspirations for the next decade.

Supporting research and enhancing visibility

- Implemented new technology transfer and corporate outreach initiatives.
- Junior Faculty Mentoring Program: Developed program to mentor junior faculty to write white papers and make presentations to federal agencies.
- Introduced “We Dig Research!” for 5-minute TED-like research talks every month. This has been very

successful, leading to research collaborations.

- Started an Early Career Award training program for junior faculty.
- Organized “Beyond NSF” workshops to introduce faculty to other federal agency and industry funding.
 - Organized specialized workshops for working with industry, NIH, DoD, DARPA, DoE, NASA.
- Introduced program to support trips to funding agencies by faculty.
- Brought program managers (NSF, DARPA, AFOSR, ONR, etc.) to campus to give talks.
- Added one industrial consortium (Missouri Consortium for Construction Innovation – MoCCI), bringing the number of industrial consortia to six.
- Completed Education Partnership Agreement with the US Army Engineer Research and Development Center under the Corps of Engineers.
- Supported the design and mailing of postcards advertising faculty research successes.

Policy

- Created and implemented a policy for establishing University-Industry Consortia.
- Working with the Directors, created guidelines for creation, operation, support, and sunseting of Centers.
- Negotiated with the Chancellor for a new distribution of F&A/IDC returns. The result is that Centers are funded through soft money and receive a return of the F&A they generate as incentive to grow research.
- Established a fee schedule for internal and external users of research equipment and personnel.

Operational

- Improved compliance: Hired a compliance manager. Established procedures for conflict of interest/commitment reporting, IRB, IACUC, IBC, and export control/ITAR and CUI. Created rules for handling sensitive data.
- Introduced rules for cost sharing in proposals.
- Restructured and simplified selection process of limited submissions.

Internal communication

- Established bi-monthly research newsletter to all faculty.
- Introduced bi-weekly “Let’s Talk Research” meetings to keep faculty informed of research activities and to receive feedback.
- Visit all department faculty meetings at least once each year.
- Present to the Faculty Senate.
- Present to Trustees.
- Visit with the Chairs Council.

Leadership of Graduate Studies

When Missouri S&T created the new VCR position, it combined it with the position of Dean of Graduate Studies. This has allowed me to provide a better connection between Research and Graduate Education, which go hand in hand. I am currently responsible for approximately 1,000 on-campus students and 600 Global graduate students.

Some select accomplishment:

- Introduced a University-wide 4+1 program leading to a BS and MS in 5 years. The program has already enrolled more than 65 S&T students.
- To improve diversity we participated in recruiting at SACNAS, SWE, NSBE, etc. conferences and events.
- Organized GEM Grad Lab. First GEM student in more than a decade joined us in Fall 2019.
- Rescheduled our domestic recruiting trips based on previous successes and on new pipelines.
- Took recruiting trips to China and the Middle East, using our faculty and alumni to open doors.
- Visited embassies to strengthen existing, and create new relationships for sponsored students.

- Working with faculty, reevaluated admission requirements which, in some cases, were prohibitively high, while in other cases not high enough.
- Created a continuous “drip marketing” program for students admitted to our graduate studies, providing them with information and reminders, in an effort to improve yield. We made heavy use of social media platforms such as WeChat and WhatsApp to communicate with international applicants.
- Created a new program to inform students about the SMART and NSF GRF opportunities and used our technical editors to assist in writing the applications.
- Developed new and modified existing professional development programs for our graduate students, and started including postdocs in some of them.
- Introduced “Networking Evening with Industry” as part of the Career Fair, where companies interested in graduate students mingle with our graduates.
- Introduced a program to support Ph.D. students to present their papers at conferences.
- We adapted to the new reality of the pandemic by organizing multiple recruiting and informational events through the Internet.

While I was responsible for graduate recruiting (2018-20) all these efforts led to a dramatic increase in our admitted graduate students for Fall 2020: our MS admissions grew 765 new students, a **18%** increase over Fall 2019, with international admissions increasing by **52%**. Our doctoral applications and admissions saw a drop at the international level after the pandemic started, but a **9%** increase of domestic students, for a total 175 newly admitted students. Unfortunately, the pandemic, closing consulates, the inability to receive a visa and to travel, did not allow these numbers to translate to an increase in enrollments. We are still hopeful that Fall 2021 enrollments will reflect our recruiting success.

University of North Texas

Established in 1890, the University of North Texas in Denton (UNT) is one of the nation’s largest and most comprehensive public research Universities with almost 41,000 students, offering 109 bachelor’s, 94 master’s, and 36 doctoral programs in areas spanning music, the arts, the sciences, the humanities, business, education, engineering, etc. UNT is the flagship University of the UNT System which includes the UNT Law School, the UNT Health Science Center, and UNT-Dallas. UNT graduated 10,300 students last year from its 14 colleges and schools, and has more than 380,000 active alumni who use their UNT education to make a difference every day. UNT was elevated to Tier 1 research University by the Carnegie Classification in 2016.

The UNT College of Engineering was established in 2003, and currently has six departments: Biomedical Engineering (established 2014), Computer Science and Engineering (established 1971), Electrical Engineering (established 2005), Engineering Technology (established 1992), Mechanical and Energy Engineering (established 2007), and Materials Science and Engineering (established 1996). In Fall 2017 it had 3,050 undergraduate students, 368 master’s, and 208 doctoral students.

2008-2018 Dean of Engineering

I became the Dean of College of Engineering when it was 5 years old. Since it was very young, my work focused on growing it, improving all aspects, and creating a mature College which would not differ in any way from Engineering Colleges that were decades older. To achieve this I focused on policies, staffing, faculty hires, lab creation and renovation, continuous improvement of our incoming student classes, strengthening of research and scholarly performance, introduction of new degrees and departments, industry outreach, and alumni relations. I believe that this effort has been successful, and the College of Engineering at UNT is mature and will continue to grow and succeed.

Select Accomplishments

- Moved our 15-year old College into the top-100 (#97) ranking of graduate programs for public engineering schools by U.S. News & World Report.
- The College of Engineering, through more than \$11.1M in research expenditures in FY14, played a big role in UNT's reaching R1 ranking in 2016.
- Created a new department (Biomedical Engineering) and started two new Ph.D. degrees (EE and MEE)
- Increased enrollment: Undergraduate: 1,303 to 3,050 (2007 vs 2017, +134%); MS: 232 to 368 (2007 vs 2017, +59%); PhD: 58 to 208 (2007 vs 2017, +259%).
- Improved freshman retention from 71% to 81% (2006 vs. 2016).
- Increased undergraduate female student numbers as percentage of the student body from 10% to 15% (2010 vs 2017).
- Increased competitive research awards from \$3.5 million or \$68,200 per faculty to \$11.16 million, or more than \$157,000 per faculty (FY08 vs FY17; +218% in awards; +130% award per faculty)
- Increased research expenditure from \$61,000 to \$127,300 per faculty member (FY08 vs FY17; +109% in research expenditure per faculty)
- Increased Engineering donations from \$425,000 from 33 donors to \$1.28 million from 173 donors (FY08 vs FY17)
- Raised \$1.3 million for a Chaired Professorship.
- Faculty publications grew by 30% and averaged 5.2 publications per faculty per year in 2018.
- Increased the number of companies attending our Career Fairs from 17 to 150.

Actions Leading to Success

Academic

- Was successful in maintaining a highly diverse undergraduate student body: 44% of our undergraduates belonged to groups underrepresented in Engineering and 1/3 were first generation.
- Created a new Department of Biomedical Engineering which offered the BS and MS degrees.
- Created new Ph.D. degrees in Mechanical and Energy Engineering and in Electrical Engineering.
- Created a 4+1 BS/MS "grad track" that was later adopted by many other departments across the University; this program increased the number of UNT students attending graduate school.
- All our undergraduate degrees were accredited by ABET.
- Created an Engineering Learning Community to house our freshmen.
- Developed a formal program for our senior capstone design classes that solicited capstone design projects from industry who funded and supervised them.
- Grew the College staff from 12 to.
- Hired an undergraduate recruiter and introduced Engineering Ambassadors for tours, outreach, etc. We also grew the staff of our Advising Office from 4 to 9 to handle the growing student body.
- Our recruiting and retention efforts led to us more than doubling undergraduate enrollments (+134%) to a total of 3,050, while in parallel increasing admission requirements twice.
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Diversity

- Were successful in maintaining a highly diverse undergraduate student body: 44% of our undergraduates belonged to groups underrepresented in Engineering and 1/3 were first generation.
- For more than a decade we organized "Robocamp for Girls," a week-long summer robotics camp for middle school girls. By 2018 590 girls had attended Robocamp, and based on exit surveys 90% of them were interested in STEM disciplines.
- Together with SWE we participated in the "Design your World" conference for girls in grades 6 through 12, parents, and educators. We also hosted the conference in 2016. During the conference parents and educators learn how to encourage girls to become involved in STEM fields.

