College and Hiring Profile

Assistant/Associate Professor, Applied Computing

Future Focused, Career Ready

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October 2021
Position Profile – Assistant/Associate Professor, Applied Computing

The Department of Applied Technology at the University of Arizona’s (UA) College of Applied Science and Technology (CAST) invites applications for a position in Applied Computing / Computer Science with an emphasis in Artificial Intelligence/Machine Learning, Cloud Computing, Data Science, and/or Software Engineering.

This tenure-track academic Assistant/Associate Professor position begins August 2022 and will report to the Department Head of Applied Technology.

CAST offers the Bachelor of Applied Science Degree to diverse, transfer, post-traditional students in an online format. CAST is also actively growing online master’s degree programs across all its disciplines. Candidates must be committed to outstanding undergraduate and graduate teaching for our diverse student population.

A commitment to establishing and maintaining a distinguished research agenda, including extramural funding, is expected. This position will work at the University of Arizona’s only Branch Campus in Sierra Vista, located 75 miles southeast of the Tucson Campus, and will travel throughout the state.

We are seeking interdisciplinary-focused colleagues eager to collaborate across the college’s programs and degrees. This position will contribute to building a strong team of culturally diverse faculty and staff who are committed to preparing students to be future focused and career ready in a 21st-century workforce.

CAST is committed to excellence in research and education in all its programs and equally committed to bridging the digital divide through accessible education for our diverse, post-traditional student population. Candidates are requested to include in their letter of interest and/or teaching philosophy how they will assist the college in furthering these goals.

Outstanding UA benefits include health, dental, and vision insurance plans; life insurance and disability programs; sick leave and holidays; UA/ASU/NAU tuition reduction for the employee and qualified family members; state and optional retirement plans; access to UA recreation and cultural activities; and more! The University of Arizona has been recognized for our innovative work-life programs. For more information, please click here.
Position Duties and Responsibilities

- A commitment to excellence in teaching is expected. The faculty member will teach classes in applied computing in CAST’s enhanced, online teaching model. The faculty member will engage virtually and in-person to mentor and educate students who represent a diverse, post-traditional demographic, including over 50% first generation college students.

- The College’s project-focused, undergraduate teaching model involves undergraduates in internships, research, and other hands-on experiences. The faculty member will mentor students in capstone experiences.

- The successful candidate will be expected to establish and maintain a distinguished research program. The faculty member is expected to pursue grant opportunities to support individual and/or collaborative research.

- The faculty member is expected to involve undergraduate researchers as part of their research while assisting the college and department in developing a robust graduate research program.

- The faculty member will participate in outreach and contribute to departmental, college, and university service. In these and other ways, the faculty member will help to develop innovative approaches to enhancing student engagement, increasing diversity, and expanding collaborations with community and business partners.

- As a part of the university’s land grant mission in the borderland region of Arizona, the faculty member is expected to be actively involved in the college’s commitment to shrinking the digital divide and expanding access to education for underrepresented students.

- CAST values inclusive, interdisciplinary research and education. The faculty member is expected to collaborate effectively with colleagues across disciplinary lines.

Qualifications

Minimum Qualifications

- Ph. D. in Computer Science, Computer Engineering, Applied Computing, or closely related fields

Preferred Qualifications

- The initial appointment will be at the level of Assistant Professor, but an appointment at Associate Professor level may be considered for exceptionally qualified candidates.

- To be considered for an appointment above the rank of Assistant Professor, candidates must have an internationally recognized record of distinguished scientific achievement,
leadership, and teaching ability. To be considered for appointment at the rank of Assistant Professor, candidates must demonstrate a clear promise of such achievement.

- Potential for developing nationally recognized scholarship and a strong publication record.
- Experience teaching in on-line or distance modalities.
- Experience mentoring undergraduate student researchers as a high impact practice in undergraduate education.

Procedure for Candidacy

Submit applications online at talent.arizona.edu. Include the following:

- Curriculum Vitae
- Cover Letter
- Teaching Philosophy that includes a statement on commitment to enhancing student engagement in online learning, increasing diversity, and expanding collaborations across disciplinary boundaries in 21st Century education
- Statement of Research Interests and Goals

Questions should be directed to Melody Dugie, CAST HR Manager at mdugie@arizona.edu. The initial review of applications will commence on or around November 1, 2021 until the position is filled.
College Profile

The University of Arizona’s College of Applied Science and Technology (CAST) is the only college at UArizona that offers the Bachelor of Applied Science (BAS) Degree. CAST education is facilitated by the college’s one-of-a-kind Virtual Learning Environment that includes CyberApolis, a unique virtual city of 15,000 AI-drive bots that conduct business, engage in cybermedia, and demonstrate human vulnerabilities that support scenarios in our classes. BAS students are transfer, post-traditional students who take all their course work in CAST’s enhanced, online education model. This model offers a hybrid combination of synchronous and asynchronous online education with opportunities to have face-to-face interactions with student service staff and faculty at UArizona locations throughout the state. CAST’s majors feature a common core of courses that develop writing, math, analysis, ethics, and critical thinking skills and include a senior capstone experience.

