Jae (Jay) C. Oh, Ph.D.

College of Engineering and Computer Science, Syracuse University, Syracuse, NY 13214, [redacted]

Education

Ph.D. in Computer Science, August 2000. University of Pittsburgh, Pittsburgh, PA.
Dissertation: Effects of the kinship bias on cooperation in multi-agent environments: Studies on theoretical models and the Internet Access Problem. Advisor: Robert P. Daley, Ph.D.

MS in Computer Engineering, Wright State University, Dayton, OH.
Thesis: Improved Classifier System Using Genetic Algorithms Applied to Image Learning (NCR Innovation Award: Best Master's thesis of the year, 1989). Advisor: Alastair D. McAulay, Ph.D.

Bachelor's in Engineering (Electronics Engineering with Computer Science focus), 1985 Kyungpook National University, South Korea.

Executive Profile

Visionary academic leader with 25+ years of experience building research excellence, advancing student success, and fostering innovation across engineering, computing, and the sciences at a Carnegie R1 research university. Currently serves as Senior Associate Dean overseeing a college with a $100M+ budget, four departments, 3,000+ students, and 100+ faculty at Syracuse University, a research institution with mission and scale comparable to Kennesaw State University's CCSE (3,929 undergraduate and 1,290 graduate students, 202 faculty, $22.5M budget).

Articulating Vision for Computing Excellence: Proven architect of transformational initiatives positioning institutions for R2-to-R1 elevation and sustained excellence. Co-led strategic planning resulting in 30% research expenditure growth and projected 50% expansion in enrollment and faculty. Successfully developed 10+ academic programs, including interdisciplinary programs spanning data science, cybersecurity, and AI. Led comprehensive academic realignment, consolidating units to foster multidisciplinary collaboration directly relevant to CCSE's innovative four-division structure (School of Data Science and Analytics, Computer Science, Information Technology, Software Engineering, and Game Development).

Research Excellence & Innovation Development: Strategic leader expanding research impact across multiple computing disciplines with $8M+ generated as PI/Co-PI from NSF, NSA, DARPA, DOE, Air Force Research Laboratory, and industry. Contributed to a 30% research expenditure increase through faculty mentoring, proposal development, and strategic research planning. An active research portfolio in AI safety, cybersecurity, and multi-agent systems demonstrates continued scholarly productivity in senior leadership, while maintaining credentials for a tenured full professor appointment. Experience with interdisciplinary research (Physics, Cybersecurity, Computer Arts, Mechanical Engineering, IT) positions me to elevate CCSE's research profile in emerging areas, including quantum computing, digital health, and sustainable technology solutions.

Strategic External Partnerships & Industry Engagement: Proven cultivator of partnerships translating research into economic and social value. Established sustained corporate collaborations generating $1M+ revenue: JPMorgan Chase 6-year strategic partnership ($730K+), IBM Green Data Center ($435K), Northrop Grumman DARPA research ($450K), NSA ($399K), Air Force Research Laboratory appointments. Created and led an external advisory board engaging industry thought leaders. Ready to deepen CCSE's technology partnerships in the metro-Atlanta region, leveraging proximity to major tech employers, Fortune

500 companies, and emerging technology startups.

Fundraising & Resource Development: Campaign-ready leader with $10M+ total fundraising impact ($8M+ research grants, $2M+ philanthropic gifts). Secured major donor support for student center enhancements and infrastructure investments. Prepared to advance strategic development initiatives for CCSE, including major gift solicitation, annual giving programs, and transformational gifts such as endowed faculty positions, named programs, facility enhancements, and potential college naming opportunities aligned with KSU's institutional advancement goals.

Comprehensive Student Success Leadership: Committed to excellence across undergraduate, graduate, and doctoral education, serving diverse student populations at scale. Developed transformational learning experiences, including Humanitarian Engineering minor (community-focused education), immersive co-op programs with industry partners integrating career preparation, comprehensive research integration, preparing students for technology leadership, and established K-12 pipeline through Syracuse Summer College programs. Ready to champion innovative instruction, high-impact experiential learning, and prepare CCSE students to thrive in environments shaped by emerging technologies, including generative AI, while promoting ethical and responsible computing practices.

Collaborative Culture Building & Shared Governance: Deeply committed to fostering environments of transparency, open communication, and trust. ACC Academic Leadership Fellow with intensive dean preparation covering strategic planning, fiscal stewardship, institutional advancement, and executive leadership. Experience as elected Faculty Council Chair and University Senate leader demonstrates commitment to faculty voice and participatory leadership. Ready to strengthen CCSE's collaborative spirit through cross-departmental collaboration, interdisciplinary research initiatives, and partnerships with fellow deans across KSU's 11 colleges, where computing intersects with virtually every discipline.

Inclusive Excellence & Diversity Leadership: As David G. Edelstein Endowed Professor for Broadening Participation, lead transformative college-wide initiatives expanding access and strengthening institutional culture. Active LEAP Alliance member and national recruiter (Tapia, Grace Hopper conferences). Faculty advisor for the award-winning CuseHacks inclusive hackathon with global participation and industry sponsorship. Recruited 36 diverse faculty, including women, Latino, Black, and international scholars; secured 10 additional faculty lines in emerging areas. Positioned to advance CCSE as a model for broadening participation in computing aligned with KSU's core values of respect, inclusivity, and accountability.

Academic & Operational Administration Excellence: Sophisticated fiscal manager with experience overseeing $100M+ operating budgets, strategic resource allocation, and personnel leadership supporting 100+ faculty. Demonstrated success in budget preparation and management, faculty recruitment and retention, curriculum innovation, program assessment, and compliance management. Ready to provide inspirational yet pragmatic leadership managing CCSE's $22.5M budget while identifying entrepreneurial revenue opportunities and strategic investments in faculty, infrastructure, and emerging program areas that position the college for continued growth and national prominence.

Positions

Senior Associate Dean for Faculty Affairs and Academic Initiatives — *College of Engineering and Computer Science*
Syracuse University — *December 16, 2023 – Present*

Faculty Affairs Leadership:
Provide senior-level oversight and strategic guidance on faculty development, college operations,

and institutional alignment. This role encompasses academic leadership, operational planning, and executive representation across the College.

- **Serve as principal advisor and senior partner** to the Dean on faculty affairs, strategic initiatives, and institutional alignment. Lead collaborative efforts across multiple organizational units levels?including ECS associate deans, department chairs, and university central administration, and faculty governance?to ensure coherent implementation of strategic priorities and effective resolution of complex faculty and operational issues.
- **Faculty Evaluation and Development**: Designed and implemented a comprehensive faculty evaluation system encompassing performance reviews, mentoring, hiring, and contract management. Oversaw evaluations for department chairs and other academic leadership roles, including endowed professorships and associate deans.
- **Strategic Planning**: Co-led the development and execution of college-wide strategic plans aligned with university priorities, driving academic excellence and operational coherence.
- **Executive Representation**: Represent the Dean at university-wide and external functions, ensuring continuity of leadership and advancing the College's visibility.
- **Talent Strategy and Staff Optimization**: Advise the Dean on faculty and staff hiring strategies, workforce planning, and organizational structure. Collaborate on staff management and utilization to enhance service delivery and operational efficiency.
- **Mentorship and Service Excellence**: Partner with the Dean to mentor college staff and improve the quality and responsiveness of services provided to students, faculty, and administrative units.
- **Space and Resource Planning**: Work closely with the Director of Space Management and Strategic Initiatives to align space allocation with strategic priorities and academic growth.
- **IT Resource and Personnel Management**: Direct the deployment and staffing of IT resources to support instructional, research, and administrative functions across the College.
- **Budget Management**: Provide oversight of budget planning and financial operations, ensuring responsible stewardship of college resources and alignment with strategic goals.

Academic Initiatives Leadership:

- Lead strategic educational and research partnerships with external academic institutions, including Minority-Serving Institutions, Community Colleges, and regional small colleges.
- Identify and cultivate research opportunities across technical and education-related domains to advance the College's scholarly mission.
- Develop and maintain academic pathways, including internship and co-op programs, to support student career readiness and experiential learning.
- Prioritize and implement emerging academic initiatives that align with institutional goals and respond to evolving educational landscapes.
- Expand Ph.D. recruitment pipelines for underrepresented minority students through targeted outreach and strategic collaborations.

Strategic Infrastructure and Institutional Growth

As Senior Associate Dean, I partnered closely with the Dean to lead transformative initiatives that elevated ECS's infrastructure, research capacity, and institutional visibility:

- Collaborated with the Dean to guide a significant renovation effort that modernized facilities, created multiple new lab spaces, and established the Allyn Innovation Center as a hub for interdisciplinary innovation.

- Collaborated with advancement team and the dean on efforts that resulted in a $6 million philanthropic gift to enhance student engagement through the Campos Student Center.
- Co-led the strategic planning and launch of the Syracuse University Center for Advanced Semiconductor Manufacturing, an interdisciplinary initiative integrating AI, cybersecurity, robotics, optimization, and manufacturing science.
- Worked with academic leadership to design and implement a new master's program in Operations Research and System Analytics, and helped launch a signature co-op program to expand experiential learning and industry engagement.
- Contributed to a 30% increase in research expenditures during the 2022-2023 academic year compared to 2019, reflecting the success of coordinated strategic initiatives.
- Helped develop and operationalize a long-term growth plan that positioned ECS for a projected 50% increase in enrollment, faculty, and staff within four years.

David G. Edelstein Endowed Professor in Broadening Participation *College of Engineering and Computer Science*
Syracuse University *January 2017 – Present*

Appointed to lead sustained, college-wide efforts to broaden participation in computing and engineering, with a focus on expanding access, cultivating inclusive academic pathways, and strengthening institutional culture change and engagement. Over multiple terms, this endowed role has supported strategic initiatives in student mentorship, K-12 pipeline development and outreach, undergraduate success, graduate recruitment, faculty recruitment, and national collaboration.

- **Student Leadership and Mentorship**: Advise *InnovateOrange*, a student-led organization that hosts *CuseHacks*, an inclusive hackathon welcoming students of all backgrounds and skill levels. Since its founding in 2018, CuseHacks has grown into a nationally recognized event with global participation, industry sponsorship, and socially relevant project themes.
- **K-12 Outreach and Pipeline Development**: Co-developed and launched a summer Electrical Engineering workshop for Syracuse City School District students, introducing high schoolers to engineering concepts in quantum information science and microwave systems. Secured funding and recruited approximately 15 students annually in collaboration with the Office of Community and Government Relations.
- **Graduate Recruitment and National Engagement**: Represent Syracuse University at national venues such as the Tapia Conference and Grace Hopper Celebration, leading outreach and recruitment efforts for domestic graduate students. Co-organized workshops such as *Quantum Computing for All* and supported students in preparing competitive graduate school applications.
- **Faculty and Ph.D. Recruitment Strategy:** Led targeted efforts to recruit faculty and Ph.D. students from underrepresented groups, including long-term engagement with candidates such as Brandan John (University of Florida) and Amanda Priestly (University of Texas at Austin). Supported GEM Fellows, Fulbright Scholars, and launched the Ph.D. Ambassador program to fund student-led outreach at their alma mater.
- **National Alliance Participation**: Active member of the LEAP Alliance (Diversifying Leadership in the Professoriate), a coalition of 29 institutions focused on increasing domestic Ph.D. enrollment in computing. Supported the development and renewal of NSF-funded departmental Broadening Participation in Computing (BPC) plans.
- **Institutional Service and Program Development**: Served on the Inclusive Excellence Council, review panels for diversity opportunity hires, and advisory boards for NSF

RESET and NCWIT initiatives. Helped design TA Dialogue Circles for inclusive teaching and co-led proposals to NSF IUSE/PFE:RED and other national programs.

- **Funding and Resource Stewardship**: Managed discretionary funds and leveraged departmental and external gifts to support student-led events, faculty collaborations, and outreach activities. Enabled compensation for workshop staff, student assistants, and faculty contributors.
- **Speaker Series and Public Engagement**: Organized high-profile university lectures featuring national thought leaders such as Professor Lynn Conway, whom I invited to campus and who was later awarded an honorary degree in 2024and Professor Juan Gilbert. These events elevated campus dialogue around equity, innovation, and the societal impact of computing.

Acting Senior Associate Dean for Faculty Affairs and Academic Initiatives *College of Engineering and Computer Science*
Syracuse University *July 1, 2023 – December 15, 2023*
For Faculty Affairs and Academic Initiatives: duties are the same as above.

EECS Department Chair *Dept. of Electrical Eng. and Computer Science*
Syracuse University *May, 11 2017–June 30, 2023*

As Department Chair, I provide visionary and operational leadership for one of the university's largest and most dynamic academic units, comprising 46 full-time faculty and approximately 1,500 undergraduate and graduate students. My responsibilities span academic excellence, strategic growth, and institutional alignment, including:

- **Program Oversight**: Manage a robust academic portfolio that includes three undergraduate programs (Electrical Engineering, Computer Engineering, Computer Science), four masters programs (on-campus and online), and two Ph.D. programs (Computer and Information Science; Electrical and Computer Engineering).
- **Faculty and Staff Development**: Lead recruitment, mentoring, and retention strategies for full-time, part-time, research-focused, teaching-focused, and online faculty. Oversee staff hiring, professional development, and performance management to support departmental operations.
- **Student Success and Inclusion**: Drive initiatives in student recruitment, academic success, career placement, and broadened participation, with a focus on equity and access.
- **Strategic and Financial Stewardship**: Direct financial planning and budget management to sustain academic quality and research productivity. Align departmental goals with university-wide strategic priorities.
- **Curriculum and Accreditation Leadership**: Coordinate academic planning, curriculum development, and accreditation processes to ensure continuous improvement and compliance.
- **Institutional Engagement and Advancement**: Promote the departments visibility across campus and externally through strategic partnerships, fundraising efforts, and community engagement.
- **Advisory Board Leadership**: Established and lead the departments external advisory board, engaging industry and academic stakeholders to inform strategic planning, enhance curricular relevance, and strengthen external partnerships.
- **Research expenditures**: Contributed to a 15% increase in research expenditures during the 2022-2023 academic year compared to 2019, reflecting the success of coordinated strategic initiatives.