- We developed three joint degrees with the Texas Woman's University (TWU) which is also located in Denton, home of UNT. Although TWU has welcomed men since 1972, it is still primarily for women, and advertises itself so. The UNT/TWU joint degrees are in Electrical Engineering/Math, Mechanical Engineering/Math, and Materials Science and Engineering/Chemistry. We also established a Siemens scholarship for students in the joint programs.
- We were participants in an NSF grant to the Convergence Technology Center of the Colling County Community College in Frisco, TX. Our part of the grant focused on the development of a focused, actionable, measurable recruitment plan for females in Engineering.
- We collaborated on an NSF ADVANCE grant with North Dakota State University. The project, titled "Advocates and Allies," aims to recruit male faculty who are trained to understand gender issues in STEM, and become allies to and advocates for female faculty.

Research

- Renovated or built more than 100,000 sq.ft. of research and office space, the latest one being a \$12M 27,000 sq.ft. Biomedical Engineering building, dedicated in 2019.
- Started the first official mentoring program for UNT Engineering junior faculty.
- Established the Engineering Research Office with 5 staff supporting our research efforts.
- Organized five "discovery" workshops bringing together researchers from across UNT and our international partners to discuss research collaborations. The workshops focused on nanotechnology and materials science, renewable and sustainable energy, big data analytics, and resilient and sustainable infrastructure.

Administrative

- Developed two strategic plans (the latest for 2014-19); led our departments to create P&T documents with quantitative criteria; led the process of rewriting all departmental by-laws to ensure compliance with UNT and State rules.
- Recreated the Industrial Advisory Board with a new charter, larger membership of director level and above members, with more UNT Engineering alumni, and with focus on active participation in the College's strategic vision, fundraising, and outreach.
- Grew the faculty from 67 to 102 with strategic hiring of excellent junior faculty and senior opportunity hires.
- Received approval by the Board of Regents to implement differential tuition for Engineering courses starting in Fall 2018.

2015-16 Interim Dean of the Toulouse Graduate School (TGS)

Responsible for 6,700 graduate students in 125 programs ranging from engineering to music, and from education to the arts.

Select Accomplishments:

- Responsible for the McNair Scholars Program
- Organized and oversaw the external evaluation of a number of graduate programs: Management, Biological Sciences, Electrical Engineering, Technical Communication, Kinesiology, Psychology, etc.
- Participated in the analysis and evaluation of proposals for new graduate degrees and concentrations, and worked with the faculty-led Graduate Council on new degrees, courses, requirements, etc.
- Led the Federation, a program that allows students to take courses towards their degree from any of three Universities: UNT, Texas Woman's University, and Texas A&M-Commerce.
- Streamlined or changed a number of policies with the goal of bringing UNT's graduate studies in line with Tier 1 (R1) research institutions: we increased the minimum admission requirements; we enforced a minimum size of MS and PhD committees and defined membership rules; changed the time limits for

courses and degree completion; changed the rules for graduate student transfers between programs; streamlined the process of theses and dissertation approvals; cleaned up dormant focus areas and tracks under graduate degrees; etc.

2018 Associate Vice President for International Research Partnerships

As a Dean of Engineering and as Graduate Dean I developed a number of international collaborations. These included MOUs for joint PhD degrees, 3+2 BS/MS, and 2+2 BS degrees; a summer program for international undergraduate researchers; and five international research workshops. Because of these successes the Provost asked me to lead UNT's effort to strengthen international research and education relationships. I started conversations with Universities in China, India, and Thailand, but left UNT before these bore fruit.

University of Kansas

Founded March 21, 1865, the university was opened in 1866, under a charter granted by the Kansas State Legislature. Today, KU has become a major public research and teaching institution of 28,00 students and 2,800 faculty on three campuses (Lawrence, Kansas City, Overland Park). A member of the prestigious Association of American Universities since 1909, KU consistently earns high rankings for its academic programs. KU has 13 schools, including the only schools of pharmacy and medicine in the state, and offers more than 345 degree programs. The University of Kansas Cancer Center is the state's only designated National Cancer Institute. KU has service centers statewide that offer training and professional development in law enforcement, firefighting, child development, health education, and public management.

2003-08 Chair of the Department of Electrical Engineering and Computer Science (EECS) (2004-08), Interim Chair of EECS (2003)

Select Accomplishments

- The EE Ph.D. program, not ranked in the top-80 before, was ranked 44th among public Universities for 2008 by USN&WR.
- In 2005 the Department was awarded a five-year, \$21 million NSF Science and Technology Center (STC), the first ever in the State of Kansas.
- Developed two new degrees: a BS in Interdisciplinary Computing, integrating CS with a other disciplines: Chemistry, Physics, Biology, Journalism, Astronomy, etc; and a M.S. in Information Technology taught to working professionals.
- Developed a strategic plan.
- The department research expenditures in FY07 were \$7.37 million, averaging \$230,000 per faculty per year, the highest ever.
- Re-instituted the Industry Advisory Board, and spearheaded contacts with local industry, leading to courses co-taught with industry, courses delivered to industry in-house, and funding of scholarships.
- Increased the number of our Ph.D. students from 31 in 2003 to 71 in 2007 (+130%).
- Increased donations to the Department by 120%.

RESEARCH

Technical Areas

Multiagent systems; case-based reasoning; machine learning; intelligent image analysis

Honors

- Elected Senior Member of the ACM (2011)
- Elected to the academic honor society Phi Kappa Phi (2010)
- Awarded the Louise Byrd Graduate Educator Award by the University of Kansas (2008)
- Awarded the Miller Scholar honor by the University of Kansas (2007)
- Awarded Spahr Professorship by the University of Kansas (2000-03)
- Awarded Bellows Fellowship by the University of Kansas (1999)
- Elected Senior Member of the IEEE (1998)
- Awarded the Big-12 Faculty Fellowship (1997)
- Awarded the Miller Award for Research Excellence by the University of Kansas (1994)
- Elected to the honorary research society Sigma Xi (1992)

Research Grants and Contracts

Principal Investigator:

Federal, Industry and State (total over \$4.3 million)

1. NASA Headquarters, "An Adaptive, Negotiating Multi Agent System for Sensor Webs," 2006-10, \$621,496.
2. Kansas Technology Enterprise Corporation, "Learning the Contents of Images for Image Retrieval," 2006-07, \$40,154.
3. Naval Research Laboratory, "Development of a Fused Ice Classification Scheme," 2001-05, \$174,644.
4. Burlington Northern Santa Fe Corporation, "Using Case-Based Reasoning (CBR) to Identify and Correct Errors in Integrated Waybills," 2001-02, \$57,224.
5. DARPA, "A Case-Based Reflective Negotiation Model," 1999-2003, \$1,540,000.
6. National Institutes of Health, "Knowledge Discovery in Databases of Blood Handling Events," 1999-2003, \$220,568 (subcontract through Columbia University)
7. Canadian Ice Services, "Port ARKTOS to a Pentium II/NT Processor," 1998-99, \$4,100.
8. DARPA, "Intelligent Information and Data Dissemination System (IIDS)," 1997-98, \$68,250 (subcontract through Lockheed-Martin Missiles and Space)
9. Kansas Technology Enterprise Corporation, "Intelligent Agents and Multiagent Systems," 1997-99, \$111,180
10. National Institutes of Health, "Conceptual Clustering and Inductive Learning of Transfusion/Blood Bank Events," 1996-98, \$58,850 (subcontract from the Southwestern Medical Center)
11. DARPA, "Intelligent Information and Data Dissemination System (IIDS) - Phase 0," 1996-97, \$45,053 (subcontract through Lockheed-Martin Missiles and Space)
12. Naval Research Laboratory, "Generating a Rule-Base for Sea-Ice Classification," 1995-2000, \$292,689
13. NASA Headquarters, "Sea-Ice Classification by the Intelligent Integration of Active and Passive Microwave Data - Supplemental," 1995, \$23,583
14. NASA Office of Mission to Planet Earth, "A Methodology for Classifying Remotely Sensed Sea Ice Cover for Global Change Applications," 1993-96, \$66,000 (Graduate Student Fellowship)
15. NASA Headquarters, "Sea-Ice Classification by the Intelligent Integration of Active and Passive Microwave Data," 1992-95, \$398,507
16. NASA Headquarters, "A Study of the Role of ACTS in a Manufacturing Collaboratory," 1991, \$45,446
17. Kansas Technology Enterprise Corporation, "The Intelligent Design Laboratory," 1990-97, \$484,400

