Executive Director

Leadership Profile

July 2020
Executive Summary

The International Computer Science Institute (ICSI) seeks an experienced and collaborative administrative leader with significant management and operational expertise to serve as its next executive director.

ICSI, located in Berkeley, California, is a leading center for research in computer science and one of the few independent, nonprofit research institutes focused on computer sciences in the United States. ICSI provides a vibrant, international environment for leading academic and industrial research. There are approximately eighty scientists in residence at ICSI including principal investigators, postdoctoral associates and visiting researchers. ICSI's primary funding comes from U.S. federal agencies and, since its inception in 1988, the Institute has leveraged its close affiliation with the University of California, Berkeley (UC Berkeley) and an ongoing international visiting program to augment its research efforts.

Current research projects span from the development of a more sophisticated, machine-readable lexicon to support the next generation of human-machine interaction technologies to security analysis of the use of data by a range of actors across the Internet. This security research, part of the ICSI's "Usable Security and Privacy Projects" group, was recently featured on NBC News. Additionally, the work of ICSI researchers is frequently commercialized with two recent startup examples including Corelight and AppCensus.

The executive director serves as the administrative head of the Institute, reporting directly to the Board of Trustees and working closely with ICSI's chief scientist. The executive director is responsible for overseeing all day-to-day Institute functions including the sponsored projects office, budgeting and financial planning, human resources and facilities. The executive director works in close coordination with the chief scientist to cultivate the success of the Institute and its investigators, build community and continuity, support strategic opportunities and further develop ICSI's international activity.

In the executive director, ICSI seeks a hands-on administrator with finely honed organizational management acumen and experience to lead and motivate an effective administrative leadership team as well as cross-functional teams that include administrative and scientific staff. This individual should be an exceptional communicator and translator of ideas, excel in relationship building and have confidence as a strong fiscal steward, particularly in the context of working with federal agencies. The ideal candidate will have a bachelor's degree (a master's degree or doctorate is preferred) and five years of research management or equivalent experience.

Applications, nominations and inquiries are invited. For information on how to apply or to submit nominations, please refer to the section, “Procedure for Candidacy” at the end of this document.
Role of the Executive Director

The executive director serves as the administrative head of the Institute, reporting directly to the Board of Trustees and working closely with ICSI’s chief scientist. Partnering with ICSI’s stakeholders, the executive director will be expected to:

- Serve as primary liaison between ICSI and the Board of Trustees.
- Support research directors, senior researchers, principal investigators and staff in developing, implementing and managing ICSI programs and operations.
- In conjunction with the chief scientist, develop strategies for addressing ICSI’s long-term future, including new funding models, a stronger relationship with UC Berkeley, and creative ways to further ICSI’s mission.
- Ensure the organization’s fiscal integrity and that the general management and conduct of ICSI activities are consistently carried out within the framework of the mission of the organization.
- Oversee Institute-wide policies and procedures to ensure ICSI researchers comply with contract obligations related to IP and sponsor agreements.
- Establish and maintain relationships with UC Berkeley administrative entities to proactively address and solve issues.
- Work with ICSI team members to foster strong morale and a culture of community within the institute, including healthy cultural norms that ensure a team-oriented approach.
- Develop and implement strategies, programs and processes that promote, attract and retain highly qualified and skilled principal investigators and staff.
- Manage a team of staff managers in sponsored projects, finance, operations and human resources providing high-level directives and oversight to fulfill the mission of the ICSI.
- Develop and nurture an inclusive and diverse culture and environment of professionalism, excellence, compliance, transparency, commitment and accountability among all staff.
Opportunities and Expectations for Leadership

The following represent some of the immediate priorities the executive director will address:

Cultivate the success of the Institute and its investigators

- Execute ICSI's mission and vision.
- Develop new, creative and diversified funding models that ensure ICSI’s long-term success.
- Support PIs by helping them overcome logistical hurdles to engage in creative work.

Build community and continuity within the Institute

- Create and foster the sense that ICSI is a community, especially with PIs, rather than a financial vehicle for standalone projects.
- Bring ICSI together, act as a liaison as needed between groups, share news and create scaffolding to help new ideas and connections take root.
- Develop an ethos that prioritizes the collective advancement of the Institute.

Capitalize on new opportunities

- Develop an endowment that is foreseen taking shape in next two to three years.
- Assist in identifying and supporting ways to further strengthen ICSI's affiliation with UC Berkeley.
- Support the chief scientist as they identify new opportunities and relationships for ICSI; enable the success of new opportunities.