- **Enrollment Growth:** Helped develop and operationalize a long-term growth plan that positioned the EECS department to grow its enrollment significantly over the six years.
- **Department Ranking** The annual ranking of the EECS department has significantly improved from 85 in the 2016–2017 academic year to 60 in the 2021–2022 academic year. The department has achieved notable advancements in various subfields of computing, with Operating Systems, Embedded Systems, and Performance Analysis ranked 13th in 2021-2022, rising from a 10-year average of 40.
- **Faculty Hiring:** Hired twelve Tenure-track faculty, and eight Teaching faculty.

Computer Science Program Director *Computer and Information Science (Programs in BSCS, MSCS, and Ph.D. in Computer Science)*

Syracuse University *July 1, 2009–December 31, 2014*

Provide academic and administrative leadership for the Computer and Information Science programs, including the BS in Computer Science (BSCS), MS in Computer Science (MSCS), BS in Systems and Information Science (BS-SIS), and the Ph.D. in Computational and Information Science and Engineering (CISE). Key responsibilities and accomplishments include:

- **Academic Oversight**: Directed curriculum planning, academic operations, and program assessment across undergraduate, master's, and doctoral levels.
- **Curriculum Leadership**: Chaired the department's curriculum committee, leading modernization of course offerings and alignment with industry and research trends.
- **Program Innovation and Accreditation**: Spearheaded the development of new degree programs and led their approval through department, college, university senate, and New York State Education Department processes.
- **Student Recruitment and Retention**: Led initiatives to recruit and retain students across all program levels, enhancing enrollment and academic support.
- **Faculty Development and Evaluation**: Conducted performance evaluations and supported mentoring and development of faculty in teaching and research roles.
- **Research Advancement**: Collaborated with the Department Chair to increase faculty research activity and external funding.
- **Collaborative Culture Building**: Fostered interdisciplinary research and curricular collaboration among faculty to enhance innovation and academic synergy.
- **Advisory Engagement**: Served as a member of the departments advisory board, contributing to long-term strategic planning and external engagement.

Co-Program Director (Joint appointment with Prof. S. Masciclat of Newhouse School of Communication and Journalism) *Master's in Computational Journalism*

Syracuse University *July 1, 2015–August 2018*

Served as Co-Program Director for the interdisciplinary Master's in Computational Journalism, a pioneering collaboration between the College of Engineering and Computer Science and the Newhouse School of Public Communications. This innovative program was designed to prepare students at the intersection of data science, computing, and modern journalism.

- **Program Design and Launch**: Co-led the conceptualization, design, and implementation of the degree program, integrating computational thinking with journalistic practice to address emerging challenges in digital media and data-driven storytelling.
- **Academic and Curricular Leadership**: Directed all Computer Science-related academic and curricular components, including course development, faculty coordination, and instructional planning.

- **Interdisciplinary Collaboration**: Worked closely with faculty from journalism, communication, and computing to ensure a cohesive and forward-looking curriculum that reflected both technical rigor and journalistic relevance.
- **Administrative Oversight**: Managed administrative responsibilities related to program governance, student advising, and cross-college coordination.
- **Innovation in Education**: Positioned the program as a national model for interdisciplinary graduate education, bridging STEM and the humanities to meet the evolving demands of the media and technology industries.

Full Professor *Dept. of Electrical Eng. and Computer Science*
Syracuse University *May, 2017–Present*
11 Ph.D. dissertations advised, 21 undergraduate honors theses and REUs, 5 MS theses, Student organization advising (InnovateOrange, CuseHacks, Trithon Club), CS-Day founder, Computing Professional Induction Ceremony,

Associate Professor *Dept. of Electrical Eng. and Computer Science*
Syracuse University *July 1, 2006–May 2017*

Assistant Professor *Dept. of Electrical Eng. and Computer Science*
Syracuse University *August 1, 2000–June 30, 2006*

Visiting Professor (Invited) *School of EECS*
Kyungpook National University, Korea *August, 2008–July 2009*
Teaching and research.

Summer Visiting Faculty *US Air Force Research Laboratory*
Rome, NY *May 23, 2016–July 15, 2016*
Served as visiting faculty conducting collaborative research with scientists and engineers at the Air Force Research Laboratory. Engaged in applied computing research aligned with national defense and advanced technology initiatives.

Summer Visiting Faculty *US Air Force Research Laboratory*
Rome, NY *May 18, 2015–August 28, 2015*
Served as visiting faculty conducting collaborative research with scientists and engineers at the Air Force Research Laboratory. Engaged in applied computing research aligned with national defense and advanced technology initiatives.

Summer Visiting Faculty *US Air Force Research Laboratory*
Rome, NY *May 3, 2004–July 19, 2004*
Served as visiting faculty conducting collaborative research with scientists and engineers at the Air Force Research Laboratory. Engaged in applied computing research aligned with national defense and advanced technology initiatives.

University Senate Agenda Committee *Syracuse University*
Member (Elected by the University Senate Members)
Syracuse University *Fall 2022–Spring 2025*

Faculty Council Chair *College of Engineering and Computer Science*
Syracuse University *Sept 2013–August 2014*

Serve as the elected Faculty Chair, providing governance leadership and representing faculty interests across the College. This role includes oversight of faculty meetings, committee coordination, and strategic liaison with college and university administration.

- **Governance Leadership**: Preside over regular and special Faculty Meetings in the absence of the Dean, and serve as the presiding officer for all faculty-led meetings not convened by the Dean.
- **Faculty Council Chair**: Lead the Faculty Council, ensuring that faculty actions are implemented effectively and that routine functions are carried out through standing and ad hoc committees.
- **Administrative Liaison**: Represent faculty concerns to the College administration and university leadership, reporting on implementation challenges and advocating for shared governance.
- **Policy and Process Oversight**: Convened and chaired an ad hoc committee to evaluate the Dean, overseeing the full evaluation process in collaboration with the Vice Chancellor and Provost.
- **Bylaw Reform**: Led the amendment of college bylaws governing dean evaluations to ensure alignment with the University Faculty Manual and institutional best practices.
- **Leadership Transition Support**: Participated in the nomination and vetting of candidates for Interim Dean, contributing to a smooth and transparent leadership transition.

Faculty Chair-Elect *College of Engineering and Computer Science*
Syracuse University *Sept 2012–August 2013*

Elected to serve as Faculty Chair-Elect, with responsibilities focused on faculty governance operations, procedural integrity, and institutional continuity. This role supports the Faculty Chair and ensures the effective functioning of faculty governance structures.

- **Meeting Coordination and Documentation**: Ensured that minutes of Faculty Meetings were accurately recorded, published, and distributed prior to the next scheduled meeting. Distributed meeting agendas at least 72 hours in advance to support transparency and preparedness.
- **Governance Records Management**: Maintained and updated the official Rules and Regulations of the Faculty. Distributed revised versions following any amendments to ensure compliance and institutional memory.
- **Election Administration**: Conducted faculty elections, managed ballot counting, and certified results in accordance with college bylaws. Maintained an up-to-date roster of faculty members as defined by governance policy.
- **Faculty Council Secretary**: Served as secretary to the Faculty Council, supporting agenda setting, documentation, and procedural follow-through.
- **Committee Organization**: Convened organizational meetings of the Tenure and Promotions Committee and the Committee on Academic Affairs to facilitate the election of committee chairs and recorders.
- **Governance Oversight**: Acted as the responsible faculty officer for duties assigned to the Faculty Clerk, ensuring procedural integrity and continuity across governance functions.

Instructor (under Teaching Fellow contract) *Department of Computer Science*
University of Pittsburgh *Summer 1996, Spring 2000*

Fundraising and Partnership Development

Major Philanthropic Gifts

- Supported advancement efforts resulting in **$2 million philanthropic gift** for Campos Student Center student engagement enhancements
- Positioned college for continued philanthropic growth through strategic donor cultivation and alumni engagement

Research Funding Excellence

Generated **$8+ million in research funding** as PI or co-PI from premier federal agencies and industry partners:

- **National Security Agency:** $399,768 for AI Safety and Trustworthiness research (2025–2026)
- **DARPA/Northrop Grumman:** $450,000 for System-Theoretic Risk Management (2021–2026)
- **National Science Foundation:** Multiple awards across programs including:
  - NSF ITR/AP: $1,057,235 (Syracuse portion of $4.98M collaborative project)
  - NSF IUCRC Planning Grant: $15,000 for Center for High-Assurance Secure Systems
  - NSF REU Supplements supporting undergraduate research
- **Air Force Research Laboratory & Air Force Office of Scientific Research:**
  - $259,763 for Adaptive Open-set Speaker Identification
  - $50,000 LRIR for Reputation Management in Multi-agent Systems
  - Multiple summer faculty research appointments (2004, 2015, 2016)
- **JPMorgan Chase:** $730,000+ in industry-sponsored research including:
  - $480,729 for Data Fusion and Visualization
  - $249,367 for Call Center Optimization
- **IBM Corporation:** $435,000 for Green Data Center research projects
- **New York State:** $75,900 through CASE Center for cybersecurity research
- **Syracuse Research Corporation:** $60,000 for Bio-inspired Foraging Threat Avoidance

Strategic Industry Partnerships

- Established and lead departmental **external advisory board** engaging industry thought leaders to inform curriculum, research priorities, and student outcomes
- Developed sustained corporate relationships generating recurring revenue through:
  - Sponsored research projects with industry application
  - Co-op and internship program development (JPMorgan Chase partnership, 2008–2014)
  - Curriculum co-design initiatives aligned with workforce needs
- Built long-term partnerships with major technology corporations:
  - **JPMorgan Chase:** 6-year strategic partnership for curriculum development and research
  - **IBM:** Multi-year collaboration on sustainable computing initiatives
  - **Northrop Grumman:** Ongoing DARPA-funded research collaboration
  - **Air Force Research Laboratory:** Regular consulting and collaborative research

Leadership Development Investment

- **ACC Academic Leadership Fellow** (2019–Present): Ongoing senior leadership development program preparing future academic deans and provosts through intensive training in strategic planning, fiscal management, shared governance, and institutional advancement
- **ACC Academic Leadership Traineeship** (2018–2019): Completed year-long intensive preparation for deanship including mentorship from sitting deans, case study analysis, and practical training in academic administration

Research Grants
Approx. $8 million

1. Rigorous and Formal AI Safety and Trustworthiness with Mission Assurance Using System-Theoretic Technical and Operational Risk Management (STORM), National Security Agency, July 1, 2025, to June 30, 2026, PI: Jae C. Oh, co-PIs: Garrett Katz, S-K Chin, and W. Young. $399,768.
2. System-Theoretic Technical and Operational Risk Management-Guaranteed Architecture for Physical Security (DARPA-GAPS), Northrop Grumman (2021-2026), $450,000, PI (Jae C. Oh), co-PI (Shiu-Kai Chin).
3. NSF-IUCRC Planning Grant, Jae C. Oh (co-PI), Shiu-Kai Chin (PI), Center for High-Assurance Secure Systems and IoT (CHASSI), 2019. $15,000
4. Bio-inspired Foraging Thread Avoidance, Syracuse Research Cooperation and NY State, $60,000, Jae C. Oh (solo-PI), 8/16/2017 to 12/31/2017.
5. AFRL Summer Faculty Extension Grant (as a contractor), "On similarities and differences in various problem formulations related to intelligent information collection using multiple UAVs," Rome Air Force Laboratory, LSeptember 1, 2015 to October 30, 2015, Jae C. Oh (PI), $7,920.
6. Proactive Customer Service Using Predictive Analytics, Call Center Optimization, Jae C. Oh (PI), Kishan Mehrotra, and C. K. Mohan, January 1st, 2013 to June 30, 2014, JPMorgan-Chase, $269,543.
7. Data Fusion and Visualization, JPMorgan-Chase, Jae C. Oh (PI), Kevin Du, and Howard Blair, May 17, 2010 to December 17, 2011, $480,729.

8. Curriculum and Development Phase IV - Subproject for Institution #25014, JPMC, Shiu-Kai Chin (PI) and Jae C. Oh (co-PI), 1/1/2011 to 12/31/2011, $93,110.
9. IBM Corporation, H Ezzat Khalifa, Frederick J Carranti, Thong Q Dang, John F Dannenhoffer, Can Isik, Jae C Oh (co-PI), Green Data Center, June 2010, $125,000,
10. IBM Corporation, $ 310,000, Green Data Center, H Ezzat Khalifa, Frederick J Carranti, Thong Q Dang, John F Dannenhoffer, Can Isik, Jae C Oh (co-PI), August 2010.
11. Laboratory Research Initiation Request (LRIR), US Air Force Research Laboratory Internal Research Grant. "Effective Reputation Management in Non-Cooperative Multiagent Systems," with Nathaniel Gemelli (AFRL), Jeffrey Hudak (AFRL), Robert Wright (AFRL). US Air Force Research Laboratory. awarded $50,000. For the fiscal year 2009 (October 1, 2008 - October 1, 2009).
12. NSF ITR/AP "Methodologies and Tools for Designing and Implementing Large Scale Real-time Systems," With Paul D. Sheldon (PI, Vanderbilt University), Jae C. Oh (PI at Syracuse University), Ruth Pordes (Fermi National Laboratory), Michael J. Haney (UIUC), Theodore A. Bapty (Vanderbilt University), From October 1, 2001, to September 30, 2006, I am the only Computer Science researcher among the PIs. Syracuse PI: Jae C. Oh (myself), Total Award Amount: $4,978,000, My Award Amount: $1,057,235.
13. Adaptive Open-set Speaker Identification Using a Genetic Classifier System," Air Force Office of Scientific Research, Jae C. Oh (sole-PI), Amount: $259,763., Start Date: July 22, 2004, End Date: July 21, 2006, Award Number: FA8750-04-1-0259.
14. NSF/ITR REU Supplement CCF-0530521 for the ITR/AP Grant, Two undergraduates $12,000 for the first summer. Summer 2005, Supplemental funding for NSF-ITR/AP. Jae C. Oh (sole-PI).
15. The New York State CASE Center equipment funds for cybersecurity research, Jae C. Oh (PI), $50,000.
16. Assessment of QoS in Internet telephony service, ShoreGroup, January 2003 – December 2004, $130,000, Jae C. Oh (sole-PI).
17. New York State CASE Center research fund (June 2001–June 2002), $6,406.00
18. New York State CASE Center research fund (June 2002–June 2003), $19,494.00
19. Research Experience for Undergraduate, National Science Foundation, Summer 2004, Advisee: Jamie Demarest, $3000,
20. Faculty Research Initiation Fund, Office of Research and Computing at Syracuse University, Year 2000. $˜250,000.
21. Stevens Undergraduate Student Summer Research Award, Summer 2001: (Colin Searle) $3,000
22. Stevens Undergraduate Student Summer Research Award, Summer 2002: (Luke Kelly) $3,000