18. NASA Headquarters, "Multi-Image Data Classification of Sea Ice using a Blackboard," 1990-93, \$66,000 (Graduate Student Fellowship)

Internal

1. University of Kansas General Research Fund, "Pilot Project in Knowledge Discovery in Databases," 1997-98, \$6,489
2. University of Kansas General Research Fund, "Intelligent Information Retrieval," 1994-95, \$6,489
3. University of Kansas General Research Fund, "Integrating Decision Theory and Case-Based Reasoning," 1993-94, \$6,885
4. University of Kansas General Research Fund, "Learning Communication Strategies for Distributed Expert Systems," 1992-93, \$6,426
5. University of Kansas General Research Fund, "Using Probabilistic Conceptual Clustering to Impose Structure to Large Case-Bases," 1990-91, \$4,924
6. University of Kansas General Research Fund, "Expanding the TOLTEC Planner to Dynamic Domains," 1988, \$5,000

Co-Investigator:

Federal, Industry and State (\$15.6 million)

1. NSF ADVANCE, "Engaging Male Colleagues as Advocates and Allies for the Advancement of Women Faculty," 2015-17, \$71,040 (PI: C. Crutsinger; North Dakota State subcontract).
2. State of Texas Energy Conservation Office, "Renewable Energy Initiative: Eagle Point Campus Project," 2011-13, \$2,000,000 (PI: B. Spinks)
3. Oak Ridge National Laboratory/ONR, "A Unified Architecture for SensorNet with Multiple Owners," 2006-08, \$1,541,588 (PI: V. Frost)
4. Kansas Transportation Research Institute, "Development of Technologies for Trusted Corridors," 2006-07, \$174,706 (PI: V. Frost)
5. Kansas Technology Enterprise Corporation, "Intelligent AutoFill of Forms for XML," 2003-05, \$41,012 (PI: Danico Lee)
6. NSF ITR, "Polar Radar for Ice Sheet Measurements," 2001-06, \$8,715,000 (PI: S. Prasad Gogineni)
7. NSF CISE Research Infrastructure Program, "Ambient Computational Environments," 1999-03, \$964,913 (PI: Gary Minden)
8. Sprint Corp., "Integrated Evaluation of Network, System, and Application Software Architecture and Performance Issues in ATM Networks," 1998-99, \$461,000 (PI: Douglas Niehaus)
9. NSF CISE Research Infrastructure Program, "DesignLab," 1995-99, \$1,500,037 (PI: Allen Ambler)
10. AT&T Corporation, "Exploratory Study and Design for a Network Maintenance Management System," 1989-90, \$104,172 (PI: Gary Minden)
11. AT&T Corporation, "Computer Aided Design Meta-Tools," 1989-90, \$15,000 (PI: Gary Minden)

Patent

1. Lee, D., C. Tsatsoulis and S. Perry, *Automated Data Entry System*, U.S. Patent Number 7,596,545, Sept. 29, 2009.

Publications

Book

1. Tsatsoulis, C. and R. Kwok (Eds.). 1998. *Analysis of SAR Data of the Polar Oceans*. Springer Verlag.

Book Chapters

1. Soh, L-K, C. Tsatsoulis, and H. Sevey. 2003. "A Satisficing, Negotiated, and Learning Coalition Formation Architecture," in: *Distributed Sensor Networks: A Multiagent Perspective*, Ortiz, C., V. Lesser and M. Tambe (Eds.), Kluwer, 109-138.
2. Sevey, H. and C. Tsatsoulis. 2002. "Agent-Based Intelligent Information Dissemination in Dynamically Changing Environments," in: *Intelligent Agents and their Applications*, Jain, L.C., Z. Chen, and N. Ichalkaranje (Eds.), volume 98 of Studies in Fuzziness and Soft Computing, Physica-Verlag, 1-26.
3. Tsatsoulis, C. and A. Williams. 2000. "Case-Based Reasoning," in: *Knowledge-Based Systems - Techniques and Applications (Volume 3: Computer Techniques)*, C.T. Leondes (Ed.), Academic Press, 807-837.
4. Tsatsoulis, C. and L-K. Soh. 2000. "Intelligent Agents in Telecommunication Networks," in: *Computational Intelligence in Telecommunications Networks*, W. Pedrycz and A.V. Vasilakos (Eds.), CRC Press, 479-504.
5. Tsatsoulis, C. and R. Kwok. 1998. "Introduction to 'Analysis of SAR Data of the Polar Oceans'", in: *Analysis of SAR Data of the Polar Oceans*, C. Tsatsoulis and R. Kwok (Eds.), Springer Verlag, 3-8.
6. Soh, L-K., Tsatsoulis, C. and Holt, B. 1998. "Identifying Ice Floes and Computing Ice Floe Distributions in SAR Images", in: *Analysis of SAR Data of the Polar Oceans*, C. Tsatsoulis and R. Kwok (Eds.), Springer Verlag, 9-34.
7. Tsatsoulis, C. and P. Alexander. 1997. "Integrating Cases, Sub-cases, and Generic Prototypes for Design," in: Maher, M.L. and P. Pu (Eds.), *Issues and Applications of Case-Based Reasoning in Design*, Lawrence Erlbaum, Mahwah, New Jersey and London, 261-300.
8. Tsatsoulis, C. and R. Kashyap. 1988. "Dynamic Memory Structures for Process Planning and Other Manufacturing Tasks," in: Kumara, S.T., R.L. Kashyap, and A.L. Soyster (Eds.), *Artificial Intelligence: Manufacturing Theory and Practice*, Industrial Engineering and Management Press, Norcross, Georgia, 265-296.
9. Tsatsoulis, C. and R. Kashyap. 1988. "Planning and its Applications to Manufacturing," in: Kumara, S.T., R.L. Kashyap, and A.L. Soyster (Eds.), *Artificial Intelligence: Manufacturing Theory and Practice*, Industrial Engineering and Management Press, Norcross, Georgia, 193-223.

Journal Publications

1. Amthauer, H. and C. Tsatsoulis. 2010. "Classifying Genes to the Correct Gene Ontology Slim Term in *Saccharomyces cerevisiae* Using Neighbouring Genes with Classification Learning," *BMC Genomics*, 11:340.
2. Beldona, S. and C. Tsatsoulis. 2010. "Identifying Buyers with Similar Seller Rating Models and Using their Opinions to Choose Sellers in Electronic Markets," *Int. J. Information and Decision Sciences*, vol. 2, no. 1, 1-16.
3. Soh, L-K. and C. Tsatsoulis. 2005. "A Real-Time Negotiation Model and a Multi-Agent Sensor Network Implementation," *Autonomous Agents and Multi-Agent Systems*, vol. 11, no. 3, 215-271.
4. Soh, L-K., C. Tsatsoulis, D. Gineris, and C. Bertoia. 2004. "ARKTOS: An Intelligent System for SAR Sea Ice Image Classification," *IEEE Trans. Geoscience and Remote Sensing*, vol. 42, no. 1, 229-248.