CAST’s Cyber Operations program was ranked the #1 online, undergraduate cybersecurity program by Academic Influence in 2021. In addition, CAST is a National Security Agency (NSA) designated Center of Academic Excellence in Cyber Operations (CAE-CO) and an Office of the Director of National Intelligence (ODNI) designated Intelligence Community Center of Academic Excellence (IC-CAE).

CAST is the University of Arizona’s only college headquartered in Sierra Vista. Sierra Vista is located 75 miles southeast of the Tucson campus and is the home to Fort Huachuca and the Army’s Military Intelligence School. CAST enjoys a robust education and research partnership with city, county, state, and government partners to include multiple relationships with Fort Huachuca’s many education, test, and evaluation organizations.
CAST houses three unique departments across the college. Each department has its own exceptional set of programs with interdisciplinary work that crosses into each of the other departments. In addition to the college’s exceptional program, it boasts 9 excellent Undergraduate Certificates.

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Department Profile

The Applied Technology Department is a unique academic department preparing students for 21st Century careers applied computing, computer science, and artificial intelligence. These programs offer a wide variety of emphasis areas and certificates such as software development, information management, network operations, digital design, and cloud computing. All CAST departments collaborate to ensure students in all departments are immersed in both the technical and human aspects of living in a digital world. The faculty in the Department of Applied Technology must be able to work at the convergence of social science and technology to deliver rigorous, 4th Industrial Revolution applied education & research to our region and our world.

Applied Technology Department includes the Information Management, Software Development, Network Operations, Applied Artificial Intelligence, Cloud Computing and DevOps emphases. Each features unique, program-specific courses and learning opportunities. All are offered fully online with instructor-optioned video conferencing and face-to-face components.

SOFTWARE DEVELOPMENT EMPHASIS

Students in the Software Development emphasis learn a variety of software fundamentals, including object-oriented and system programming, UNIX, mobile app development, web programming and secure computing. Students learn by doing and create a variety of software applications under the guidance of faculty. The Software Development emphasis prepares students for a variety of positions, including Software and Web developer, Data Engineer, Mobile App Developer and Data Analyst positions.

NETWORK OPERATIONS EMPHASIS

Network Operations students develop the engineering and operational skills required to create, operate, and defend complex computing and information networks. The program curriculum includes theory, operational labs, modern network architecture, advanced routing and switching, systems administration, cloud
computing, network defense, wireless networking, and network security. Security is a prevailing theme across all of these areas of study. Network Operations graduates are prepared to take on a wide variety of IT-related positions in the private, public and government sectors.

**INFORMATION MANAGEMENT EMPHASIS**

The Information Management emphasis prepares students for careers in database administration, data analysis and engineering, web development and information architecture. Students learn the foundations of database systems, web design and programming, data visualization and analysis, as well as methods for visualizing, managing, and analyzing information.

**APPLIED ARTIFICIAL INTELLIGENCE (AI) EMPHASIS**

The Applied Artificial Intelligence (AI) emphasis focuses on AI algorithm development and applying AI to approach practical application problems. Master concepts and tools including machine learning, statistical analysis and data analytics in applied computing. This emphasis will prepare graduates to pursue careers such as AI Specialist/Developer, Data Engineer and Security Programmer.

**CLOUD COMPUTING EMPHASIS**

In the Cloud Computing emphasis, students will become familiar with the complicated infrastructure related to virtualization, Amazon Web Services and Microsoft Azure. The course outline provides a baseline on virtualization technologies, introduction to cloud technologies, as well as courses focusing on Amazon and Microsoft, with advanced discussion topics on cloud computing.

**DEVOPS EMPHASIS**

The DevOps emphasis uses the core of Applied Computing enabling students to develop a solid foundation in statistics, programming, networking, and cybersecurity. Courses focus on DevOps development and applying DevOps to approach practical application problems in secure computing. Students will study applying DevOps in a hands-on from an interdisciplinary approach with peers and faculty.