Honors and Recognitions

Received

1. ACC Academic Leadership Fellow (2019–Present).
2. ACC Academic Leadership Traineeship: a training program to develop future academic deans and higher administration personnel (2018–2019).
3. Endowed Professorship for David G. Edelstein Professor for Broadening Participation (2017–Present)
4. Engineering and Computer Science Dean's Award for Excellence in Engineering Education, Syracuse University, 2015

5. University Commencement Marshall, Syracuse University, 2015, 2016, and 2017.
6. Honorary Member (2015): International Society of Applied Intelligence
7. Senior Member of International Technical Program Committee, International Conference on Collaboration Technologies and Systems (from 2014 to 2016).
8. Distinguished Scholar Award, International Society of Applied Intelligence, 2011.
9. Best Paper Award among 106 accepted papers, A Game Theoretic Framework for Community Detection, IEEE/ACM ASONAM 2012 (with K. Mehrotra and P. McSweeny).
10. Best paper award among 220 accepted papers, Genetic and Evolutionary Computation Conference 2009 (GECCO 2009), "New Entropy Model for Extraction of Structural Information from XCS Population," July 2009 Montreal, Canana, with W. K. Park.
11. Travel Grant for RTSS 2006, Rio de Janeiro, Brazil from NSF, December 2006.
12. Invited to attend NSF Cyber-Physical Systems Workshop for Aspiring PIs ($500)
13. Orrin E. and Margaret M. Taulbee Award for Excellence in Computer Science, University of Pittsburgh, September 1998.
14. University award for the best Master's thesis in the year (NCR Innovation Award), awarded by the NCR-University Stakeholder Program, Wright State University (1989).
15. First Prize for Excellence in Research at Wright State University Club of Sigma Xi, Annual Student Research Colloquium for the presentation of the article "Inductive Image Learning with Genetic Algorithms" (1989).

Teaching Excellence Pedagogical Innovation

Curriculum Innovation

1. Developed Minor in Humanitarian Engineering, a transformative educational journey centered around advancing the human condition and benefiting communities locally and worldwide.
2. Developed Master's in Operations Research and System Analytics, with Natarajan Gautam and Sue Older.
3. Developed Master's in Computational Journalism with the Newhouse School of Communication and Journalism (with Steven Masiclat).
4. Developed Bachelor's in Systems and Information Science (with faculty in Computer Science, iSchool and JPMorgan Chase)
5. Developed Master's in Computational Linguistics with the College of Arts and Sciences (with C. Isik, C. Mohan, et al)
6. Developed Online MS in Computer Science, Computer Engineering, and Cybersecurity (with C. Isik, C. Mohan, et al).
7. Developed Immersive Experiential co-Op Program with Jeff Saltz (JPMorgan Chase).
8. Developed GET Certificate of Advanced Study with iSchool, Whitman, and JPMorgan Chase.
9. Course development consultant for the Vietnam Open Course Project, for the Vietnam Education Foundation (2007).
10. Oversight Board Member for Syracuse University's Intelligence Community Center for Academic Excellence

Curriculum Assessment and Accreditation

1. 2020–2021: Led the Middle State Assessment/Accreditation efforts.
2. 2019–2021: Led the effort for BSCS ABET Accreditation Effort and prepared the BSCS ABET self-report document and wrote the 30-day response. The BSCS Program is fully accredited.
3. 2017: Led the effort for BSEE and BSEE ABET Accreditation Effort and prepared the BSEE ABET self-report document.
4. 2009–2013: Designed the entire BSCS program evaluation cycle methodology, rubrics for outcome-related courses, and other necessary assessment strategies.
5. 2010: Wrote and submitted ABET interim report for the BSCS program, and the program received accreditation until 2015.
6. 2010–2014: Prepared all necessary documents and data (rubrics, alumni surveys, student surveys, employer surveys, updated CQIs, compiled data, and wrote the final self-study report.
7. Fall 2014: Conduct the overall operations of the ABET evaluation team visit.
8. Spring 2015: Redesign CIS341 to address concerns of the ABET visit team; Prepared the 30-day response to the ABET evaluation teams report.
9. Summer 2015: The ABET self-report was selected as one of the best self-study reports submitted. It was exhibited in the 2015 ABET symposium as a model self-study.
10. August 2015: BSCS program accredited to September 30, 2021 (The program has no deficiencies, weaknesses, or concerns.)
11. Fall 2015: Middlestate accreditation: co-developed program outcomes for MSCS and CISE Ph.D. programs.
12. External team member to meet with the Accrediting Council for Education in Journalism and Mass Communication for accreditation of the Newhouse School of Journalism and Communication.
13. Invited program evaluator for the M.S. in Information Technology and the M.S. in Computer Information Systems at Nova Southeastern University, Fort Lauderdale, FL. (2013)

Developing, Improving, and Maintaining Curricula

1. Developed CIS437/637, Multi-agent Systems: Concepts and Programming. Proposal submitted for approval.
2. Improved MS in Cybersecurity for the rapidly changing field.
3. Developed a new Electrical Engineering Curriculum that includes Computing Core.
4. Developed the following new courses for Computational Journalism: CPS681, CPS688, CPS782, and CIS321/CPS571.
5. Revised and maintained the curriculum of the Joint Degree of Law and Computer Science.
6. Developed remedial courses for MSCS: CPS400 M001 and CPS400 M002
7. Developed a new core course CIS342 to fill the gap in the BSCS program
8. Developed GET683 (Simulation and Modeling) online course
9. Developed and taught Operating Systems, Game Theory, Multi-agent systems
10. Developed a Mobile Security course (with Heng Yin)

11. Developed a topics course, Competitive Programming (taught by S. Chapin).
12. Develop Qualifying Exams (2000–2016)
13. Developed new course content for CIS453 and CIS454 with JPMC to facilitate matchmakings between students and industry partners in software engineering projects.

Innovations in Education and Instructional Methods

1. **ECS101 Introduction to Computing:** Designed and taught new course materials tailored for Computing majors. Developed robotics-based projects using Lego Mindstorms, along with custom hardware/software systems suitable for first-year CS and Engineering students. Created laboratory exercises and team-based projects to reinforce core computing concepts and foster community. Instructional methods emphasized hands-on, in-class, and in-lab engagement using tools such as Snap! and Socrative, with a focus on supporting students of varying academic preparedness. The course was intentionally structured to promote retention and success among women and underrepresented minority students through mentoring and inclusive group dynamics. Participated in Harvards Project FICSIT survey on first-year CS knowledge acquisition.
2. **CIS467/667, CSE487 Artificial Intelligence:** Developed educational lab packages integrating Lego robots with Common Lisp-based AI algorithms, enabling students to apply symbolic AI techniques in physical computing environments. (See items 2 and 3 in Publications Related to Innovation in Education.)
3. **CIS486/CSE486 Operating Systems:** Created modular, small-scale projects and exercises suitable for undergraduate instruction. Authored a companion textbook, *Operating Systems: A Multi-perspective Episodic Approach* (Preliminary Version, Fall 2015), used in CIS486 and CSE486. The first edition was published by Cognella in August 2016.
4. **DORITOS Real-Time Operating Systems Course Package:** Designed and implemented a comprehensive software and project suite for teaching real-time operating systems. (See items 2 and 3 in Publications Related to Innovation in Education.)
5. **Socrative Integration:** Developed lecture materials and classroom strategies to enhance the effectiveness of Socrative as an interactive learning tool in ECS101.
6. **FunClass In-House Engagement Software:** Designed and deployed custom classroom software to promote student participation and engagement (used from 2005 to 2008; now decommissioned).

Commitment to Undergraduate Research Experience, Student Engagement, and Promotion of the CS Program

1. **Honors Thesis Advising:** Mentored undergraduate honors students through rigorous research projects, including Gabriel Samadi (Current), Kevin Aziz (2015), Catherine Martin (2015), and Christopher Chan (2004), KrutarthaNagesh (2023–2025),.
2. **Undergraduate Research Advising (REU and Independent Projects):** Provided sustained research mentorship to a diverse group of undergraduate students, including: Eli Goldweber (20152017), Nabid Nieves (20152017), Alberto Rivera (20152017), Michal Augoff (Summer 2015, visiting), Arun Kabir (Spring 2016), Gabriel Smadi (BSCE, 2014), Badr Alduaiji (BSCS, 2013), Ashley McVeigh (BSCE), Rodrigo Chamun (Visiting, 2012), Briana Peterson (BSCS, JPMC/REU, 2011), Jason Mather (BSCS, JPMC/REU, 2011), Michael Konrad (NSF/REU, 2005), Yu-Pin Hsiao (NSF/REU, 2005), Jamie Demarest (BSCS, 2004), Colin Searle (BSCS, 2001), and Luke Kelly (BSCS, 2002).

3. **Student Organization Advising:** Served as faculty advisor and mentor for multiple student-led extracurricular initiatives, including: ACM Programming Competition Group (2013), IEEE XTreme Programming (Faculty Proctor, 2013; Faculty Advisor, 2014), and the Robotics Club (2014).
4. **CS-Day Event Founder and Organizer:** Initiated and organized the inaugural CS-Day events in 2013 and 2014full-day celebrations of the Computer Science program at Syracuse University. These events featured student project exhibitions, faculty research presentations, and interactive activities designed to engage the broader university and local community.
5. **Computing Professional Induction Ceremony:** Co-organized and participated in the inaugural Pledge of the Computing Professional Induction Ceremony for graduating CS seniors in March 2015, in collaboration with Sue Older.

Publications Related to Innovation in Education (Listed again in Publications section)

1. Jeff Saltz and Jae Oh, An Open Co-op Model for Global Enterprise Technology Education: Integrating the Internship and Course Work, SIGCSE Technical Symposium on Computer Science Education 2012.
2. Jeff Saltz, Jae Oh, Suk-Chung Yoon, "Reviewing GET IE: An Open Co-op Program," 2012 ASEE Northeast Section Conference, Extended Abstract, University of Massachusetts, Lowell, April 27–28, 2012.
3. Paul Talaga and Jae C. Oh, Combining AIMA and LEGO Mindstorms in an Artificial Intelligence Course to Build Real World Robots," Journal of Computing Sciences in Colleges, 24-3, PP 56-64, 2009
4. P. Talaga and Jae Oh Combining AIMA and LEGO Mindstorms in an Artificial Intelligence Course to Build Real World Robots," Presented at Consortium for Computing Sciences in Colleges Conference 2008.
5. Oh, Jae C. and Mosse, D., Teaching Real Time OSs with DORITOS," Thirtieth SIGCSE Technical Symposium on Computer Science Education, pp. 68 - 72, New Orleans, 1999.
6. Jae Oh and D. Mosse, DORITOS (Distributed Object-based Real-time Instructional Operating System): A Complete Package for Teaching Principles and Practices of Real-time OS," Frontiers in Education 1998.

Participations in programs or Conferences related to teaching and curriculum (partial list)

1. Attended several ABET workshops and symposiums to prepare for BSCS accreditation evaluation in Fall 2014.
2. NSF Webinar: AP Computer Science Principles Broadening Participation and Changing the Landscape of Computer Science Education.
3. CATME workshop for creating and managing student teams for class activities.
4. Completed Workshop on CSAB Computing accreditation process (SIGCSE 2012)
5. Completed Workshop on Digital Humanities curriculum (SIGCSE 2012)
6. Completed Workshop on Computational Art and Creative Coding: Teaching CS1 with Processing from CS2 to Theory of Computation (SIGCSE 2012)
7. Attended SIGCSE 2012 main conference and presented a paper on Experiential Learning.
8. Attended 2011 GET Curriculum Workshop (May 24–25, 2011)

Broadening Participation Promoting Diversity and Inclusion Efforts

1. Developed Electrical Engineering Summer College Program for High School Students, Summer 2023 and 2024 (with Graham, Medjo Me Biomo, Marum)
2. Advisory Board Member, NSF RESET (Re-Enter Stem through Emerging Technology) Conference on Finding Re-Entry Pathways for Women in STEM, 2021
3. Learning Circle NCWIT Higher Ed Community of Practice.
4. LEAP Alliance Cohort Member: LEAP Alliance: Diversifying Future Leadership in the Professoriate, Leading institution: University of Chicago.
5. NSF-IUSE: RED proposal: Breaking Down Disciplinary, Cultural, and Student Cohort Silos to Enhance Student Learning and Foster a Diverse and Inclusive Environment for Future Generations of Engineers and Computing Professionals are to be submitted for the next solicitation cycle.
6. NSF Departmental Broadening Participation Plan (BPC Plan), in progress.
7. NCWIT (National Center for Women and Information Technology) Extension Service Team member (2019–Present)
8. Developed and conducted Diversity and Inclusion Dialogue Circle for Graduate TA Training (2019–2020). All TA contracts include language requiring the TA to complete the Dialogue Circle Program.
9. Developed a Graduate student ambassador program to recruit students from underrepresented countries.
10. Developed a stipend program to encourage female students to attend the Grace Hopper Conference.
11. Developed a stipend program to encourage female students to attend the Society of Hispanic Professional Engineers (SHPE) National Convention.
12. Oversight Board, US Intelligence Community Center / Academic Excellence Program (Diversity and Inclusion)
13. Developed a Faculty Ambassador program to recruit students from underrepresented countries.
14. Member, the review panel for the Diversity Opportunity Hire Initiative, Syracuse University, 2019–Present.
15. Faculty Liaison for AFTPE (Committee for Academic Freedom, Tenure, Promotion, and Ethics), 2020–Present.
16. Developed a completely new BSEE curriculum to meet workforce needs and serve a broader range of students from different backgrounds (2017–2018)
17. Streamlined modern electrical engineering topics like digital controls and communications systems. Courses are more activity-based; studies show that underrepresented engineering and science groups learn better in activity-based classes than in traditional lecture-based classes (2017–2018)
18. Advisor: CuseHacks 2018, 2019, 2020, 2021, 2022: A student-organized event (i.e., Hackathon) focusing on broadening participation in Computing and Engineering.