5. Tsatsoulis, C. and H. Amthauer. 2003. "Finding Clusters of Similar Events within Clinical Incident Reports: A Novel Methodology Combining Case Based Reasoning and Information Retrieval," *Quality and Safety in Health Care Journal*, vol. 12, suppl. 2, 24-32.
6. Soh, L-K. and C. Tsatsoulis. 2002. "ARKTOS: A Knowledge Engineering Software Tool for Images," *Int. J. of Human-Computer Studies* 57, 469-496.
7. Soh, L-K. and C. Tsatsoulis. 2000. "Separating Touching Objects in Remote Sensing Imagery," *IEEE Trans. on Image Processing*, vol. 9, no. 2, 312-315.
8. Soh, L-K. and C. Tsatsoulis. 1999. "Unsupervised Segmentation of ERS and RADARSAT Sea Ice Images Using Multiresolution Peak Detection and Aggregated Population Equalization," *Int. J. of Remote Sensing - Special Issue on Remote Sensing of the Polar Regions*, vol. 20, no. 15&16, 3087-3190.
9. Haverkamp, D. and C. Tsatsoulis. 1999. "Information Fusion for Estimation of Summer MIZ Ice Concentration from SAR Imagery," *IEEE Trans. on Geoscience and Remote Sensing - Special Issue on Data Fusion*, vol. 37, no. 3, 1278-1291.
10. Soh, L-K. and C. Tsatsoulis. 1999. "Segmentation of Satellite Imagery of Natural Scenes Using Data Mining," *IEEE Trans. on Geoscience and Remote Sensing*, vol. 37, no.2, 1086-1099.
11. Soh, L-K. and C. Tsatsoulis. 1999. "Texture Analysis of SAR Sea Ice Imagery Using Gray Level Co-occurrence Matrices," *IEEE Trans. on Geoscience and Remote Sensing*, vol. 37, no.2, 780-795.
12. Kinney, M. and C. Tsatsoulis. 1998. "Learning Communication Strategies in Multiagent Systems," *Int. Journal of Applied Intelligence, Special Issue on Adaptive Agent Systems*, vol. 9, 71-91.
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14. Tsatsoulis, C., Q. Cheng, and H-Y Wei. 1997. "Integrating Case-Based Reasoning and Decision Theory: Theory and Experiments," *IEEE Expert*, July/August, 46-55.
15. Haverkamp, D., L-K Soh, and C. Tsatsoulis. 1995. "A Comprehensive, Automated Approach to Determining Sea Ice Thickness from SAR Data," *IEEE Transactions on Geoscience and Remote Sensing*, vol. 33, no. 1, 46-57.
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17. Roderman, S. and C. Tsatsoulis. 1993. "PANDA: A Case-Based System to Aid Novice Designers," *Journal of Artificial Intelligence for Engineering Design, Analysis and Manufacturing* 7(2), 125-134.
18. Tsatsoulis, C. and R.L. Kashyap. 1993. "Case-Based Reasoning and Learning in Manufacturing with the TOLTEC Planner," *IEEE Trans. Systems, Man, and Cybernetics*, vol. 23, no. 4, 1010-1023.
19. Adalier, M. and C. Tsatsoulis. 1992. "Redesigning for Manufacturability using REINRED," *International Journal of Applications of Artificial Intelligence - Special Issue* 6, 285-302.
20. Alexander, P. and C. Tsatsoulis. 1992. "Using Sub-Cases for Skeletal Planning and Partial Case Reuse," *Int. J. of Expert Systems - Special Issue* 4 (2), 221-247.

21. Kumara, S., I. Ham, S. Ohsuga, C. Tsatsoulis, R. Ramesh, V. Frost, and R.L. Kashyap. 1992. "Intelligent Computer-Integrated Manufacturing (I-CIM): Research Perspectives," *International Journal of Applications of Artificial Intelligence - Special Issue* 6, 529-552.
22. Tsatsoulis, C. and R. Kashyap. 1988. "A Case-Based System for Process Planning," *International Journal of Robotics and Computer-Integrated Manufacturing*, Vol. 4, No. 3/4, 557-70.
23. Tsatsoulis, C. and R. Kashyap. 1988. "A System for Knowledge-Based Process Planning," *International Journal for Artificial Intelligence in Engineering*, Vol. 3, No. 2, 61-75.
24. Tsatsoulis, C. and K. S. Fu. 1986. "Using Machine Vision for the Inspection of Industrial Assemblies," *NDT International*, Vol. 19, No. 4, pp. 263-270.
25. Tsatsoulis, C. and K. S. Fu. 1985. "Modeling Rule-Based Systems by Stochastic Programmed Production Systems," *Information Sciences*, Vol. 36, No. 3, 207-230.

Conference and Workshop Papers (proceedings published)

1. Van Dyne, M. and C. Tsatsoulis. 2017. "An Experimental Design to Study Decommitment in a Collaborative Multi-agent System in Resource Scheduling," *Proc. 21st Intl. Conf. on Circuits, Systems, Communications, and Computers – CSCC'17*, Crete, Greece.
2. Van Dyne, M. and C. Tsatsoulis. 2014. "Software Architecture for a System Combining Artificial Intelligence Approaches for Ground Station Scheduling," *Proc. 18th Int. Conf. on Computers- CSCC'14*, Santorini, Greece, 71-76.
3. Tsatsoulis, C. and M. Van Dyne. 2014. "Integrating Artificial Intelligence Techniques to Generate Ground Station Schedules," *IEEE Aerospace Conference*, Big Sky, MT.
4. Tsatsoulis, C. and E. Komp. 2013. "Integrating Expert- and Algorithm-Derived Data to Generate a Hemispheric Ice Edge," *IEEE Aerospace Conference*, Big Sky, MT.
5. Van Dyne, M. and C. Tsatsoulis. 2012. "An Inferential System for Determination of Candidate Crash Sites for Search and Rescue Operations," *IEEE Aerospace Conference*, Big Sky, MT.
6. Sevay, H. and C. Tsatsoulis. 2011. "Multiagent Reactive Plan Application Learning in Dynamic Environments," *15th Int. Conf. on Computers*, Corfu, Greece.
7. Van Dyne, M. and C. Tsatsoulis. 2011. "Effect of Agent Decommitment in a Target Tracking Domain," *IEEE Aerospace Conference*, Big Sky, MT.
8. Van Dyne, M. and C. Tsatsoulis. 2010. "A Comparison of Agent Decommitment Techniques in a Real-Time Environment," *9th Int. Conf. on Artificial Intelligence, Knowledge Engineering and Databases*, Cambridge, UK.
9. Amthauer, H., E. Komp, and C. Tsatsoulis. 2009. "Negotiated Rational Commitment and Decommitment in Sensor Webs," *3rd Int. Conf. on Sensor Technologies and Applications – SENSORCOMM 2009*, Athens, Greece.
10. Amthauer, H. and C. Tsatsoulis. 2009. "Sensor Web Coalition Formation via Argumentation-Based Negotiations," *IEEE Aerospace Conference*, Big Sky, MT.

11. Quanz, B. and C. Tsatsoulis. 2008. "Determining Object Safety Using a Multiagent, Collaborative System," *Workshop in Environment-Mediated Coordination in Self-Organizing and Self-Adaptive Systems*, held at the 2nd IEEE Int. Conf. on Self-Adaptive and Self-Organizing Systems, Venice, Italy.
12. Tsatsoulis, C. and D. Lee. 2008. "Domain Independent Data Discrepancy Detection Using Ensemble Learning," *12th WSEAS Int. Conf. on Computers*, Heraklion, Greece.
13. Tsatsoulis, C., N. Ahmad, E. Komp, and C. Redford. 2008. "Using a Contract Net to Dynamically Configure Sensor Webs," *IEEE Aerospace Conference*, Big Sky, MT.
14. Beldona, S. and C. Tsatsoulis. 2007. "Reputation Based Buyer Strategy For Seller Selection For Both Frequent and Infrequent Purchases," *4th Int. Conf. on Informatics in Control, Automation & Robotics*, Angers, France.
15. Beldona, S. and C. Tsatsoulis. 2007. "An Investigation of Sharing of Seller Reputation Among Buyers in Agent-Based Markets," *3rd Int. Conf. on Autonomic and Autonomous Systems, ICAS 2007*, Athens, Greece
16. Tsatsoulis, C. and D. Lee. 2005. "Using an Ensemble Classifier for Machine Learning Applications," *Proc. 9th WSEAS Int. Conf. on Computers*, Athens, Greece.
17. Lee, D. and C. Tsatsoulis. 2005. "Intelligent Data Entry Assistant for XML Using Ensemble Learning," *Int. Conf. on Intelligent User Interfaces*, San Diego, California, 83-89.
18. Sivashanmugam, S. and C. Tsatsoulis. 2004. "A Bayesian Network for Autonomous Sensor Control during Polar Ice Sheet Measurements," *IGARSS'04*, Anchorage, Alaska.
19. Tsatsoulis, C., S. Sivashanmugam and S. Perry. 2004. "Intelligent Matchmaking for Polar Ice Sheet Data Collection and Delivery," *IGARSS'04*, Anchorage, Alaska.
20. Tsatsoulis, C. and E. Komp. 2004. "Reactive Agent Technology for Real-Time, Multisensor Target Tracking," *Proc. 8th WSEAS Int. Conf. on Computers*, G. Manikopoulos et al. (Eds.), WSEAS (Also appeared in *WSEAS Trans. on Information Science and Technology*, iss. 1, vol. 1, 82-87, 2004).
21. Soh, L.-K. and C. Tsatsoulis. 2003. "Utility-Based Multiagent Coalition Formation with Incomplete Information and Time Constraints," *IEEE International Conference on Systems, Man, and Cybernetics*.
22. Tsatsoulis, C. and B. Stephens. 2003. "Using Genetic Algorithms to Discover Selection Criteria for Contradictory Solutions Retrieved by CBR," in: *Proc. 5th Int. Conf. On Case-Based Reasoning*, K. Ashley and D. Bridge (Eds.), Berlin: Springer Verlag, 566-580.
23. Tsatsoulis, C. and P. Yang. 2003. "Maintenance of Case Bases Through Pruning and Learning," *7th WSEAS Int. Conf. on Computers*, in: *Recent Advances in Intelligent Systems and Signal Processing*, Mastorakis et al. (Eds.), WSEAS, 296-300.
24. Sevay, H. and C. Tsatsoulis. 2002. "Multiagent Reactive Plan Application Learning in Dynamic Environments," *1st Int. Conf. On Autonomous Agents and Multiagent Systems*, Bologna, Italy, 839-40.
25. Soh, L-K. and C. Tsatsoulis. 2002. "Satisficing Coalition Formation among Agents," *1st Int. Conf. On Autonomous Agents and Multiagent Systems*, Bologna, Italy, 1062-63.