**MAVRX Lab**

The Mixed Augmented ViRtual eXtended (Reality) Laboratory (referred to as the MAVRX Lab, pronounced mavericks) is space in which we drive innovation through alternative reality modalities and research. It came about in early 2021 as an entity, though its physical location had existed for some time. MA{VR}X Lab is intended as a collaborate effort, meant to be interdisciplinary and reside in a place of praxis and innovation.
Commitment to Diversity and Inclusion

At the College of Applied Science and Technology (CAST), we believe it is crucial for the success of the College to have a diverse community comprised of individuals with different ideas, strengths, interests and backgrounds that embrace efforts towards diversity in experience, thought, and action.

We see great benefit in the diversity of our students, faculty and staff, as this helps us to better fulfill the wishes and multi-faceted demands of our students, faculty, staff, and communities, to provide a dynamic environment that yields academic excellence.

We strive to create an environment where all our students, faculty and staff are heard and appreciated – regardless of gender, nationality, ethnic origin, religion, world view, differently-abled abilities, age, sexual orientation or identity, or military affiliation. In action, we will work hard to create policies, programs, and opportunities that will ensure that diversity, equity, and inclusion thrive and are at the center of all that we do.

Our goal is to assist all CAST stakeholders by facilitating efforts that address critical issues related to diversity, equity and inclusion that result in positive outcomes where students, faculty and staff feel respected, are treated fairly, provided work-life balance, and have opportunities for professional development at CAST and throughout the University of Arizona community.

Our CAST values are (and should be) aligned with the values of the University as a whole.

- INTEGRITY – Be honest, respectful, and just.
- COMPASSION – Choose to care.
- EXPLORATION – Be insatiably curious.
- ADAPTATION – Stay open-minded and eager for what's next.
- INCLUSION – Harness the power of diversity.
- DETERMINATION – Bear Down.
At the University of Arizona, we value our inclusive climate because we know that diversity in experiences and perspectives is vital to advancing innovation, critical thinking, solving complex problems, and creating an inclusive academic community. As a Hispanic-serving institution and a Native American/Alaska Native-serving institution, we translate these values into action by seeking individuals who have experience and expertise working with diverse students, colleagues, and constituencies. Because we seek a workforce with a wide range of perspectives and experiences, we provide equal employment opportunities to applicants and employees without regard to race, color, religion, sex, national origin, age, disability, veteran status, sexual orientation, gender identity, or genetic information. As an Employer of National Service, we also welcome alumni of AmeriCorps, Peace Corps, and other national service programs and others who will help us advance our Inclusive Excellence initiative aimed at creating a university that values student, staff, and faculty engagement in addressing issues of diversity and inclusiveness.

Community Profile

Sierra Vista is located 75 miles southeast of the Tucson campus and is the home to Fort Huachuca and the Army’s Military Intelligence School. CAST enjoys a robust education and research partnership with city, county, state, and government partners to include multiple relationships with Fort Huachuca’s many education, test, and evaluation organizations. Sierra Vista sits at 4,600 feet at the foot of the Huachuca mountains and enjoys a moderate climate, extensive parks and trails, and a reputation as one of the best birding locations in the state. Here is a snapshot of our community. You can learn more at https://www.sierravistaaz.gov/.

Discover soaring mountain peaks under extraordinary skies, rich history, and room to roam. With 275 days of sunshine and a temperate climate, Sierra Vista is a year 'round destination for outdoor adventure, authentic history, and global cuisine.

With picturesque mountain views in all directions and a temperate four-season climate, Sierra Vista beckons visitors with clear skies, fascinating history, and world-class birding.

Surrounded by towering 10,000-foot mountains and known as the “Hummingbird Capital of the U.S.,” Sierra Vista is primed for outdoor exploration.
Sierra Vista’s climate and southern location make it a major stop for rare birds. Though you can spot resident and migrating birds year-round, the annual Christmas Bird Count regularly records one of the nation’s highest tallies of inland species.

While you’re outside, take in the scenic panoramas, rolling byways, and outdoor trails by bike, boot, or hoof. With a 360-degree mountain view, you’ll see why Sierra Vista (literally “mountain view” in Spanish) is so aptly named.

When the sun sets, a thick blanket of stars blaze across the dark night. These views have paved the way for Sierra Vista as a center for amateur astronomy; the city has more than a dozen amateur observatories as well as the Patterson Observatory at University of Arizona’s Sierra Vista Campus, which offers public viewing.