19. Developed and organized an Arduino programming workshop aimed at elementary and middle school students. 75% of the participants were females. The workshop was led by undergraduates in EECS.
20. Developed and organized various Middle school and high school workshops
21. Developed and organized Electrical Engineering day: a day associated with one of the Orange preview days to highlight what electrical engineering is, targeting female and URM high school students.
22. Developed and organized Speaker Series for Broadening Participation, Diversity, and Inclusion: Professor Lynn Conway of the University of Michigan; Professor Juan Gilbert of the University of Florida; Brandan John (a Native American Ph.D. student).
23. Member of the Inclusive Excellence Council of the College of Engineering and Computer Science
24. Developed and organized Inaugural Faculty and Staff Dialogue Circles for Diversity and Inclusion
25. Developed New Online Curriculum Design for Veterans and URM Groups
26. Developed and organized parent week activities and gave AI demos for prospective parents and students, including on the following dates: 2001, 2002, 2003, and 2004. organized K-12 Outreach: Technical advisor Lego Mindstorm robot competition for Syracuse area high school students (Spring 2002)
27. Developed and organized Computer Science Day (2010, 2011, and 2012)

Hiring Experience

As the Department Chair and Senior Associate Dean

Over six years as Department Chair and one year as Senior Associate Dean, I have led one of the most ambitious and inclusive faculty hiring initiatives in the College of Engineering and Computer Science at Syracuse University. During this period, I successfully recruited **25 tenured and tenure-track faculty members** and **11 full-time teaching faculty**, representing a wide range of disciplinary expertise and diverse backgroundsincluding individuals from historically underrepresented groups such as women, Latino, and Black scholars.

- **Mechanical and Aerospace Engineering (MAE)**: Andrea Shen (TT), Karen M. Soto (TT), Changmin Shi (TT)
- **Electrical Engineering and Computer Science (EECS)**: Alex Jones (T, Chair), Junzhe Zhang (TT), Rodrick Kuate Defoe (TT), Ethan Arnault (TT), Tianyi Zhang (TT), Paulo Sharkarian (T, Endowed), Jason Pollack (TT), Pankaj Jah (TT), Younes Radi (TT), Fanxin Kong (TT), Garrett Katz (TT), Asif Salekin (TT), Endadul Hoque (TT), Kris Micinski (TT), Bryan Kim (TT), Ferdinando Fiorretto (TT), Venkata Gandioka (TT), Jun-Eun Kim (TT)
- **Biomedical and Chemical Engineering (BMCE)**: Joseph Andrea (TT), Che Jeong-Potter (TT), Christian Rivera (TT)
- **Civil and Environmental Engineering (CEE)**: Fabrizio Sabba (TT)
- **Teaching Faculty (across departments)**: Yue Cao, Gabriel Oliveira, Joe Waclawski, Farzana Rahman, Mehmet Kaya, Mohamad Abdallah, Jean-Daniel Medjo Me Biomo, Nadeem Ghani, Joao Paulo Oliveira Marum, Priyantha Kumarawadu (Teaching/Visiting), Michael Ammoury

In addition to executing these hires, I secured approval from Syracuse Universitys central administration for **10 new faculty lines** to be filled over the next five years. These strategic positions

target emerging and high-impact areas, including *Quantum Computing, Game-Theoretic AI, Embedded Systems, Computer Vision, and Virtual Reality.*

I also oversee departmental staff hiring and development, ensuring operational excellence and alignment with academic priorities.

Currently, I am actively mentoring and recruiting several Ph.D. candidates from other institutions who belong to underrepresented minority groups in STEM, with the goal of welcoming them into faculty roles upon completion of their degrees. This proactive engagement reflects my ongoing commitment to building a more inclusive and intellectually vibrant academic community.

As Faculty Search Committee and Search Chair

I have played an active, multifaceted role in faculty and staff hiring at both academic and administrative levels. My experience includes serving as a program director, a member of internal and external search committees, and a search chair for a wide range of recruitment efforts. I am well-versed in the distinct processes and strategic considerations involved in hiring tenure-track assistant professors, tenured associate and full professors, and senior academic administratorsincluding deans.

In addition to faculty recruitment, I have contributed to the hiring of professional staff across multiple university units, ensuring alignment with institutional priorities and operational excellence. This breadth of involvement has given me a comprehensive understanding of academic talent acquisition and the nuances of building diverse, high-performing teams.

1. Search Committee Member for the Newhouse School of Communication and Journalism (2014). Faculty hired: Prof. Adam Peruta.
2. Faculty Search Committee (and Chair for CS hires) for EECS (2003-Present): Faculty Hired: Professors Tom Barnard (Professor of Practice), Jun Choi (EE), Sara Eftekharnejad (EE), Jennifer W. Graham (EE), Sucheta Soundarajan (CS), Yuzhe (Richard) Tang (CS), Senem Velipasalar (EE), Yanzhi Wang (CE), Reza Zafarani (CS), Mustafa Cenk Gursoy (EE), Vir Phoha (CS), Mina Jung (CS).
3. Engineering Dean Search (2007–2008): Hired Faculty: Dean Laura Steinburg
4. Engineering Dean Search (2019): Hired Faculty: Dean J. Cole Smith
5. iSchool Dean Search (2018–2019): Hired Faculty: Dean Rajiv Dewan
6. Faculty Search Committee for College of Visual and Performing Arts (Fall 2005 – Fall 2006). None hired.
7. Search committee member for Project Manager for the Office of Vice President of Research. Hired: Mr. Gabe Coleman.
8. Search committee member for Director of Online Learning. Hired: Dr. Michael J. Frasciello.

Design and Development of Laboratories

1. **I3 Lab New York State CASE Center (2015–Present):** Established and currently operate the I3 Lab, a collaborative research space designed to foster interdisciplinary innovation. The lab co-locates multiple faculty-led research projects, encouraging spontaneous interaction and idea exchange among faculty and graduate students who might not otherwise collaborate. The physical proximity and shared infrastructure promote cross-disciplinary initiatives and the incubation of novel research directions.

2. **Distributed Multi-Agent Systems Laboratory Director:** Lead the Distributed Multi-Agent Systems Lab, which supports research in autonomous systems, real-time coordination, and game-theoretic modeling. The lab serves as a hub for graduate and undergraduate research in multi-agent environments and distributed computing.
3. **Artificial Intelligence Laboratory for CIS467/667 (2008–2014):** Designed and implemented a dedicated AI teaching lab to support CIS467/667. The lab featured Lego Mindstorms workstations and a wide array of hardware components, enabling students to build and control intelligent robotic systems using symbolic AI algorithms. The lab provided a hands-on platform for experiential learning and project-based instruction in artificial intelligence.

Memorandum of Understanding

1. Clean Harbors International Talent Visa Pathways for Engineers and Computer Scientists, in progress
2. Houghton College, MS Pathways (final stage of signing MoU)
3. InterLearn, MS Pathways
4. Beijing Jiaotong University, MS in Engineering Management, dual degree program (final stage)
5. Lotte Biologics, Good Manufacturing Practice (GMP) program
6. University of Shanghai for Science and Technology, Academic Exchange Program
7. The Institute for Sustainable Infrastructure (ISI), the Technical Assistance Program (TAP)
8. Xidian University and Syracuse University, General Agreement
9. ENGINEERING WORLD HEALTH (EWH), International Engineering World Health Campus to Country Program
10. Oakton Community College, MS Pathways
11. Joint Center Implementation Plan, Xidian University and Syracuse University
12. University of Electronic Science and Technology (UEST) of China and ECS
13. Tohoku University (Japan), Academic Exchange
14. Wuhan University, Articulation Agreement
15. Le Moyne College, Articulation Agreement
16. Victoria University of Wellington - New Zealand, Academic Exchange
17. EWHA University for ECS, Academic Exchange
18. SUNY Research Foundation/Upstate, Affiliation Agreement
19. Tsinghua Holdings Zijing (Beijing) Education Group, MS Pathways
20. Hefei Institute of Technology, in progress

Staff Mentoring and Development

In addition to the staff hiring experience mentioned above, I worked with several staff members to improve administrative processes and innovate the accreditation process. A small list of examples is:

1. Shawn Knight: Hired in Summer 2022, Assistant to Chair
2. Cynthia Salanger: Graduate Programs
3. Tammy Gharbi: Graduate Admissions
4. Cynthia Bromka-Skafidas: Awards and Budget
5. Linda Lowe: Budget Manager
6. Rick DiRubbo: Online Program Director (reports to the EECS Chair and Dean of Engineering and Computer Science)
7. Zoey Smith: Communication and social media outreach; Special Projects
8. Marrika D Flowers-Dorsey: ABET data collection and analysis
9. Shalini N Suryanarayana: ABET data collection and analysis, and Online Blackboard-based ABET test run.
10. Mary Cosco: ABET data collection and analysis, and class schedule

Syracuse U. Committees Served

1. University Senate Academic Freedom, Tenure, Promotion, Equal Opportunity (elected by University Senate), 2025–Present.
2. University Senate Agenda Committee (elected by University Senate), 2022–2025.
3. University Senator, 2017–Present
4. Faculty Liaison for AFTPE (Committee for Academic Freedom, Tenure, Promotion, and Ethics).
5. Member, the review panel for the Diversity Opportunity Hire Initiative, Syracuse University
6. Committee member for Interdisciplinary Course Development with Newhouse, Maxwell, and E&CS. Chair: Laura Steinberg. (Fall 2016)
7. Committee member for Dean's Excellent in Engineering Education Award 2016.
8. LCS College Faculty Council Member (Sept. 2011–August 2015): Duties included amending the college by-laws on faculty evaluations, tenure, and promotions.
9. Search Committee Member for the Newhouse School of Communication and Journalism (2014)
10. Certificate of Advanced Study Curriculum Development Team (ECS, IST, Whitman).
11. EECS Dept. Advisory Committee (2009–2015)
12. Certificate of Advanced Study Working Team (ECS, IST, Whitman, JP Morgan)
13. Tenure and promotion committee, EECS Dept., (2009–2010, 2011–2014)
14. College of Engineering Dean Search Committee, Syracuse University (March 2007– May 2008)
15. College of Engineering Dean Search Committee, Syracuse University (2019)
16. iSchool Dean Search Committee, Syracuse University (2018–2019)

17. Syracuse-JP Morgan Chase Partnership. University core team member. (2007–2008): To establish a Syracuse-JPMorgan Chase partnership for research and curriculum development. The partnership lasted from 2008 to 2014.
18. Course and Curriculum Committee, Computer Science Program, EECS, Syracuse University (June 2007–Present)
19. Course and Curriculum Committee, Systems and Information Science Program, EECS, Syracuse University (June 2011–Present)
20. Ad-hoc Committee for the SDIT (Socially Directed Information Technology) Initiative (2006–2007)
21. Dept EECS, Ph.D. QE1 Exam Committee Member (2006–Present)
22. College Academic Affairs Committee (2003–2005)
23. Faculty Search Committee for College of Visual and Performing Arts (Fall 2005 – Fall 2006)
24. College Computing Steering Committee (2004–Present)
25. Department Computing Search Committee (2003–Present)
26. Artificial Intelligence Ph.D. qualifying exam coordinator/committee member (2001–2008)

Scholarly Activities and Services

Editorships

1. Advisory Board Member, International Journal of Computer Information Systems and Industrial Management Applications, from 2017 to 2019.
2. Associate Editor, International Journal of Computer Information Systems and Industrial Management Applications, from 2013 to 2017.
3. Member of Reviewer Board, Journal of Applied Intelligence, Springer.
4. Kishan G. Mehrotra, Chilukuri K. Mohan, Jae C. Oh, Pramod K. Varshney, Moonis Ali: Modern Approaches in Applied Intelligence - 24th International Conference on Industrial Engineering and Other Applications of Applied Intelligent Systems, IEA/AIE 2011, Syracuse, NY, USA, June 28 - July 1, 2011, Proceedings, Part I & Part 2, Springer 2011
5. K. Mehrotra, Chilukuri K. Mohan, Jae C. Oh, Pramod K. Varshney, Moonis Ali, Developing Concepts in Applied Intelligence (Studies in Computational Intelligence 363)
6. The Guest Editor for a Special Issue on Large Embedded Systems for ACM SIGBED Review July 2005 issue.

Book Reviews

1. Reviewer for "Computer Organization and Design," Fifth Edition, David Patterson and John Hennessy. I have also written a paragraph of forward that appears at the beginning of the book.
2. Reviewer for The Handbook of Technology Management (Three Volume Set), Editor-in-Chief, Hossein Bidgoli, Ph.D., John Wiley & Sons, Inc.
3. Book Proposal Reviewer for the Advances in Natural Computation series by World Scientific, Book title: "The Iterated Prisoner's Dilemma: 20 years on," edited by Graham Kendall and Xin Yao, Reviewed in October 2004.

4. Book Proposal Reviewer for the Advances in Natural Computation series by World Scientific, Book title: "Collective Learning and Co-evolution in Games," by Akira Namatame, Reviewed in January 2005.
5. Pre-Publication Book Review for Springer-Verlag, Book title: "Information Processing with Evolutionary Algorithms: From industrial applications to academic speculations," by Manuel Grana, Richard Duro, Alicia d'Anjou, and Paul Wang

Conference and Workshops Organized and Chaired

1. Organizing Committee and co-Program Chair: The 28th International Conference on Industrial, Engineering and Other Applications of Applied Intelligent Systems, 2015.
2. Organizing Committee and co-Program Chair: The 24th International Conference on Industrial, Engineering and Other Applications of Applied Intelligent Systems, 2011.
3. Chair, The First Workshop on Games and Emergent Behaviors in Distributed Computing Environments with PPSN 2004 (Parallel Problem Solving in Nature 2004), Birmingham, UK.
4. Workshop Chair / Program Committee Chair - The Second Workshop on High Performance, Fault Adaptive, Large Scale Real-time Systems (FALSE-II), 2005 with RTAS 2005 (11th IEEE Real-Time and Embedded Technology and Applications Symposium).
5. International Steering Committee Member, 5th International Conference on Hybrid Intelligence Systems, November 2005, Rio de Janeiro, Brazil.
6. International Steering Committee Member, 4th International Conference on Hybrid Intelligence Systems, December 05-08, 2004, Kitakyushu, Japan.
7. Organizing Committee - The First Workshop on High Performance, Fault Adaptive, Large Scale Real-time Systems (FALSE 2002).