Support the further development of ICSI's international activity

- Advance international engagement with government and industry across Europe, Japan, China, Israel and other places where opportunities might arise.
- Build on the two current international programs and ICSI’s long history of international relationships and research, critically assessing what form these engagements should take going forward.
- Ensure that logistics for international exchange are addressed successfully.
- Promote a spirit of international relations with cultural understanding.
Professional Qualifications and Personal Qualities

ICSI seeks a knowledgeable, experienced and collaborative leader to support the next phase of the Institute’s development. A bachelor's degree is required for this role; an advanced degree (master's or doctorate) is preferred. The selected candidate will also have five or more years of experience in research management or equivalent experience.

In addition, ICSI seeks an executive director with many of the following qualities and qualifications:

Organizational leadership

- **Strategic partnership building capability.** The ability to partner with the ICSI Board of Trustees and chief scientist to advance the Institute in support of the future of computer science and closely connected fields.

- **Appreciation of disciplinary diversity.** Ability to successfully lead in a scientific environment while engaging and supporting scholars from diverse disciplines. Understand the ethos of academia, which is the backdrop of the Institute and an intellectual curiosity that underpins effective problem solving.

- **Collaborative leadership style.** The inclination to seek stakeholder input, the emotional intelligence and interpersonal skills to ensure broad-based support for decisions, an ability to build consensus and the willingness and ability to take decisive and sometimes difficult action when necessary. A strong orientation towards service as well as leadership.

- **Demonstrable commitment to diversity and inclusion.** Evidence of engagement and leadership in advancing institutional diversity, equity and inclusion in prior roles. Exemplary, demonstrable skill in communicating and collaborating with diverse groups.

- **Impeccable character.** Excellent judgment, high integrity and an enterprising spirit. Tenacity and energy to persevere when encountering obstacles.

Managerial skills

- **Managerial and operational acumen.** Proven experience successfully managing personnel and programs in a complex organization. Past experience in building, leading and motivating an effective leadership team as well as cross-functional teams that include administrative and scientific staff. A strong capacity for implementing and operationalizing new plans and initiatives through broad buy-in and investment of others.

- **Strong communication skills.** Exceptional ability to connect with the ICSI’s staff and researchers as well as key funding agencies, stakeholders and external audiences. Ability to articulate the Institute’s story and serve as a translator for both internal and external constituents.

- **Relationship building ability.** Excellent relationship management skills and the ability to navigate complex institutional environments. Experience stewarding relationships with business, government and other external funders, partners and organizations; leveraging institutional excellence into
concrete, positive institutional outcomes. Experience supporting a transparent, nurturing and positive culture.

- **Operational experience.** Prior experience with operations, finance and/or program development. In-depth knowledge of federal funding and regulations, first-hand experience working with federal contracts and an understanding of liability in relation to funding sources in order to best mitigate risk.

- **Fiscal acumen.** Successful experience with budget management, financial planning and strategic resource allocation particularly in the context of working with federal agencies.
About the International Computer Science Institute

The International Computer Science Institute is a leading independent, nonprofit center for research in computer science.

With its unique focus on international collaboration and through its established international programs, ICSI brings together scientists from all over the world and at all stages of their career to work with established staff researchers, UC Berkeley professors and their networks of academic, government and industrial partners.

Current areas of research include computer networking, speech and language processing, brain networks, computer vision, audio and multimedia analysis, usable security and privacy, big data, artificial intelligence, 5G and cybermanufacturing. Algorithm development - with application to genomics, video and speech processing, Internet routing and measurement and machine learning - is one of ICSI's particular strengths.

Additionally, the work of ICSI researchers is frequently commercialized with two recent startup examples including Corelight and AppCensus:

- **Corelight** brought the open-source "Zeek" network monitoring system to market, providing rich, detailed information about enterprise network activity, primarily to facilitate detecting and analyzing attacks. Experiencing rapid growth, Corelight is fueled by more than $80M in venture funding.

- **AppCensus** performs automated dynamic analysis of mobile apps to audit their privacy behaviors. Combining a bespoke fork of the Android OS that tracks all access to sensitive user data with state of the art network monitoring tools, AppCensus monitors how third-party apps access sensitive user data and then with whom they share it. AppCensus provides tools and data to enterprise customers so that they can determine their apps' compliance with various privacy regulations, whereas regulators, journalists and other watchdog groups rely on AppCensus for investigations into bad actors in the mobile app ecosystem.

Since its inauguration in 1988, ICSI has maintained an affiliation with UC Berkeley. Many of ICSI's scientists hold joint faculty appointments at the university, teaching graduate and undergraduate courses and supervising students who pursue their doctoral thesis research at ICSI. ICSI's offices are located in downtown Berkeley, adjacent to the UC Berkeley campus and in close proximity to San Francisco and the Silicon Valley.