26. Soh, L-K. and C. Tsatsoulis. 2002. "Allocation Algorithms in Dynamic Negotiation-Based Coalition Formation," *Workshop on Teamwork and Coalition Formation* (held during the *1st Int. Conf. On Autonomous Agents and Multiagent Systems*), Bologna, Italy, 16-23.
27. Soh, L-K. and C. Tsatsoulis. 2002. "Learning to Form Negotiation Coalitions in a Multiagent System," *AAAI Spring Symposium on Collaborative Learning Agents*, 106-12.
28. Soh, L-K. and C. Tsatsoulis. 2001. "Agent-Based Argumentative Negotiations with Case-Based Reasoning," *AAAI Fall Symposium on Negotiation Methods for Autonomous Cooperative Systems*, 16-25.
29. Lee, D. and C. Tsatsoulis, 2001. "Integrating Structure and Contents to Identify Similar XML Domain Documents," *International Conference on Intelligent Agents, Web Technologies, and Internet Commerce - IAWTIC'2001, Special Session on Cooperative Information Agents*, Las Vegas, NE., 373-378.
30. Soh, L-K., C. Tsatsoulis, M. Jones and A. Agah. 2001. "Evolving Cases for Case-Based Reasoning Multiagent Negotiations," in: *Proceedings of the Genetic and Evolutionary Computation Conference, GECCO-2001*, Spector, L., E. Goodman, A. Wu, W.B. Langdon, H.-M. Voigt, M. Gen, S. Sen, M. Dorigo, S. Pezeshk, M. Garzon, and E. Burke (Eds.), San Francisco, CA: Morgan Kaufmann Publishers, 909.
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33. Soh, L-K. and C. Tsatsoulis. 2000. "ARKTOS: A Knowledge Engineering Software Package for Satellite Sea Ice," *IGARSS'00*, Honolulu, Hawaii.
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35. Williams, A.B. and C. Tsatsoulis. 2000. "An Instance-based Approach for Identifying Candidate Ontology Relations within a Multi-Agent System," *Workshop on Ontology Learning, European Conference on Artificial Intelligence*, Berlin, Germany.
36. Soh, L-K. and C. Tsatsoulis. 1999. "Multisource Data and Knowledge Fusion for Intelligent SAR Sea Ice Classification," *IGARSS'99*, Hamburg, Germany, 68-70.
37. Soh, L-K. and C. Tsatsoulis. 1999. "Adaptive Multiresolution Quantization for Contextual Information Gain in SAR Sea Ice Images," *IGARSS'99*, Hamburg, Germany, 1567-1569.
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39. Sevay, H. and C. Tsatsoulis. 1999. "An Agent-Based Approach to Anticipatory Information Dissemination," *IASTED International Conference on Artificial Intelligence and Soft Computing*, Honolulu, Hawaii, 146-150.

40. Tsatsoulis, C. and J. Holtzman. 1999. "Generating Satellite Control Schedules Using Case-Based Scheduling," *Florida Artificial Intelligence Research Symposium FLAIRS'99*, Orlando, FL, 43-48.
41. Williams, A. and C. Tsatsoulis. 1999. "Diverse Web Ontologies: What Intelligent Agents Must Teach to Each Other," *AAAI Spring Symposium on Intelligent Agents in Cyberspace*, Stanford, CA, 115-120.
42. Soh, L-K., H. Sevay and C. Tsatsoulis. 1999. "MAGE: Multi-Agent Graphical Environment," *AAAI Spring Symposium on Intelligent Agents in Cyberspace*, Stanford, CA, 128-135.
43. Soh, L-K. and C. Tsatsoulis. 1998. "Automated Sea Ice Segmentation (ASIS)," *IGARSS'98 Conference*, Seattle, WA, 586-588.
44. Soh, L-K. and C. Tsatsoulis. 1998. "Data Mining in Remotely Sensed Images: A General Model and an Application," *IGARSS'98 Conference*, Seattle, WA, 798-800.
45. Dukes-Schlossberg, J., Y. Lee, M. Zev, C. Tsatsoulis, H. Sevay, Y. Arens, H. Garcia-Molina, M. Rys. 1998. "WIP: Warfighter Information Packaging," *AAAI Technical Report WS-98-14*, 147-48.
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51. Soh, L-K., D. Haverkamp, and C. Tsatsoulis. 1996. "Separating Ice-Water Composites and Computing Floe Size Distributions," *IGARSS '96 Conference*, Vol. III, 1532-1534.
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53. Tsatsoulis, C. and G. Yee. 1996. "Learning Reliability Models of Other Agents in a Multiagent System," *AAAI-96 Workshop on Adaptive Multiagent Systems*, WS-96-04, AAAI Press.
54. Demarest K., J. Miller, J. Roberts, and C. Tsatsoulis. 1995. "Electrical Engineering vs. Computer Engineering vs. Computer Science: Developing Three Distinct but Interrelated Curricula," *IEEE Frontiers in Education Conference*, 4b2.1-4b2.4.
55. Cheng, Q. and C. Tsatsoulis. 1994. "Decision-Theoretic Evaluation of Design Choices in a Case-Based Environment," *AAAI CBR Workshop*, AAAI'94, 79-83.

56. Haverkamp, D. and C. Tsatsoulis. 1994. "Utilizing the Dynamic Behavior of Sea Ice for Determining Ice Thickness Distributions in SAR Imagery," *IGARSS'94*, 1753-1755.
57. Silveira, P.E., M. Van Dyne, and C. Tsatsoulis. 1994. "Feature Matching from SAR Arctic Data Using Neural Networks," *IGARSS'94*, 496-498.
58. Tsatsoulis, C., J. Holtzman, and S. Woodward. 1994. "Integrating Disparate Representations of Large Systems," *AAAI AI in Systems Engineering Workshop, AAAI'94*, 1-8.
59. Van Dyne, M. and C. Tsatsoulis. 1994. "An Experiment to Determine Improvements in Automated Problem Solving in a Complex Problem Domain," *Sixteenth Annual Conf. of the Cognitive Science Society*, 899-904.
60. Van Dyne, M., C. Tsatsoulis, and J. Thorp. 1994. "Using Inductive Machine Learning, Expert Systems and Case Based Reasoning to Predict Preterm Delivery in Pregnant Women," *5th Int. Conf. on Database and Expert System Applications*, in: *Database and Expert System Application*, D. Karagiannis (Ed.), Berlin: Springer-Verlag, 690-702.
61. Van Dyne, M., L. Woolery, J. Grzymala-Busse, and C. Tsatsoulis. 1994. "Using Machine Learning and Expert Systems to Predict Preterm Delivery in Pregnant Women," *10th Conference on Artificial Intelligence Applications*, 344-350.
62. Haverkamp, D., L-K Soh, and C. Tsatsoulis. 1993. "A Dynamic Local Thresholding Technique for Sea Ice Classification," *IGARSS'93*, Tokyo, 638-640.
63. Soh, L-K and C. Tsatsoulis. 1993. "A Feature Extraction Technique for Synthetic Aperture Radar (SAR) Sea Ice Imagery," *IGARSS'93*, Tokyo, 632-634.
64. Van Dyne, M. and C. Tsatsoulis. 1993. "Extraction and Analysis of Sea Ice Leads from SAR Images," *IGARSS'93*, Tokyo, 629-631.
65. Woolery, L., M. Van Dyne, J. Grzymala-Busse, and C. Tsatsoulis. 1993. "Machine Learning for Developing of an Expert System to Support Nurses' Assessment of Preterm Labor Risks," *Nursing Informatics Proceedings (1993)*, in: *Nursing Informatics: An International Overview for Nursing in a Technological Era*, Grobe, S.J. and Pluyter-Wenting, E.S.P. (Eds.), Amsterdam: Elsevier Publishers, 357-361.
66. Haverkamp, D. and C. Tsatsoulis. 1992. "The Use of Expert Systems in Combination with Active and Passive Microwave Data to Classify Sea Ice," *IGARSS'92*, Houston, 1625-1627.
67. Kinney, M. and C. Tsatsoulis. 1992. "Learning Communication Strategies for Distributed Artificial Intelligence," *SPIE Conference on Adaptive and Learning Systems*, Orlando.
68. Alexander, P., C. Tsatsoulis, J. Holtzman, and G. Minden. 1990. "A Case-Based System for Simulation Generation and Control," *AI and Simulation: Theory and Practice, Proc. of AI and Simulation Conference*, Nashville, TN, The Society for Computer Simulation.
69. Alexander, P., C. Tsatsoulis, J. Holtzman, and G. Minden. 1990. "Case-Based Planning for Simulation," *IEE Int. Conference on Expert Planning Systems*.
70. Tsatsoulis, C. 1990. "Design Using Case-Based Reasoning," *5th International Conference on CAD/ CAM, Robotics and Factory of the Future*, 219-224.