Conference Session Chairs Served (A partial list)

1. Session Chair for Multiple Sessions, IEA/AIE 2011 and 2015, International Conference on Industrial, Engineering and Other Applications of Applied Intelligent Systems.
2. Session Chair, ASONAM S1 Agents in Networks and Organizations at The 2013 IEEE/ACM International Conference on Advances in Social Networks Analysis and Mining ASONAM 2013 Niagara Falls, Canada, August 25-28, 2013
3. Session Chair, Session 7: Analysis and Design II on August 22, 2007 at RTCSA 2007, The 13th IEEE International Conference on Embedded and Real-Time Computing Systems and Applications, August 21-24, 2007, Daegu, Korea.
4. Special Session Chair, Applications of Game Theory and Artificial Intelligence Techniques on Distributed Computing and Internet-wide Computing in The 17th International Conference on Parallel and Distributed Computing Systems (PDCS-2004).
5. Session Chair: Agent Systems, Design and Architectures I at Hybrid Intelligent Systems 2004, Kitakushu, Japan.
6. Session chair: Real-time Multi-agent Systems and Multi-agent Systems for Load-balancing in High Performance, Large-scale Computer Systems, Workshop on High Performance, Fault Adaptive, Large-scale Real-time Systems (FALSE 2002).
7. Session Chair - Theoretical issues of Evolutionary Algorithms - Frontiers in Evolutionary Algorithms 2000.

Journal Reviews Served

1. Journal of Applied Intelligence
2. IEEE Annals of the History of Computing
3. International Journal of Mobile Computing and Multimedia Communications (IJMCMC).
4. Data & Knowledge Engineering (DKE) Journal
5. Journal of Mobile Computing and Multimedia
6. Neural Computing and Applications, Springer.
7. Journal of Autonomous Agents and Multi-Agent Systems.
8. IBM Journal of Research and Development, IBM T. J. Watson Research Center.
9. The Computational Intelligence, An International Journal, Blackwell Publishing.
10. The Computer Journal, Oxford University Press.
11. Journal of Systems and Software, Elsevier.
12. Journal of Parallel and Distributed Computing, Elsevier.
13. Journal of Applied Intelligence, Springer-Verlag.
14. ACM Computing Surveys.
15. IEEE Transactions on Parallel and Distributed Systems.
16. Computer Languages, Systems & Structures, Elsevier.
17. Journal of Systems and Software, Elsevier.
18. IPSI Transactions on Internet Research.
19. Journal of Natural Computing Research
20. International Journal of Electronics and Communications
21. Wireless Networks
22. International Journal of Computational Intelligence and Applications.

Conference Program Committee and Reviewer Served, etc.

1. Technical Program Committee, International Joint Conferences on Artificial Intelligence (IJCAI), 2019
2. Technical Program Committee, HIS2005, HIS2007 to HIS 2015, International Conference on Hybrid Intelligent Systems, Sponsored by IEEE Systems, Man, and Cybernetics Society.
3. Technical Program Committee, CIT2007, CIT2008, CIT2009, CIT2010, CIT2011, CIT2013, CIT2015, IEEE International Conference on Computer and Information Technology.
4. Technical Program Committee, ISDA2007, ISDA2008, 2012, IEEE The International Conference on Intelligent Systems Design and Applications.
5. Technical Program Committee, AFRICON 2015.
6. Technical Program Committee, CTS 2005–2006, CTS 2008–2010, CTS 2012–2013, ACM/IEEE/IFIP, the 2013 International Conference on Collaboration Technologies and Systems.
7. Technical Program Committee, ACM/IEEE MEDES2009, 2010, 2011, 2013, International ACM/IEEE conference on Management of Emergent Digital EcoSystems
8. Technical Program Committee, IEEE TrustCom2012 and TrustCom2013, IEEE International Conference on Trust, Security and Privacy in Computing and Communications
9. Technical Program Committee, The International ACM conference on Management of Emerging Digital Ecogsystems, 2012

10. Technical Program Committee, SoCPaR 2009, 2010, 2012, The International Conference on Soft Computing and Pattern Recognition.
11. Technical Program Committee, Sixth International Conference on Genetic and Evolutionary Computing (ICGEC)
12. Technical Program Committee, WSC04, WSC05, WSC08, WSC09, WSC10, WSC11, WSC14, WSC15, WSC17, Online World Conference on Soft Computing in Industrial Applications
13. Technical Program Committee, WICT 2011
14. Technical Program Committee, The Fourth International Conference on Genetic and Evolutionary Computing, December 13-15, 2010, Shenzhen, China.
15. Reviewer, IEEE GlobeCom 2010, December 6–10, 2010, Miami, FL, USA.
16. Technical Program Committee, The Fifth International Conference on Soft Computing as Transdisciplinary Science and Technology (CSTST'08), Cergy-Pontoise/Paris, FRANCE, October 26-30, 2008.
17. Reviewer: The 14th IEEE Real-time and Embedded Technology and Application Symposium, April 22-24, 2008, St. Louis, MO, USA.
18. Technical Program Committee, RTCSA-2007, The 13th IEEE International Conference on Embedded and Real-Time Computing Systems and Applications, August 21-24, 2007, Daegu, Korea.
19. Technical Program Committee, the US-Korea Conference on Science, Technology, and Entrepreneurship (UKC) 2007.
20. Technical Program Committee, the International Conference on Software, Knowledge, Information Management and Applications (SKIMA) 2006, Chiang Mai, Thailand 12-15 December 2006
21. Technical Program Committee on 2007 IEEE Symposium on Computational Intelligence for Defense Applications, Honolulu, Hawaii, April 1–5, 2007.
22. Technical Program Committee on Real-Time Middleware and Software Engineering Track at RTSS-2006, Rio De Janeiro, Brazil, December 2006.
23. Technical program committee member for the US-Korea Conference on Science, Technology, and Entrepreneurship (UKC), August 10–13 (Thursday–Sunday), 2006, at Marriott Hotel at Glenpointe, Teaneck, NJ.
24. Reviewer: The 26th IEEE Real-time Systems Symposium, December 2005, Miami, FL, USA.
25. Technical Program Committee - Frontiers in Evolutionary Algorithms 2000, 2002, 2003, 2005.
26. Special Session Program Committee (Reviewer) - Special Session on Co-Evolutionary Learning of Games and Game-Like Tasks, in the Congress on Evolutionary Computation 2000, San Diego, California, July 16 - 19, 2000

Other Services and Invited Participations

1. Computing Research Association, Fall 2023 Congressional Visit Team
2. NSF Panel member, March 2020
3. NSF Panel member, December 2019 to February 2020.
4. NSF Panel member, December 2018 to February 2019.
5. NSF Panel member, March 16–17, 2018.
6. NSF Panel member, May 24–25, 2017.

7. NSF Panel member, May 6–7, 2010.
8. University Commencement Marshall (2015–2017)
9. University Senate Curriculum Committee (2017–)
10. University Senate (2017–)
11. Invited to participate and speak at the 1st Wireless Grid Research Consortium and Future Industry Standards Meeting, November 29–30, 2006, Syracuse, NY.
12. Evaluator, Manlius Pebble Hill School Science Fair for grades 5 to 8.
13. Invited to participate in the NSF-ITR meeting hosted by the National Science Foundation (June 9–11, 2004)
14. Invited to participate in the NSF Grid day, September 17, 2003, hosted by the National Science Foundation.
15. Technical Adviser - Lego Mindstorm robot competition for Syracuse area high school students.
16. Helped with the SU College of Engineering marketing at the State Fair 2001.
17. Helped with the department and college Parents' Week on multiple occasions.
18. New faculty mentoring at Workshop for Engineering Education Scholars, 2002, at the SU Adirondacks retreat center.
19. Faculty adviser: Syracuse Student Triathlon Club.

Publications

Books

1. Jae C. Oh, Operating Systems: A Multi-perspective Episodic Approach, Cognella Publishing (First Edition, January 2017).

Art Catalogues, Art Exhibits

1. Jae C. Oh, Basic Research Art of Science Showcase Artistic Innovation that Supports Air, Space, and Beyond by the Air Force Research Laboratory's Air Force Office of Scientific Research, Fall 2022. (`https://community.apan.org/wg/afosr/p/art_of_science_showcase`)
2. Jae C. Oh (with Edvard Zajec), "Emergence of self-reflection through visual dialogues based on evolutionary algorithms," a description of Informatrix III from a computer science perspective, in the Art Catalogue of the 14th International Festival of Intermedia Art, Maribor, Slovenia, October 13, 2008, English), ISBN 978-961-6154-19-2
3. Jae Oh (with Edvard Zajec), A description of Informatrix III from a Computer Science perspective, in *The Artist and the Computer: From the Beginning to the Present.* Art Catalogue, International Center of Graphics Arts (MGLC), Ljubljana, 2007, in English and Slovene, ISBN 978-961-6229-20-3.

Journal Papers

1. Mahmuda Rahman and Jae C. Oh, "A Graph-based Bandit Algorithm for User Coverage in Online Recommendation Systems," Applied Intelligence (The International Journal of Artificial Intelligence, Neural Networks, and Complex Problem-Solving Technologies), 2017. Springer.

2. Joo Young Lee, Yue Duan, Jae C. Oh, Wenliang Du, Howard Blair, Lusha Wang, Xing Jin, Social Network Based Reputation Computation and Document Classification, Journal of Universal Computer Science, vol. 18, no. 4 (2012), 532-553.
3. Paul Talaga and Jae C. Oh "Combining AIMA and LEGO Mindstorms in an Artificial Intelligence Course to Build Real World Robots," Journal of Computing Sciences in Colleges, Volume 24, Issue 3, Pages 56-64, January 2009.
4. Derek Messie, Mina Jung, and Jae C. Oh, Shweta Shetty, Steven Nordstrom, Michael Haney, "Prototype of Fault Adaptive Embedded Software for Large-Scale Real-Time Systems," a special issue on Engineering Autonomic Systems, AI Review, Vol 25, No 4, Pages 299–312, June 2006.
5. Haney, M., et al., "RTES Demo System 2004," ACM SIGBED Review, special issue on High Performance, Fault Adaptive, Large Scale Embedded Real-Time Systems, July 2005, Volume 2, Number 3, Pages 1–6.
6. Oh, Jae C., "Emergence of Cooperative Internet Server Sharing Among Internet Search Agents caught in the n-Person Prisoner's Dilemma Game," Knowledge and Information Systems Journal, Springer-Verlag, Volume 7, Issue 1 (2005), pp 23–55.
7. Oh, Jae C., "Promoting Cooperation using 'Kin' Biased Conditional Strategy in the Iterated Prisoner's Dilemma Game (Extended Version)," Special issue on Evolutionary Algorithms, Journal of Information Sciences, Volume 133, 2001, pp. 149–164.
8. McAulay, A.D. and Oh, Jae C., "Improving Learning of Genetic Rule-Based Classifier Systems," IEEE Transactions on Systems, Man, and Cybernetics. Vol. 24, No. 1, pp. 152–159, January 1994.

Book Chapters

1. Joo Lee and Jae C. Oh, A Node-Centric Reputation Computation Algorithm on Online Social Networks, in Lecture Notes in Social Networks: Application of Social Media and Social Network Analysis, Springer International Publishing, Eds:, Kazienko, Przemyslaw and Chawla, Nitesh, 2015, Pages 1-22.
2. Jae C. Oh, and Kishan Mehrotra, "Game Theory and Social Networks," in Encyclopedia of Social Network Analysis and Mining, Springer, 2014, pp. 589–599.
3. P. McSweeny, K. Mehrotra, and Jae C. Oh, "A Game Theoretic Framework for Community Detection" in Encyclopedia of Social Network Analysis, Springer, 2014, pp. 573–588
4. McSweeney, P.J., K. Mehrotra, and J.C. Oh, "A force-directed layout algorithm for community detection with Automatic Clusterization," Simulating Interacting Agents and Social Phenomena, Springer Series on Agent-Based Social Systems, 2010, Volume 7, Part I, pp. 49–63.
5. Messie, D. and Oh, J.C., "Environment Organization of Roles using Polymorphism," Environments for Multi-agent Systems, Lecture Notes in Artificial Intelligence, Volume 3830/2006, pp 251–269, Springer, Editors: Danny Weyns, Van Parunak, Fabien Michel.
6. Messie, D. and Oh, J.C., "SWARMs of Self-Organizing Polymorphic Agents", in Swarm Intelligence of Book series: Studies in Computational Intelligence, Springer-Verlag, Berlin., Volume 26, 2006, pp75–90, Editors Nadia Nedjah, Luiza Mourelle.

Refereed Conference Proceeding Papers

1. Jae Oh, S-K Chin, Qinru Qiu, et al, Managing Trustworthiness in Advanced Autonomous Systems, HICSS 58. Hawaii, January 2025
2. Zilong Jiao and Jae Oh, Consensus-Based Protocol for Distributed Exploration and Mapping, IEA/AIE 2020.