71. Tsatsoulis, C. 1990. "Using Advanced Artificial Intelligence Techniques to Create Analysis Plans for Cosite Electromagnetic Interference Problems," *Annual Review of Progress in Applied Computational Electromagnetics*, 1-7, (invited).
72. Alexander, P., G. Minden, C. Tsatsoulis, and J. Holtzman. 1989. "Storing Design Knowledge in Cases," *Defense Advanced Research Project Agency (DARPA) Workshop on Case-Based Reasoning*, 188-192.
73. Tsatsoulis, C. 1989. "Case-Based Design and Learning in Telecommunications," *Second International Conference on Industrial and Engineering Applications of Artificial Intelligence and Expert Systems*.
74. Tsatsoulis, C. 1989. "Case-Based Planning in Manufacturing," *Spring Symposium of the American Association of Artificial Intelligence*, Stanford.
75. Kashyap, R., H. Smit, C. Tsatsoulis, and L. Wiggins. 1988. "An Intelligent System for Integrating Process Planning and Design," *IEEE Conference on Robotics and Automation*, 1297-1299.
76. Tsatsoulis, C. and R. Kashyap. 1987. "A Case-Based System for Process-Planning," *International Conference on the Manufacturing Science and Technology of the Future*.
77. Tsatsoulis, C. and R. Kashyap. 1986. "A Methodology for the Implementation of Knowledge-Based Systems in Process Planning," *AI in Manufacturing Workshop*, AAAI-86, Pittsburgh.
78. Tsatsoulis, C. and K.S. Fu. 1985. "SAIL - A High-Level Programming Language Translator for Visual Inspection of Industrial Assemblies," *Proceedings SPIE International Conference on Automatic Inspection and Measurement*, Vol. 557, 59-63.
79. Tsatsoulis, C. and K.S. Fu. 1984. "A Computer Vision System for Assembly Inspection," *Proceedings SPIE Conference on Intelligent Robotics and Computer Vision*, Vol. 521, 352-57.

Conference and Workshop Papers (proceedings not published)

1. Niehaus, D., C. Tsatsoulis, W. Dinkel, and A. Gautam. 2001. "An Infrastructure for Real-Time, Reflective Intelligent Agents," *Ninth International Workshop on Parallel and Distributed Real-Time Systems and Sixth International Workshop on Embedded/ Distributed HPC Systems Applications*, San Francisco, CA.
2. Tsatsoulis, C., C. Bertoia and M. Van Woert. 2001. "Fusion of PALSAR and ANVIR-2 Data for Sea Ice Analysis, with Applications to an Operational Environment," *ALOS Joint Symposium and 1st ALOS PI Workshop*, Tokyo, Japan
3. Gineris, D., C. Bertoia, M.R. Keller, L-K. Soh and C. Tsatsoulis. 2000. "Operational Evaluation of a Knowledge-Based Sea Ice Classification System," *Workshop on Mapping and Archiving of Sea Ice Data and the Expanding Role of Radar*, Ottawa, Canada
4. Soh, L-K. and C. Tsatsoulis. 2000. "Methodologies and Discriminating Visual Cues for Unsupervised Image Segmentation," *Workshop on Machine Learning of Spatial Knowledge, The Seventeenth International Conference on Machine Learning (ICML-2000)*.
5. Tsatsoulis, C., L-K. Soh, C. Bertoia, and K. Partington. 1999. "Intelligent Fusion of Multisource Data for Sea Ice Classification," *Workshop on Intelligent Techniques for Spatio-Temporal Data Analysis in Environmental Applications*, Chania, Greece.

6. Soh, L-K., C. Tsatsoulis, C. Bertoia and B. Ramsey. 1998. "Transition from Research to Operations: ARKTOS, Advanced Reasoning Using Knowledge to Classify Sea Ice," *Sea Ice Charts of the Arctic - Scientific Achievements from the First 400 Years*, Seattle, WA.
7. Bertoia, C., C. Tsatsoulis and Y. Zhao. 1996. "Using Neural Networks for Monitoring Polar Sea Ice," *2nd World Congress of Nonlinear Analysts*, Athens, Greece, July.
8. Haverkamp, D. and C. Tsatsoulis. 1994. "ISICLE: The Sea-Ice Classification System of The University of Kansas," *3rd Circumpolar Symposium on Remote Sensing of Arctic Environments*, Fairbanks, AK., May.
9. Haverkamp, D., L-K. Soh, and C. Tsatsoulis. 1994. "A Dynamic Local Thresholding Technique for Distinguishing Sea Ice Thickness in SAR Data," *Workshop of the International Union of Radio Science, URSI'94*, Lawrence, KS.
10. Soh, L-K., S. Cappiello, D. Haverkamp, and C. Tsatsoulis. 1993. "Analysis of the Distribution of Local, Dynamic Classification Thresholds for Sea Ice in ERS-1 Data," *ASF SAR Users Meeting*, Seattle, WA, July.
11. Tsatsoulis, C. 1993. "Can CBR Help in Systems Engineering?," *AAAI'93 Workshop on AI Models for Systems Engineering*.
12. Tsatsoulis, C. 1993. "The ISICLE Project and Its Use of the GPS," *GPS Users' Meeting*, Seattle.
13. Wei, H-Y and C. Tsatsoulis. 1993. "Uncertain Case-Based Reasoning," *AAAI'93 Workshop on Case-Based Reasoning*.
14. Chang, C.C., L-K Soh, and C. Tsatsoulis. 1992. "Experiments in Case-Based Search," *First Midwest Electro Technology Conference*, Ames, Iowa.
15. Haverkamp, D. and C. Tsatsoulis. 1992. "Using Expert Systems to Classify SAR Imagery," *First Midwest Electro Technology Conference*, Ames, Iowa.
16. Roderman, S. and C. Tsatsoulis. 1992. "PANDA: A Hybrid System to Aid in Routine Design," *Case-Based Design Systems Workshop*, Pittsburgh.
17. Kashyap, R. and C. Tsatsoulis. 1986. "An Artificial Intelligence System for Manufacturing that is Based on Episodic Memory," *Greek Symposium and Workshop on Artificial Intelligence*, Athens, Greece (in Greek).

Other Articles

1. Bell, B., L.D. Canamero, S. Coradeschi, C. Gomes, A. Saffiotti, C. Tsatsoulis, and T. Walsh. 2002. "AAAI 2002 Fall Symposium Series Report," *The AI Magazine*, vol. 23, no. 2, 91-94 (invited).
2. Tsatsoulis, C. 1994. "AAAI'94: Conference Report," *IEEE Expert*, vol. 9, no. 5, 66, (invited).
3. Tsatsoulis, C. 1994. "AAAI Workshop Report: AI Models for Systems Engineering," *The AI Magazine*, vol. 15, no. 1, 63 (invited).
4. Tsatsoulis, C. 1994. "Introduction to the Special Issue on the Application of AI Techniques to Systems Engineering," *Int. J. of Concurrent Engineering: Research & Applications (CERA)*, vol. 2, no. 4, 253-254.

5. Wei, T. and C. Tsatsoulis. 1994. "MEM-1: Case-Based Reasoning Meets Lisp," *PC AI*, September/October, 32-34 (invited).
6. Tsatsoulis, C. 1993. "Expert Systems in Remote Sensing Applications," *IEEE Geoscience and Remote Sensing Society Newsletter*, 7-15, June (invited).
7. Tsatsoulis, C. 1992. "A Plan for Remote Manufacturing Using the ACTS Satellite," *NASA ACTS Newsletter*, Summer (invited).
8. Tsatsoulis, C. 1991. "A Review of Artificial Intelligence in Simulation," *Bulletin of the ACM Special Interest Group in AI*, vol. 2, no. 1, 115-121.