3. Zilong Jiao and Jae Oh, A Real-Time Actor-Critic Architecture for Continuous Control, IEA/AIE 2020.
4. Zilong Jiao and Jae Oh, Asynchronous Multi-Task Reinforcement Learning with Dropout for Continuous Control, ICMLA 2019
5. Qinyun Zhu and Jae Oh, Deep Reinforcement Learning for Fairness in Distributed Robotic Multi-type Resource Allocation, IEEE 17th International Conference on Machine Learning and Applications, ICMLA 2018.
6. Mahmuda Rahman and Jae C. Oh, "Online Learning for Patrolling Robots against Active Adversarial Attackers," The 31st International Conference on Industrial, Engineering and Other Applications of Applied Intelligent Systems, Proceedings of the 28th International Conference on Industrial, Engineering & Other Applications of Applied Intelligent Systems, IEA/AIE 2018, full paper, accepted for publication.
7. Zhi Xing and Jae C. Oh, "Energy-conserving risk-aware data collection using Ensemble Navigation Network," The 31st International Conference on Industrial, Engineering and Other Application of Applied Intelligent System, Proceedings of the 28th International Conference on Industrial, Engineering & Other Applications of Applied Intelligent Systems, IEA/AIE 2018, full paper, accepted for publication.
8. Chris Sanford and Jae C. Oh, "Optimization Methods for Beacon Based Foraging Algorithms," The 31st International Conference on Industrial, Engineering and Other Applications of Applied Intelligent Systems, Proceedings of the 28th International Conference on Industrial, Engineering & Other Applications of Applied Intelligent Systems, IEA/AIE 2018, full paper, accepted for publication.
9. Zilong Jiao and Jae C. Oh, "Simultaneous Exploration and Harvesting in Multi-Robot Foraging," The 31st International Conference on Industrial, Engineering and Other Applications of Applied Intelligent Systems, Proceedings of the 28th International Conference on Industrial, Engineering & Other Applications of Applied Intelligent Systems, IEA/AIE 2018, short paper, accepted for publication.
10. Qinyun Zhu and Jae C. Oh, "Learning Fairness under Constraints: A Decentralized Resource Allocation Game," the IEEE 15th International Conference on Machine Learning and Applications (ICMLA 2016), Accepted for publication, Acceptance rate 30% to 35%.
11. Zhi Xing and Jae C. Oh, "Heuristics on the Data-collecting Robot Problem with immediate rewards," the International Conference on Principles and Practice of Multi-Agent Systems (PRIMA 2016), August 22-26, Accepted, Acceptance rate 34%.
12. Mina Jung and Jae C. Oh, "Rare Event-Prediction with a Hybrid Algorithm under Power-law Assumption," Proceedings of the 29th International Conference on Industrial, Engineering & Other Applications of Applied Intelligent Systems, August 2016. Accepted.
13. Jeffrey Hudack, Jae C. Oh. "Multi-Agent Sensor Data Collection with Attrition Risk," The 26th International Conference on Automated Planning and Scheduling, AAAI conference, June 2016. (35%)
14. N. Gemelli, J. Hudack, and Jae Oh: "Using Coalitions with Stochastic Search to solve Distributed Constraint Optimization Problems," ICAART, Jan 2015, 443-450 (acceptance rate: 19%) (Currently missing from proceedings by an error)
15. Mahmuda Rahman and Jae C. Oh, "Parallel and Synchronized UCB2 for Online Recommendation Systems," IEEE/WIC/ACM International Conference on Web Intelligence 2015, pp. 413–416 (acceptance rate: 28.3%)
16. Qinyun Zhu, Jae Oh, "Equality or Efficiency: A Game of Distributed Multi-type Fair Resource Allocation on Computational Agents," WI/IAT 2015, pp. 139- 142 (acceptance rate: 24.5%)

17. Jeffrey Hudack, Nathaniel Gemelli, Daniel Brown, Steven Loscalzo, and Jae Oh. "Multi-objective Optimization for the Stochastic Physical Search Problem," Proceedings of the 28th International Conference on Industrial, Engineering & Other Applications of Applied Intelligent Systems, 2015, pp 212-221, Acceptance rate: no official info.
18. M. Rahman and Jae Oh, "Fast Online Learning to Recommend a Diverse Set from Big Data," The 28th International Conference on Industrial, Engineering and Other Application of Applied Intelligent System, Proceedings of the 28th International Conference on Industrial, Engineering & Other Applications of Applied Intelligent Systems, IEA/AIE 2015, pp 361-370. Acceptance rate: no official info.
19. Qinyun Zhu, Jae Oh, "An Approach to Dominant Resource Fairness in Distributed Environment," Proceedings of the 28th International Conference on Industrial, Engineering & Other Applications of Applied Intelligent Systems, IEA/AIE 2015, pp 141-150, Acceptance rate: no official info.
20. Joo Lee and Jae Oh, "Convergence of True Cooperations in Bayesian Reputation Game," The 12th IEEE International Conference on Trust, Security and Privacy in Computing and Communications, 2014, pp. 487–494 (31.7%)
21. Joo Lee and Jae Oh, "Estimating the Degrees of Neighboring Nodes in Online Social Networks," in the 17th International Conference on Principles and Practice of Multi-Agent Systems (PRIMA 2014), pp 42–56 (27.3%)
22. Jeff Hudack, Nate Gemelli, and Jae Oh, "Modeling Self-Interested Information Diffusion With Game Theory on Graphs," In Proceedings of the 6th International Conference on Agents and Artificial Intelligence. 2014. pp 215-222. (15%).
23. Lee, J., Oh, J.C. 2013. "A Model for Recursive Propagations of Reputations in Social Networks," 2013 International Conference on Advances in Social Networks Analysis and Mining. August 25.-28, Niagara Falls, Canada, Pages 666-670. (acceptance rate 15%)
24. N. Gemelli, J. Hudack, J.C. Oh. "Virtual structure reduction on distributed k-coloring problems. In International Conference on Intelligent Agent Technology (IAT 2013)," November 2013, Pages 46-52, (acceptance rate: 31%)
25. N. Gemelli, J. Hudack, J.C. Oh. "Virtual structure reduction for distributed constraint problem solving.," Late Breaking Paper, In The Twenty-Seventh AAAI Conference on Artificial Intelligence (AAAI 2013), July 2013, pp. 32- 34, (acceptance rate: 29%)
26. Hudack, J., N. Gemelli, J.C. Oh. "Modeling Spatial Information Diffusion With Self-Interested Agents." IEEE/WIC/ACM International Conference on Web Intelligence, 2013. (acceptance rate 31%)
27. J. Huddack, N. Gemelli, J. C. Oh, "Evolution of Cooperation in Packet Forwarding with the Random Waypoint Model," International Conference on Agents and Artificial Intelligence (ICCART 2013), pp58–66 (acceptance rate: 14%)
28. A Game Theoretic Framework for Community Detection, IEEE/ACM ASONAM 2012 (with K. Mehrotra and P. McSweeny), pp. 227 - 234, Best Paper Award among 106 accepted papers, (acceptance rate 16%).
29. N.Gemelli, J. Huddack, J. C. Oh, "Adopting a Risk-Aware Utility Model for Repeated Games of Chance, STAIRS 2012 in ECAI 2012, 113-124, 67% acceptance rate.
30. Jeff Saltz and Jae Oh, "An Open Co-op Model for Global Enterprise Technology Education: Integrating the Internship and Course Work," SIGCSE 2012, Feb 29–March 1, 2011, Pages 117–122 (acceptance rate 35%)
31. Mina Jung and Jae C Oh, "SWARM-eTOSSIM: A Simulator for Distributed Energy-Constrained Tiny Devices," The 10th International Symposium on Autonomous Decentralized Systems, Kobe, Japan, 2011, pp. 17–24, (acceptance rate 59.7%)

32. JooYoung Lee, Yue Duan, Jae C. Oh, Wenliang Du, Howard Blair, Lusha Wang, Xing Jin: Automatic Reputation Computation through Document Analysis: A Social Network Approach. ASONAM 2011: 559-560 (acceptance rate 25%)

33. Jae C. Oh, and Edward Zajec, "Evolving Artistic Styles through Visual Dialogues," Evo-MusArt 2010, The 8th European event on Evolutionary and Biologically Inspired Music, Sound, Art and Design (EvoStar 2010), Istanbul, Turkey, April 2010, pp. 261–270, (acceptance rate 44%).

34. Wonkyung Park and Jae C. Oh, "New Entropy Model for Extraction of Structural Information from XCS Population," Proceedings of the Genetic and Evolutionary Computation Conference 2009 (GECCO 2009), July, Montreal, Canada, ACM, Pages 1283–1290, Best paper award out of 220 papers. (acceptance rate 41.4%).

35. McSweeney, P.J., K. Mehrotra, and J.C. Oh, "A New Community Detection Algorithm, Based on Makov-Chains and a Team Formation Model," IEEE ASONAM 2009. July 2009, pp. 371-372, Athens, Greece.

36. Patrick McSweeney, Kishan Mehrotra, and Jae C. Oh, "Discovering Community Structure Through Self-Organizing Nodes," The Second World Congress on Social Simulation (WCSS-08), George Mason University, Fairfax, July 14-17, 2008.

37. Alexandre Ferreira, Daniel Mosse, and Jae Oh, "Thermal Faults Modeling using an RC model with an Application to Web Farms," The 19th Euromicro Conference on Real-Time Systems (ECRTS 2007), Pisa, Italy, July 4-6, 2007, pp. 113- 124 (acceptance rate 30%).

38. Matt B. Wolf, WonKyung Park, Jae C. Oh, Misty K. Blowers, "Toward Open-Set Text-Independent Speaker Identification in Tactical Communications," First IEEE Symposium on Computational Intelligence for Security and Defense Applications (CISDA 2007), Hilton Hawaiian Village Resort, Honolulu, Hawaii, USA, pp7-14 , April 1-5, 2007

39. Jung, M., Messie, D., and Oh, J.C., "Real-Time Distributed Problem Solving in the CMS Experiment," US-Korea Conference on Science, Technology and Entrepreneurship (UKC), Washington, DC, August 2007.

40. Alexandre Ferreira, Jae Oh, and Daniel Mosse, "Toward Thermal-aware Load-Distribution for Real-Time Server Farms," Work in Progress Session for the 27th IEEE International Real-Time Systems Symposium (RTSS 2006), December 5-8, 2006, Rio de Janeiro, Brazil.

41. WonKyung Park, Jae C. Oh, Misty K. Blowers, Matt Wolf, "Speaker Identification with Learning Classifier Systems," UKC 2006, US-Korea Conference on Science, Technology, and Entrepreneurship, Teaneck, NJ, Aug 10–13.

42. Mina Jung, Derek Messie, Jae C. Oh, "A Distributed multi-agent approach to Large-scale, real-time high-energy physics experiment system," UKC 2006, US-Korea Conference on Science, Technology, and Entrepreneurship, Teaneck, NJ, Aug 10–13.

43. Derek Messie and Jae C. Oh, "SWARMs of Self-Organizing Polymorphic Agents," Fifth International Conference on Hybrid Intelligent Systems (HIS05), Rio de Janeiro, Brazil, November 2005, an IEEE conference, (yearly average acceptance rate: approx. 35%)

44. M. Haney et.al., "The RTES Project - BTeV, and Beyond," 14th IEEE Nuclear & Plasma Science Society Real Time Conference 2005, Stockholm, Sweden, June 4-10, 2005

45. Derek Messie and Jae C. Oh, "Polymorphic Self-* Agents for Stigmergic Fault Mitigation in Large-Scale Real-Time Embedded Systems, "The Fourth International Joint Conference on Autonomous Agents and Multi Agent Systems (AAMAS 2005), July 2005, Utrecht, The Netherlands, Pages 571-577, AAAI Conference. (Acceptance rate 24%, Total submissions 530),

46. Jae C. Oh, Nathaniel Gemelli, and Robert Wright, "A Rationality-based Modeling for Coalition Support," Fourth International Conference on Hybrid Intelligent Systems (HIS),

Kitakyushu, Japan, December 2004, pp. 172- 177, (Acceptance rate: 38%), an IEEE Conference.

47. Derek Messie and Jae C. Oh, "Cooperative Game Theory within Multi-Agent Systems for Systems Scheduling", Fourth International Conference on Hybrid Intelligent Systems (HIS04), Kitakyushu, Japan, December 2004, (Acceptance rate: 38%), an IEEE Conference.
48. Hongliang Gai and Jae C. Oh, "Modeling Voice Quality with QoS Parameters in VoIP Networks: A multivariate statistical approach," 2004 International Symposium on Performance Evaluation of Computer and Telecommunication Systems (SPECTS'04), July 25–29, 2004, San Jose, California, pp182–189, The Society for Modeling and Simulation International Conference, (yearly average acceptance rate seems to be: approx. 50%)
49. Dmitri E. Volper, Jae C. Oh, Mina Jung, "GameMosix: Game Theoretical Middleware for CPU sharing in Untrusted P2P Environment," 17th International Conference on Parallel and Distributed Computing Systems (SPDCS-2004), September 15-17, 2004, San Francisco, CA, pp. 448-454, IASTED Conference.
50. Derek Messie and Jae C. Oh, "SWARM Simulation of Multi-Agent Fault Mitigation in Large-Scale, Real-Time Embedded Systems," The 2004 High Performance Computing & Simulation (HPC &S) Conference with The 18th EUROPEAN SIMULATION MULTICONFERENCE (ESM 2004) Magdeburg, Germany June 13 - 16, 2004.
51. Jae C. Oh, and Dmitri E. Volper, "Design of Rationality-based Computing Middleware: A Preliminary Study," CEC 2004, Portland, Oregon, June 20–23, 2004, pp. 839-846, Volume 1, Poster Presentation, an IEEE conference.
52. Hovey, L., Volper, D., and Oh, J. C. "Adaptive Dynamic Load-balancing Through Evolutionary Formation of Coalitions," Hybrid Intelligence Systems 2003, Melbourne, Australia, Pages 194-203, (yearly average acceptance rate: approx. 35%)
53. Hovey, L., Volper, D., and Oh, J. C. "Evolution of Optimal Compute Server Clusters for Dynamic Load-balancing Systems," CEC 2003, Canberra, Australia, pp. 528- 535, an IEEE conference. (acceptance rate 65.5%)
54. Gottschalk, E., Appel, J., Oh, J., et al, "The BTeV DAQ and Trigger System – Some Throughput, Usability and Fault Tolerance Aspects," Computing in High Energy Physics Conference, Beijing, China, 2001.
55. Oh, Jae C., "Cooperating Search Agents Explore More than Defecting Search Agents in the Internet Information Access," Congress on Evolutionary Computation 2001 (CEC2001), Seoul, Korea, May 2001, pp. 1261-1268, vol. 2, (acceptance rate 69%), an IEEE conference.
56. Oh, Jae C., "Benefits of Clustering among the Internet Search Agents caught in the n-Person Prisoner's Dilemma Game," Congress on Evolutionary Computation 2000 (CEC2000), San Diego, CA, July 2000, pp864-871, vol. 2, an IEEE conference.
57. Oh, Jae C., "Ostracism for Improving Cooperation in the Iterated Prisoner's Dilemma Game," Congress on Evolutionary Computation 1999 (CEC99), Washington, DC, July 1999, an IEEE conference.
58. Oh, Jae C. and Mosse, D., "Teaching Real Time OSs with DORITOS," SIGCSE '99 Technical Symposium, Proceedings of the Thirtieth SIGCSE Technical Symposium on Computer Science Education, pp. 68-72, New Orleans, March 24-28, 1999, an ACM conference (acceptance rate 35%)
59. McAulay, A.D. and Oh, Jae C., "Improved Learning in Genetic Rule-Based Classifier Systems," in Proceedings of the 1991 IEEE International Conference on Systems, Man, and Cybernetics, University of Virginia, Charlottesville, VA, Vol. 2, pp., 1393-1398, an IEEE conference.

60. McAulay, A. D. and Oh, Jae C., "Inductive Character Learning and Classification with Genetic Algorithms," 1991 IEEE International Conference on Systems Engineering, Wright State University, Dayton, OH.
61. McAulay, A. D. and Oh, Jae C., "Image Learning Classifier System Using Genetic Algorithms," in Proceedings of IEEE National Aerospace Electronics Conference NAECON '89, Vol. 2, pp., 705-710 (1989), an IEEE conference.

Refereed Workshop Papers

1. Jae C. Oh, Rajesh Chopade, Sunil Vajir, Radika Garg, "RK+openMOSIX: A Real-time Kernel with Task Migration Support," The VII Brazilian Workshop on Real-Time Systems, May 13, 2005, Fortaleza, Brazil. (Acceptance rate 30%).
2. Mina Jung, Jae C. Oh, and Derek Messie, "Persistent, Rationality-based Internet-wide Open Resource Infrastructure (PRIORI)," Workshop on Smart Grid Technologies (SGT), with The Fourth International Joint Conference on Autonomous Agents and Multi Agent Systems (AAMAS 2005), July, 2005, Utrecht, The Netherlands.
3. Jae C. Oh and Misty K. Blowers, "Text-independent Open-set Speaker Identification for Military Missions Using Genetic Rule-based System," Second Workshop on Military and Security Applications of Evolutionary Computation, with Genetic and Evolutionary Computation Conference 2005, June 25–29, 2005, Washington, DC. (an ACM Conference)
4. Messie, D. et al., "Prototype of Fault Adaptive Embedded Software for Large-Scale Real-Time Systems", 2nd Workshop on Engineering of Autonomic Systems (EASe), in the 12th Annual IEEE International Conference and Workshop on the Engineering of Computer Based Systems (ECBS), Washington, DC, April, 2005, an IEEE conference.
5. Messie, D. and Oh, J.C., "Self-Organizing Lightweight Agents for Large-Scale Real-Time Systems Scheduling", Workshop on Games and Emergent Behaviors in Distributed Computing Environments, in the 8th International Conference on Parallel Problem Solving from Nature (PPSN), Birmingham, UK, September 2004, a top European conference.
6. Oh, Jae C., Madhura S. Tamhankar, and Daniel Mossé, "Design of Very Lightweight Agents for Reactive Embedded Systems," 10th IEEE Symposium and Workshops on the Engineering of Computer Based Systems (ECBS '2003).
7. Matthew H. Thomas, Jae C. Oh: Synthetic Pheromones for Avoiding Social Dilemmas. JCIS 2002: 655-658.

Refereed Abstracts

1. Jeff Saltz, Jae Oh, Suk-Chung Yoon, "Reviewing GET IE: An Open Co-op Program," 2012 ASEE Northeast Section Conference, Extended Abstract, University of Massachusetts, Lowell, April 27–28, 2012.
2. WonKyung Park, Jae C. Oh, Matt B. Wolf, M. K. Blowers, "An Open-set Speaker Identification System using Genetic Learning Classifier System," GECCO-2006, Poster session.
3. Oh, Jae C., "Effects of 'Physical Body' on Biased Opponent Selection in the Iterated Prisoner's Dilemma Game," one-page abstract, 1999 Genetic and Evolutionary Computation Conference (GECCO-99), Orlando, FL.
4. Oh, Jae C. and Mosse, D., "DORITOS (Distributed Object-based Real-time InsTructional Operating System): A Complete Package for Teaching Principles and Practices of Real-time Operating System," one-page abstract, Frontiers in Education 1998 (FIE 98), Tempe, AZ, November 1998.

Presentations without Publication (Refereed)

1. Paul Talaga and Jae C. Oh "Combining AIMA and LEGO Mindstorms in an Artificial Intelligence Course to Build Real World Robots," Consortium for Computing Sciences in Colleges - Eastern Conference 2008.
2. W. Park and Jae C. Oh, Adaptive Speaker Identification using Genetic Rule-based Classifier Systems, US-Korea Conference on Science, Technology, and Entrepreneurship 2008 (UKC 2008), a poster presented by W. Park, August 2008.
3. Jung, M., Oh, J.C., and Messie, D., "Grid Peer Discovery, Task, and Friendship Management using PRIORI," poster session, 18th International Conference on High-Performance Computing, Networking, and Storage (SC), Seattle, WA, November 2005.

Publications not refereed (through invited talks)

1. Jae C. Oh, "Genetic Learning Classifier Systems: Fundamentals and Recent Advances," ENABLING TECHNOLOGIES FOR SIMULATION SCIENCE, SPIE Defense and Security Symposium, April 17–21, 2006, Orlando, FL, USA.
2. Jae C. Oh, "Open-Set Speaker Identification with Classifier Systems," MODELING AND SIMULATION FOR MILITARY APPLICATIONS (OR50), SPIE Defense and Security Symposium, April 17–21, 2006, Orlando, FL, USA.

Technical Reports

1. Oh, Jae; Choi, Jun, Adaptable Compressed Jaumann Absorber for Harsh and Dynamic Electromagnetic Environments, 2020 Aug 18, AFRL, AFSOR.
2. Oh, Jae C., Self-Organizing Collective Decision Making for ISR Swarms, Submitted to AFRL, Rome. September 2015.
3. On similarities and Differences in Various Problem Formulations Related to Intelligent Information Collection Using Multiple UAVs. Submitted to AFRL, Rome. November 2015.
4. Oh, Jae C. and Gai, Hongliang, Development of VoIP Call Quality Assessment/Prediction Model. Submitted to ShoreGroup, 2004.
5. Oh, Jae C., "Proofs of the Conditions of the n-Person Iterated Prisoner's Dilemma Game for the Internet Access Problem," Technical Report, TR-99-19, 1999, Department of Computer Science, University of Pittsburgh.
6. McAulay, A. D., Krile, T. F., Oh, Jae C., *et al*, "Polynomial Neural Networks for Airborne Applications: Phase I & II," Final Report for The ASD AI Applications Office WRDC/TXI, Wright-Patterson AFB, OH, Wright State University Technical Report, WSU-CS-90-12.

Dissertation and Thesis

1. Oh, Jae C., "Effects of the kinship bias on cooperation in multi-agent environments: Studies on theoretical models and the Internet Access Problem," Ph.D. Dissertation, The University of Pittsburgh (2000).
2. Oh, Jae C., "Improved Classifier System Using Genetic Algorithms Applied to Image Learning," NCR Innovation Award: Best Master's thesis in the year, Wright State University (1989)

Media Publicity
(partial list)

1. Interview with Syracuse Engineer Magazine for article "Swarm Robots," published in Fall 2015 issue.
2. Interview with Linda Grace Gorman, a reporter for Jerk Magazine about Robotics Competitions, article "A League of Their Own," published in October 15, 2014 issue.
3. Interview with WSTM-TV (NBC 3) about cell-phone triangularization algorithm to explain how a phone can be located. Aired three times on Tuesday, May 1, 2007.

Invited Talks
(partial list)

1. Research Problems in Information Gathering UXVs: Where planning meets foraging, Syracuse Research Corporation, March 1, 2016.
2. Emergence of Self-Reflection Through Visual Dialogues: A Computer Scientist's Perspective, Departmental Colloquium Series, Department of Computer Science, The University of Pittsburgh, April 7, 2009.
3. *"Emergence of self-reflection through visual dialogues based on evolutionary algorithms,"* October 2, 2008 at Faculty of Electrical Engineering and Computer Science of the University of Maribor, as part of the 14th International Festival of Intermedia Art, Maribor, Solvenia.
4. *"On Interdisciplinary Research: Computer Science is not a service discipline," for School of Information Science and Technology, Soong-Sil University, Korea, July 18, 2007.*
5. *"Two Tales of Interdisciplinary Research on Computer Science, Arts, and Physics: Building a fault-adaptive real-time embedded system and reasoning about visual compositions," for Semniar series at the Department of Computer Science, Union College, Schenectady, NY, March 1, 2007."*
6. *Computer Science: The Science of MP3 players, Computer Games, Space Exploration, Instant Messaging, the Internet and eBay,* for Junior Cafe Scientifique at the Milton J. Rubenstein Museum of Science & Technology (MOST), March 17, 2007.
7. *"Anything Distributed and Interacting: a.k.a.Distributed Multi-agent Systems,"* for PhD Alumni Workshop - Oct 20, 2006, Dept. of Computer Science, University of Pittsburgh.
8. Jae C. Oh, "Genetic Learning Classifier Systems: Fundamentals and Recent Advances," ENABLING TECHNOLOGIES FOR SIMULATION SCIENCE, SPIE Defense and Security Symposium, April 17–21, 2006, Orlando, FL, USA.
9. Jae C. Oh, "Open-Set Speaker Identification with Classifier Systems," MODELING AND SIMULATION FOR MILITARY APPLICATIONS (OR50), SPIE Defense and Security Symposium, April 17–21, 2006, Orlando, FL, USA.
10. *"Genetic Learning Classifier Systems: Fundamentals and Recent Advances,"* ENABLING TECHNOLOGIES FOR SIMULATION SCIENCE, SPIE Defense and Security Symposium, April 17–21, 2006, Orlando, FL, USA.
11. *"Open-Set Speaker Identification with Classifier Systems,"* MODELING AND SIMULATION FOR MILITARY APPLICATIONS (OR50), SPIE Defense and Security Symposium, April 17–21, 2006, Orlando, FL, USA.
12. *"From EBay to Fully-automated E-commerce: Management of Trust and Security"* for the New York State Multi-CAT day, September 22, 2005, Cortland, NY
13. *"Text Independent Speaker Identification using Genetic Classifier Systems,"* for Air Force Office of Scientific Research, December 2, 2004.

14. *"Evolutionary Computations, Genetic Rule-based Systems, and Evolutionary Games for Real-word and Military Applications,"* The AFRL Chief Scientist Seminar Series, June 23, 2004.
15. *"Computer Science and Computer Engineering?: Why should I choose to be a CS/CE major?" A talk given to ECS 101 Students in the College of Engineering and Computer Science at Syracuse University, 2003.*
16. *Lightweight Agents for Reactive, Fault-Tolerant Real-time systems*, Workshop on High Performance, Fault Adaptive Large Scale Real-time Systems, Vanderbilt University, Nashville, TN, Nov. 14–15, 2002
17. *New faculty mentoring talk at Workshop for Engineering Education Scholars Program, 2002 at Minnowbrook.*
18. *Artificial Intelligence in Computer Games and Entertainment Industry*, for Newhouse graduate students, Syracuse University, Syracuse, NY. March 27, 2002
19. *Issues and Methodologies in Multi-agent Systems*, Department of Computer Engineering, Kyungpook National University, Taegu, Korea, July 2, 2001

Computer Art Exhibitions

1. Jae Oh (with Edvard Zajec), Informatrix III, 14th International Festival of Intermedia Art, October 1, 2008 to October 3, 2008, Maribor, Solvenia.
2. Jae Oh (with Edvard Zajec), Informatrix III, *The Artist and the Computer: From the Beginning to the Present*, November 15, 2007 to January 13, 2008, International Center of Graphic Arts (MGLC), Ljubljana, Slovenia.

Program and System Exhibitions

1. Real-time Embedded System Demo Exhibition at Real-Time and Embedded Technology & Applications Symposium 2005 (IEEE), March 7-10, 2005, San Francisco, Accepted by the workshop and conference.
2. Prototype of Real-time Embedded System for the BTeV tevatron system, with Fermi National Laboratory, SuperComputing 2003, November 2003, Pheonix, AZ.

Consulting Work (Not a complete list, since 2007)

1. Air Force Research Laboratory, Fall 2016.
2. Course Syllabus consultant for the Vietnam Open Course Project, for Vietnam Education Foundation (an independent U.S. federal government agency), November 2007.

Ph.D. Dissertation Advised

1. Zilong Jiao, *Reinforcement Learning for Mobile Robot Collision Avoidance in Navigation Tasks,* Defended in 2020
2. Zhi Xing, *Risk-Aware Navigation for UAV Digital Data Collection,* Defended in 2017.
3. Mahmuda Rahman, *Online Learning with Bandits for Coverage*, Defended in 2017.

4. Qinyun Zhu, *Fair Multi-type Resource Allocation for Multi-Robot Systems*, Defended in 2017.
5. Jeffrey Hudack, *Risk-Aware Planning for Sensor Data Collection,* Defended in 2016.
6. Nathaniel Gemelli, *Coalition Formation for Distributed Constraint Optimization Problems,* Defended in 2014.
7. Jooyoung Lee, *Trust Management in Online Social Networks,* Defended in 2014.
8. Mina Jung, *A Distributed Approach for Fault Mitigation in Large Scale Distributed Systems,* Defended in December 2011.
9. Wonkyung Park, *Information Theoretic Measure Applied on Learning Classifier Systems For Speaker Identification Problems,* Defended in March 2010.
10. Patrick McSweeny, *Community Detection in Complex Networks as Equilibrium Points,* Defended in March 2010, co-advisor Prof. Kishan Mehrotra.
11. Norka Lucena, *Application-Layer Protocol Steganography,* Defended on April 4, 2009, co-advisor Prof. S. Chapin.