Research Collaboration

- Spent two weeks in April 1997 at the National Snow and Ice Data Center at the University of Colorado, Boulder
- Spent six months (June-December 1995) at the Artificial Intelligence Center of Lockheed-Martin, Palo Alto, CA.
- Spent two weeks in June 1993 at the Naval Research Laboratory, Stennis Space Center, MS
- Spent one week in August 1992 at the Naval Oceanic and Atmospheric Research Laboratory, New Hampshire

Invited Research Talks

- Multimedia University, Cyberjaya, Malaysia (2009, 2011, 2013)
- Montana Tech University, Butte, MT (2008, 2009, 2011)
- Spelman College, Atlanta, GA (2006, 2007)
- Centre for Intelligent Machines, McGill University, Montreal, Canada (2006)
- Department of Systems Design Engineering, University of Waterloo, Waterloo, Canada (2006)
- Dept. of Pathophysiology, The Athens Medical School, Greece (2002, 2004)
- Dept. of Informatics, University of Ioannina, Greece (2002)
- Naval Research Laboratories, Monterey (2001)
- Dept. of Electrical and Computer Engineering, The University of Iowa (2001)
- Dept. of Electrical Engineering, Wichita State University (1999)
- Silicon Prairie Technology Association, Kansas City, MO (1997, 1998, 1999)
- School of Engineering, University of Denver (1997)
- Naval Research Laboratories, Stennis Space Center (1992, 1993, 1994)
- Department of Electrical Engineering, Colorado State University (1992)
- Naval Oceanic and Atmospheric Research Laboratories (1991, 1992)
- Computer Science Department, Wichita State University (1992)
- IEEE Kansas City Section (1992)
- Advanced Computational Electromagnetics Society (1990)
- Kansas City Expert Systems Group (1988, 1990)

Consulting

- External Examiner for the B.Eng. Electronics majoring in Computer, Multimedia University, Malaysia (2007-2016)
- Member of the External Advisory Committee of the ASPIRE Program, Spelman College, Atlanta, GA (2008-10)
- Reviewer of the Computer Science Department of Spelman College, Atlanta, GA (2006)

- Consultant in Case-Based Reasoning and Data Mining to the Presbyterian Hospital, Columbia University, NYC, NY. Provided support in an Army-sponsored project (2005-06)
- Consultant in Artificial Intelligence to the Intellidyne Corporation, Kansas City, MO. Provided support in a NASA-sponsored project (2004)
- Consultant in Case-Based Reasoning for Burlington Northern Santa Fe, Topeka, KS (2002)
- Consultant in Databases for Community Living Opportunities., Lawrence, KS. (2000-02).
- Consultant in Case-Based Reasoning and Utility Theory for the Lawrence Applied Research Corp., Lawrence, KS. Provided support in an Air Force-sponsored project (1997-2001).
- Consultant in Multiagent Systems for Sprint Corp. (1998-99)
- Consultant in Case-Based Teaching for Knowledge Communication Inc., Wichita, KS. (1995).
- Consultant in Case-Based Reasoning to the Southwestern Medical Center, Dallas, TX. Provided support in a NIH-sponsored project (1995-97)
- Consultant in Artificial Intelligence and Machine Learning to the Intellidyne Corporation, Kansas City, MO. Provided support in a NIH-sponsored project (1992-93)

Other Activities

- Organized and supported a lecture series in Artificial Intelligence (1990-95)
- Organized and ran an informal seminar on Machine Learning (1992)
- Organized and ran an informal seminar on Planning in Artificial Intelligence (1991)
- Invited panelist at the *Software Validation Workshop* of the *IEEE Electromagnetics Society* (1990)
- Invited panelist at the *IEEE Videoconference on Real-Time Expert Systems and Databases* (1990)

TEACHING

Courses Taught

Undergraduate

Introduction to Programming (1999-2000, 2005-06, 2013-14)

Data Structures (1989-93, 1995, 1996)

Microprocessors and Assembly Language (1996-2000)

Introduction to Database Systems (1994, 1998, 2001-03, 2008)

Introduction to Artificial Intelligence (1988-94, 1996, 1998, 2001-02)

Graduate

Multiagent Systems (2001, 2003, 2006)

Machine Learning (1997)

Knowledge-Based Systems (1995, 1997, 1999, 2001, 2003, 2005, 2007)

Image Processing (1992, 1996)

Analysis and Design of Algorithms (1991, 1994)

Case-Based Reasoning (1991, 1993)

Theoretical Foundations of Artificial Intelligence (1990)

Case-Based Reasoning and Distributed AI (1989)

Expert Systems (1988-92, 1994)

Student Evaluations of Teaching

Undergraduate classes: graded by students an average of 4.42 out of maximum 5

Graduate Classes : graded by students an average of 4.72 out of maximum 5

Teaching Awards

- Excellence in Teaching, awarded by the undergraduate students in Computer Engineering (2000)
- Awarded the AT&T Engineering Education Excellence Award by the State of Kansas (1995)
- Finalist for the National AT&T Engineering Education Excellence Award (1995)
- Nominated for the HOPE Award, the highest teaching award of the University of Kansas, by the seniors of the Department (1992)

Student Advising (as committee chairman)

Ph.D.

1. Sandhya Beldona, "Reputation-based Buyer Strategies for Seller Selection in Electronic Markets," Ph.D. Computer Science, 2008.
2. Heather Amthauer, "Applying Machine Learning Methods to Suggest Network Involvement and Functionality of Genes in *Saccharomyces cerevisiae*," Ph.D. Computer Science, 2008 (currently Associate Professor at University of Wisconsin - Eau Claire, WI).
3. Hüseyin Sevay, "Multiagent Reactive Plan Application Learning in Dynamic Environments," Ph.D. Electrical Engineering, 2004 (currently Professor at Neareast University, Nicosia, Cyprus)
4. Michele Van Dyne, "Negotiated Decommittment in a Collaborative Agent Environment," Ph.D. Electrical Engineering, 2003 (currently Professor and Chair of Computer Science at Montana Tech, Butte, MT)
5. Andrew Williams, "Learning Ontologies in a Multiagent System," Ph.D. Electrical Engineering, 1999 (currently Professor and Associate Dean for Diversity, Equity and Inclusion at the University of Kansas, KS).
6. Leen-Kiat Soh, "A Unified Data Investigation Model for Clustering and Data Mining," Ph.D. Electrical Engineering with Honors, 1997 (currently Professor at the University of Nebraska-Lincoln, NE).
7. Donna Haverkamp, "Data Fusion for Imagery Classification," Ph.D. Electrical Engineering, 1997 (currently with SAIC, Denver, CO).

Master of Science

1. Daniel Leung, "Distributed Multiagent Inductive Learning," Thesis (MS CS), 2006.
2. Brent Stephens, "Using Genetic Algorithms to Discover Selection Criteria for Resolving Contradictory Solutions Returned by CBR," Thesis (MS CS), 2005.
3. Sudha Sivashanmugam, "A Bayesian Intelligent System for Autonomous Radar and Vehicle Control during Polar Ice Sheet Measurements," Thesis (MS CS), 2004.
4. Heather Amthauer, "The Systematic Analysis of Integrating Case-Based Reasoning with Information Retrieval for the Similarly Based Retrieval of Incident Reports," Thesis (MS CS), 2003.
5. Ping Yang, "Novel Case-Base Maintenance Strategies," Thesis (MS CS), 2002.
6. Qiang Zhang, Non-Thesis (MS CS), 2002.
7. Kelly Corn, Non-Thesis (MS CS), 2002.
8. Danico Lee, "Integrating HTML Document Structure and Contents to Identify Similar XML Domain Documents Using K-Nearest Neighbor Classification," Thesis (MS CS), 2002.
9. Michalakakis Michael, "An Investigation of the Application of Population Reduction of Financial Temporal Datasets," Thesis (MS CS), 1998.
10. Todd Bowers, "Knowledge Acquisition for a Beaufort Sea Ice Class Expert System", Project (MS EE), 1996.
11. Xiaoyi Wang, "Conceptual Clustering for Definition of Information Classes in Multiagent Systems," Thesis (MS EE), 1995.
12. Lan Guo, "Textural Analysis and Classification for Synthetic Aperture Radar (SAR) Se-Ice Imagery," Thesis (MS EE), 1995.
13. Grace N. Yee, "Adaptive Agents for Conflict Resolution in Multiagent Systems," Honors Thesis (MS EE), 1995.
14. Hüseyin Sevay, "ExPress: An Expert System to Support Maintenance Applications," Project (MS EE), 1994.
15. Juan Cuadra-Sola, "Rembrand: A Case-Based Design System for User Interfaces," Thesis (MS EE), 1994.
16. Fan Kong, "Automatic Configuration of Concept Interrelationship Networks for Query Expansion," Project (MS EE), 1994.
17. Qing Jean Cheng, "Explanation-Based Evaluation Utility," Thesis (MS CS), 1994.
18. Michael Kinney, "An Adaptive Communications Strategy for Multi-Agent Systems," Honors Thesis (MS EE), 1993.
19. Leen-Kiat Soh, "A Multi-stage Feature Extraction Technique for Synthetic Aperture Radar (SAR) Sea Ice Imagery," Thesis (MS EE), 1993.
20. Stacy Roderman, "PANDA: A Hybrid System to Aid in Routine Design," Honors Thesis (MS EE), 1992.
21. Hsin-Yen Wei, "Applying Decision Theory in Case-Based Reasoning," Thesis (MS EE), 1992.
22. Donna Haverkamp, "The Combination of Algorithmic and Heuristic Methods for the Classification of Sea Ice Imagery," Thesis (MS EE), 1992.
23. V.G.R. Prasad, "Visualization of the RETE Algorithm in CLIPS," Project (MS EE), 1992.
24. Mehmet Adalier, "Using Probabilistic Conceptual Clustering to Impose Structure to Large Case-Bases," Thesis (MS EE), 1991.

Other Graduate Advising

- Outside reader for a Ph.D. student at the Department of Systems Design Engineering, University of Waterloo, Waterloo, Canada (2006).

Postdoctoral Researchers

- Dr. Leen-Kiat Soh, from The University of Kansas (1998- 2000).
- Dr. Qixiong Liu, from the faculty of Wuhan University of Hydraulic and Electrical Engineering, PRC (1992).
- Dr. Sattiraju Prabhakar, from the Ohio State University (1990).

Other Teaching

- Two-day short course "Methodologies and Applications of Knowledge-Based Systems," taught through the Continuing Education Program of the University of Kansas

- Two-day short course "Introduction to Case-Based Reasoning," taught through the Continuing Education Program of the University of Kansas
- Tutorial "Introduction to Case-Based Reasoning" taught during the *Mid-America Conference on Intelligent Systems*, October 1994.

SERVICE

External Service

Journal Editing and Reviewing

Member of the Editorial Board for the *International Journal of Information and Decision Sciences* (2008-2018)

Member of the Editorial Board for the *International Journal of Applied Intelligence* (2001-2016)

Member of the Review Board for the *International Journal of Applied Intelligence* (1998-2001)

Associate Editor of *IEEE Intelligent Systems* (1994-98)

Area Editor of *The AI Magazine* (1989-92)

Guest Editor of Special Issue on "Applications of Artificial Intelligence in Systems Engineering" of the *International Journal of Concurrent Engineering: Research and Applications*, vol. 2, no. 4, 1994

Reviewer for a number of journals, including: *Int. Journal of Intelligent and Robotic Systems*, *Int. Journal of Applied Intelligence*, *Int. Journal of Tools with AI*, *Artificial Intelligence for Engineering Design, Analysis and Manufacturing*, *IEEE Trans. on Systems, Man, and Cybernetics*, *IEEE Trans. on Data and Knowledge Engineering*, *Int. Journal of Applications of Artificial Intelligence*, *IEEE Trans. on Geoscience and Remote Sensing*, *Int. Journal of Remote Sensing*, *Remote Sensing of the Environment*, *J. of Machine Learning Research*, etc.

Conferences and Workshops

Organizer and Chairman of a Symposium on "Negotiation Methods for Autonomous Cooperative Systems" held during the Fall Symposium Series of the American Association of Artificial Intelligence (2001)

Organizer of the Workshop "Uses of Neural Networks in Environmental Applications" during the *Second World Congress of Nonlinear Analysts* (1996)

Organizer of the Workshop on "Artificial Intelligence in Systems Engineering" held during the *National Conference of the American Association of Artificial Intelligence - AAAI'94* (1994)

Organizer and Chairman of a Workshop on "Artificial Intelligence Models for Systems Engineering" held during the *National Conference of the American Association of Artificial Intelligence - AAAI'93* (1993)

Program Committee Member for the IEEE Region 5 Technical, Professional and Student Conference (2007-08)

Program Committee Member for the WSEAS International Conference on Computers (2003-05)

Program Committee Member for the International Joint Conference on Autonomous Agents and Multi Agents Systems (AAMAS) (2003-04)

Program Committee Member for the International Conference on Machine Learning and Applications (ICMLA) (2003-04)

Program Committee Member for the Workshop on "Forming and Maintaining Coalitions in Adaptive Multiagent Systems" held during the AAAI Conference (2003-04)

Program Committee Member for the Workshop on "Coalition Formation in Dynamic Multiagent Environments" held during the AAAI Conference (2001-02)

Program Committee Member for *FLAIRS '00, Thirteenth Florida Artificial Intelligence Research Symposium* (1999-2000)

Program Committee Member for "Models and Applications for Design", special track during *FLAIRS '97, Tenth Florida Artificial Intelligence Research Symposium* (1996-97)

Program Vice Chair for "Distributed and Cooperative AI, Information Agents" for the *6th IEEE Int. Conference on Tools with Artificial Intelligence*, New Orleans (1994)

Organizing Committee Member and Session Chair for the *Mid-America Conference on Intelligent Systems*, Overland Park, KS (1994)

Program Committee Member for the *4th Int. Workshop on Computer-Aided Systems Technology (CAST'94)*, Ottawa, Ontario (1994)

Program Committee Member for the *6th Int. Conference on Computing and Information*, Peterborough, Ontario (1994)

Leadership in Professional Organizations

Secretary/Treasurer of the Central States ECEDHA (2005-2008)

Chair, Chair-Elect, Awards Chairman of the Midwest Section of ASEE (2005-07)

Membership in Professional Organizations

Senior Member of the *IEEE*

Senior Member of the *Association for Computing Machinery* (ACM)

Member of the *American Association for Artificial Intelligence* (AAAI)

Member of the *IEEE Computer Society*

Member and Newsletter conference editor for *ESKAMO*, a Kansas City industry and university consortium for expert systems technology (1988-92)

Other

Member of the IEEE Geoscience and Remote Sensing Technical Committee on Data Fusion (1998-present)

Member of NASA proposal review panel (1994, 2003, 2008, 2009, 2017)

Member of NSF proposal review panel (1999, 2017)

Proposal reviewer for DoD (2017)

Proposal reviewer for the State of Louisiana's EPSCoR Program (2007)

Proposal reviewer for the U.S. Civilian Research and Development Foundation (2005)

Member of NASA's RGPS Team (1993-97)

Member of NASA's GPS Sea Ice Classification Validation Team (1992-94)

Proposal reviewer for NASA

Proposal reviewer for NSF

Proposal reviewer for NIH

Proposal reviewer for NASA's Global Change Graduate Fellowship program

Service to the University

University of Kansas

EECS Promotion and Tenure Review Committee, Chairman (2003-2008)

EECS Ad Hoc Strategic Plan Committee, Chairman (2003-2008)

EECS Edwards Program Committee, Member (2003-2008)

EECS Edwards Campus Recruiting Committee, Member (2003-2006)

EECS Website Committee, Member (2003-2006)

EECS Chair Search Committee, Chairman (2002-03)

EECS Faculty Rights and Privileges Committee, Chairman (2002-03)

EECS Untenured Faculty Evaluation Committee, Chairman (1998-2003)

EECS Ad Hoc Undergraduate Enrollment Committee, Chairman (2001-02)

EECS Faculty Rights and Privileges Committee, Member (1997-2002)

EECS Recruiting Committee, Member (1999-2000)

EECS Graduate Admissions and Recruiting Committee, Member (1995-99)

EECS Untenured Faculty Evaluation Committee, Member (1996-98)

EECS Recruiting Committee, Chairman (1996-97)

EECS Ad Hoc Graduate Curriculum Review Committee, Member (1994-95)

Responsible for scheduling of the Computer Engineering and Computer Science courses (1993-96)

EECS Graduate Studies Committee, Member (1993-95)

EECS Ad Hoc Undergraduate Curriculum Review Committee, Member (1993-94)

ECE/CS Merger Committee, Member (1992-93)

ECE Recruiting Committee, Member (1988-90, 1992-93)

ECE Recruiting Committee, Chairman (1991-92, 1996-97)

Undergraduate ECE Curriculum Review Committee, Member (1991-93)

ECE Graduate Admissions and Recruiting Committee, Member (1990-93)
ECE Undergraduate Curriculum Committee, Member (1989-90)
ECE Graduate Studies Committee, Member (1989-90)

Study-Abroad Representative at the School of Engineering (1996-2008)
School of Engineering Promotion and Tenure Committee, Chairman (2002-2004)
School of Engineering-English Liaison Committee, Member (1996-99)
School of Engineering Miller Award Committee, Member (1995)

University International Affairs Committee, Chairman (2000-2001)
University International Affairs Committee, Member (1998-2000)

Service to the Community

Board Member for Community Living Opportunities (CLO), an organization that provides services to adults with severe developmental disabilities (2004-2008)
Member of the Board Executive Committee of CLO (2006-2008)