Master's Thesis Advised

1. Shweta Chandore, "Thermal-aware load balancing in Real-time, Heterogeneous Computing Clusters," Master's Thesis, October 5, 2007, Thesis Advisor: Jae C. Oh
2. Radhika Garg, "Supporting timeliness for distributed computing environment: Implementation of RK+OpenMosix and Studies on Target Selection Algorithms using Naive Bayesian Classifiers," Master's Thesis, October 10, 2006, Thesis Advisor: Jae C. Oh
3. Madhura Tamhankar, "Design of Very Lightweight Agents for Reactive Embedded Systems," Master's Thesis, 2003. Committee members: Jae C. Oh (Thesis advisor),C. K. Mohan (Oral Exam Chair), Kevin Du (Committee), Adrian Nunez (Committee).

Master's Project Supervised

1. Praveen Kumar Gattu, "Event Synchronization in DORITOS."
2. Samir Mistry, "Investigation of PVM," 2002–2003.
3. Neda Abdolrahimi, "Developing Quantum Computing Education materials for CS majors," 2023.

Undergraduate Honor's Thesis Advised

1. Christopher Chan, "An Implementation of Platform Independent Virtual Memory," Completed, May 2004.
2. Kevin Aziz, "Applications of Computer Science and Technology as a Vehicle for Societal Change, Activism, and Outreach," In progress.
3. Caely Martin, "HCI with Leap Motion Sensors", In progress.

Ph.D. Dissertation Committee Served

1. Ph.D. defense committee, Fnu Askshay, Adaptive Generation in Evolutionary Robotics: From Adversarial Objects to Guided Optimization, Advisor: Garrett Katz.
2. Ph.D. defense committee, Chengxiang Yin, Visual-Semantic Learning, Advisor: Qinru Qiu.
3. Ph.D. defense committee, Pegah Hozhabrierdi, Protection against Negative Contagion in Complex Social Networks, Advisor: Sucheta Soundrajan.
4. Ph.D. defense committe, Kai Li, Understanding and Hardening Blockchain Network Security Against Denial-of-Service Attacks, Advisor: Yuzhe Tang.
5. Ph.D. defense committee (Chair), Yebin Liu, DESIGN AND MODELING SUPERCONDUCTING HARDWARE FOR IMPLEMENTING QUANTUM STABILIZERS, Advisor: Britton Plourde.
6. Ph.D. defense committee, Zhiyuan Xu, Experience-Driven Control for Networking and Computing, Advisor: Jian Tang
7. Ph.D. defense committee, Francis Enoch Akowuah, Real-time Adaptive Sensor Attack Detection and Recovery in Autonomous Cyber-Physical Systems, 2021, Advisor: Fanxin Kong.
8. Ph.D. defense committee, Teng Li, Efficient Online Scheduling in Distributed Stream Data Processing Systems. Advisor: Jian Tang
9. Ph.D. defense committee, Jing Wang, Modeling and Resource Allocations in Mobile Wireless Networks, Advisor: Jian Tang
10. Ph.D. defense committee, Jieong Xu, Enhancing survivability and reliability in the cloud, Advisor: Jian Tang
11. Andrew Henderson, "Selective Dynamic Analysis of Virtualized Whole-System Guest Environments," Advisor Heng Yin (2016).
12. Committee Chair for Ph.D. Committee for John D'Ignazio, "Digital Curation on a Human Scale: Investigating information infrastructures and environments to support technology-enabled science." Advisor: Jian Qin (iSchool), 2015
13. Karthik Kuber, "Network Theoretic Analyses and Enhancements of Evolutionary Algorithms." Advisor C. K. Mohan, 2014
14. Mehmet Kaya, "Identifying Extract Class and Extract Method Refactoring Opportunities Through Analysis of Variable Declarations and Uses." Advisor: Jim Fawcett, 2014
15. Hao Shen, "Adaptive power management for computers and mobile devices." Advisor, Qinru Qiu, 2014
16. Daniel Patten, "Problems in the Theory of Convergence Spaces." Advisor: Howard Blair, 2014
17. Committee Chair for Ph.D. Committee for Blias Pal, "Precision measurement of the Lambda_b baryon lifetime", Advisor Sheldon Stone 2013
18. Huaming Huang, Rank Based Anomaly Detection Algorithms, Advisor K. Mehrotra, 2013
19. Robert J Irwin, The Differential Scheme and Quantum Computation, Advisor: Howard Blair, 2011.
20. Rajaa K Alqudah, Techniques for Designing, Verifying and Debugging Message Passing Systems, Advisor: C Y Roger Chen, 2011.
21. Stuart W. Card, Towards an Information Theoretic Framework for Evolutionary Learning, Advisor: C. K. Mohan, August, 2011.

22. Committee Chair for Ph.D. Committee for Ercan Dumlupinar, CFD Studies of Dynamic Stall for Rotor Applications, Advisor: V. R. Murthy. December 15, 2009. Dept. Mechanical and Aerospace. Served the Oral Examination Chair.
23. Minjun Wang, "Grid-Based Collaboration," Doctor of Philosophy, Department of Electrical Engineering and Computer Science,Syracuse University, Defended on August 2, 2006, Advisor: Geoffrey Fox.
24. Haizhi Xu, "Surviving Malicious Code Attacks," Doctor of Philosophy, Department of Electrical Engineering and Computer Science, Syracuse University, Defended on December 14, 2005, Advisor Dr. S. Chapin.
25. Kyung-suk Lhee, "Integrity Checking for Process Hardening," Doctor of Philosophy, Department of Electrical Engineering and Computer Science, Syracuse University, Defended on April 12, 2005, Advisor Dr. S. Chapin.
26. Committee Chair for Ph.D. Committee for Haoyu Wang, "A Scheme for Mechanical Product Family Modeling and Functional Tolerancing," Doctor of Philosophy, Department of Mechanical Engineering, Syracuse University, Defended on August 9, 2004, Advisor Dr. U. Roy.
27. Sunngwook Kim, "Adaptive Online Bandwidth Management for QoS sensitive Multimedia Networks," Doctor of Philosophy, Department of Electrical Engineering and Computer Science, Syracuse University, Defended on October 24, 2003, Advisor Dr. P. Varshiney.
28. YoungKi Hwang, "The design and Evaluation of Efficient Routing and Quality of Service Support for Wireless Ad-Hoc Networks," Doctor of Philosophy, Department of Electrical Engineering and Computer Science, Syracuse University, Defended on September 13, 2002, Advisor: Dr. S. Chapin.
29. Hasan T. Ozdemir, "Graph Based Evolutionary Algorithms for Transportation Problems," Department of Electrical Engineering and Computer Science, Doctor of Philosophy, Syracuse University, Defended on April 26, 2001, Advisor: Dr. C. Mohan.
30. Joohan Lee, "Computational Resiliency," Doctor of Philosophy, Department of Electrical Engineering and Computer Science, Syracuse University, Defended on October 3, 2001, Advisor: Dr. S. Chapin.
31. Jagannadha Chidella, "RBF: An Object and Constraint Oriented Reasoning Blackboard Framework for Knowledge Based Applications," Department of Electrical Engineering and Computer Science, Doctor of Philosophy, Syracuse University, Defended on August 21, 2002, Advisor: Dr. C. Mohan.

Ph.D. Dissertation Proposal Committee Served

1. Francis Enoch Akowuah, Real-time Adaptive Sensor Attack Detection and Recovery in Autonomous Cyber-Physical Systems, 2021, Advisor: Fanxin Kong.
2. Patrick McSweeny, Community Structure through Equilibriums, dissertation proposal defense, April 9th, 2009, co-advised with K. Mehrotra.
3. Leland Hovey, "Adaptive Dynamic Load Balancing Through Evolutionary Coalition Formation and Simulation Studies," Department of Electrical Engineering and Computer Science, Syracuse University, Proposal Defended on December 12, 2005, Advisor: Prof. Jae C. Oh.
4. Stuart William Card, "Toward an Information Theoretic Framework for Evolutionary Learning," Department of Electrical Engineering and Computer Science, Syracuse University, Proposal Defended on December 19, 2005, Advisor: Prof. C. Mohan.

5. Dmitri Volper, "Fine-Grained Punishment in Game-Theoretical Situations Effect of reputation management in Game-Theoretical Situations," Department of Electrical Engineering and Computer Science, Syracuse University, Proposal Defended on May 19, 2005, Advisor: Prof. Jae C. Oh.
6. Haizhi Xu, "System Support for Host-based Anomaly Detection," Department of Electrical Engineering and Computer Science, Syracuse University, Proposal Defended on November 22, 2004, Advisor: Prof. Steve Chapin.
7. Minjun Wang, "Shared Event Models for Collaborations," Department of Electrical Engineering and Computer Science, Syracuse University, Proposal Defended on November 22, 2004, Advisor: Prof. Geoffrey Fox.

Master's Thesis Committee Served

1. Ricky Laishram, "Link Prediction in Dynamic Weighted and Directed Social Network using Supervised Learning", August 2015. Advisor: C.K. Mohan.
2. Karthik Kuber, Improving Learning Classifier Performance Using Information Theoretic Fitness Measures, November 13, 2009, EECS Dept., Advisor: C.K. Mohan.
3. Deepak Devicharan, "Particle Swarm Optimization with Adaptive Linkage Learning," Master's Thesis, August 2, 2006, Thesis Advisor: Chilukuri Mohan
4. Kalyan Kumar Veeramachaneni, "A Swarm Intelligence Based Approach for Multimodla Biometrics Fusion," Master's Thesis, May 2004, Thesis Advisor: Lisa Osadciw.
5. Ramesh Rajagopalan, "Path Planning with Evolutionary Algorithms," Master's Thesis, July 15, 2004, Thesis Advisor: Chilukuri Mohan

Professional Memberships

1. Life Member of AAAI.
2. Member of ACM.
3. Member of IEEE.

Software Design and Implementations

1. PRIORI beta (was RI-MOSIX (Rationality-based Internet-wide MOSIX): OpenSource Linux patch for Internet-wide resource management, `http://www.ecs.syr.edu/faculty/oh/Research/RI-MOSIX/RI-MOSIX.html` (Link no longer active)
2. DORITOS (Distributed Object-based Real-time insTructional Operating System). Main author.
3. DORITOS tutorial Web pages. `http://www.doritos.cs.pitt.edu`. Sole author. (Link no longer active)
4. FlashCard, a Macintosh program for assisting memorization of words. First published in a CD-ROM magazine *Nautilus*. Sole author.
5. FunClass, a Web application for promoting students' participation in class, `http://128.230.109.41/funClass/index.php`, Designer. (Link no longer active)

Historical Research Interests Profile

Dr. Jae C. Oh's research portfolio spans a wide spectrum of academic domains, including education, high-energy physics applications, artificial intelligence, finance, cybersecurity, and visual arts. His interdisciplinary approach reflects a lifelong commitment to bridging technical rigor with creative inquiry.

His research journey began as an undergraduate, developing interactive educational software on Apple II computers to teach arithmetic to elementary school studentsan- an early fusion of computing and pedagogy. For his masters thesis, he explored Genetic Rule-Based Learning Classifier Systems for handwritten image recognition, laying the groundwork for his long-standing interest in machine learning.

During his Ph.D. studies, Dr. Oh's focus evolved toward real-time and distributed systems, with a particular emphasis on operating systems and game-theoretic modeling. His dissertation addressed cooperation strategies among selfishly rational agents in multi-agent environments, contributing to foundational work in autonomous systems.

As a faculty researcher, Dr. Oh collaborated with high-energy physicists at Fermi Lab and CERN, applying real-time operating systems to high-energy physics data acquisition and processing. He organized two interdisciplinary workshops, FALSE I and FALSE II, bringing together researchers in real-time systems and multi-agent artificial intelligence to foster cross-domain dialogue and innovation.

Dr. Oh has served as a guest editor for the ACM Special Interest Group on Embedded Systems Review and participated extensively in technical program committees for major conferences. His editorial and review contributions span artificial intelligence, multi-agent systems, real-time and distributed systems, wireless networks, and the history of computing.

A passionate advocate for interdisciplinary synergy, Dr. Oh has collaborated with computer artists and participated in two European art exhibitions. His scientific art visualization was featured in the Air Force Research Laboratorys *Basic Research Art of Science Showcase: Artistic Innovation that Supports Air, Space, and Beyond*, sponsored by the Air Force Office of Scientific Research.

Currently, Dr. Ohs research interests center on trustworthy and explainable AI, with a focus on cybersecurity and assurance. He works closely with the Air Force Research Laboratory (AFRL) and the National Security Agency (NSA) to advance secure, interpretable systems for mission-critical applications.

Fundamental Research Interests

Dr. Jae C. Oh's research is fundamentally driven by a deep curiosity about the dynamics of interaction among multiple entities, whether autonomous agents, computational systems, or human participants. His work explores both game-theoretical and non-game-theoretical frameworks to understand and optimize coordination, competition, and cooperation across diverse domains.

At the core of his research lies a systems-level inquiry into multi-agent and distributed environments, with applications in resource allocation, symbolic and sub-symbolic artificial intelligence, and real-time decision-making. This intellectual foundation extends beyond traditional computing contexts to include computer-based visual art and dialogic systems, reflecting a

commitment to interdisciplinary synthesis and expressive computation.

Dr. Oh's scholarly contributions span operating systems, AI, high-energy physics, finance, cybersecurity, and the arts, united by a consistent focus on how entities interact, adapt, and evolve within structured environments. His current research continues this trajectory through work on trustworthy and explainable AI, with emphasis on assurance and security in collaboration with AFRL and NSA.

Courses Taught

Artificial Intelligence (CIS467/667), Multi-agent Systems: Concepts and Programming (CIS437), Operating Systems (CIS486, CIS657), Game Theory (CIS700), Systems Programming (CIS342, CSE348), Multi-agent Systems (CIS700), Fundamentals of Research (ECS691), Introduction to Engineering and Computer Science (ECS101)

References

Available upon request.