Administration and Finance

The executive director, in conjunction with the chief scientist, Scott Shenker, and the ICSI Leadership Council, manages and provide oversight of the daily operations and research support services. The Board of Trustees, led by Chairman C. Raymond Perrault, provides strategic oversight of the operation of the Institute and ensures that ICSI continues to meet the financial and legal requirements for operation as a non-profit corporation in the State of California. A team of three full time staff – with more than 45 years of collective experience at ICSI – manage human resources, sponsored projects and finance and report directly to the executive director. An organizational chart is available in Appendix A.
ICSI's primary funding comes from U.S. federal agencies and, since its inception in 1988, the Institute has leveraged its close affiliation with the UC Berkeley and an ongoing international visiting program to augment its research efforts. ICSI's budget is $7 million, of which $3 million supports operations. Additional financial position information is available [here](#).

**ICSI Highlights**

- Start-ups founded by ICSI PIs and/or based on technology developed at ICSI include: Nefeli (Sylvia Ratnasamy, Scott Shenker), Nicira (Scott Shenker), Corelight (Vern Paxson, Robin Sommer), AppCensus (Serge Egelman), Intact Solutions (Vadim Shapiro), Syfive (Krste Asonovic)

- Technology developed at ICSI: Zeek (formerly Bro), AppCensus, Lumen/Haystack app, XORP, Ring Array Processor (RAP)

- Current large scale projects at ICSI:
  - *The Science of Privacy: Implications for Data Usage*. ICSI is home to one of six NSA-funded labs focused on privacy and security research. PI Serge Egelman, head of ICSI’s Usable Security and Privacy group and a founder of the startup AppCensus, leads the lab.
  
  - *Robust, Efficient, and Local Machine Learning Primitives* is a DARPA and AFRL funded project led by PI Michael Mahoney, head of ICSI’s Big Data research group. In this project, ICSI researchers are developing, implementing and applying a suite of theoretically-principled algorithmic and statistical primitives that are easy for the non-expert to use and that map cleanly to the intuition and understanding that domain experts have about their data and the processes generating their data.

- In addition to numerous smaller NSF grants, ICSI currently has six NSF large grants:
  
  - *Internet-Wide Vulnerability Measurement, Assessment, and Notification* is a collaborative project and ICSI’s effort is led by PI Mark Allman: Vulnerable software costs the U.S. economy more than $180 billion a year, and large-scale, remotely exploitable vulnerabilities affecting millions of Internet hosts have become a regular occurrence. This project seeks to reduce the impact of software vulnerabilities in Internet-connected systems by developing measurement-driven techniques for global vulnerability detection, assessment and mitigation.
  
  - *Shining Light on Non-Public Data Flows* led by PI Nicholas Weaver: This project looks into the usage and collection of data by programs that operate behind the scenes. The collected data and its use by a network of sellers, brokers and marketers represents a direct privacy threat as it can be used for marketing, profiling, crime, or government surveillance, and yet consumers have little knowledge about it and no legal means to access the data.
  
  - *Towards a Science of Censorship Resistance* led by PI Sadia Afroz: This research includes the assessment of historical trends in censorship and censorship research; identification of criteria to consider when assessing circumvention approaches; consideration of theoretical models of the censorship/evader conflict as a means for illuminating fundamental abstractions; empirical grounding rooted in extensive measurements of censorship mechanisms and policies; developing
frameworks to automate testing of circumvention technologies, probing censorship systems for structural weaknesses and discovering the onset of new forms of blocking; and deploying new technologies we develop at scale in order to “close the loop” on our scientific methodology and empirically observe the full gamut of issues that come into play in the censor/evader arms race.

- **Lumen Privacy Monitor** (formerly known as Haystack), developed by PI Narseo Vallina-Rodriguez: The team is studying data collected from the app to understand the operation, performance and personal information flow---including online third-party services collecting this information---at unprecedented scales with real user stimuli. Specifically, Lumen’s comprehensive vantage point facilitates four research thrusts: network performance analysis, mobile traffic characterization, analysis of the mobile tracking ecosystem and mobile networking security assessment.

- **Effective and Economical Protection for High-Performance Research and Education Networks** led by PI Johanna Amann: As scientific research requires free exchange of information and ideas among collaborators world-wide, scientists depend critically on full and open access to the Internet. Yet in today’s world, such open access also exposes sites to incessant network attacks. Some of the most powerful networks today remain particularly hard to defend: for the 100G environments and backbones that facilitate modern data-intensive sciences, classic inline firewalls remain infeasible options. This project is developing effective and economical network protection for critical high-performance science infrastructure that exploits their specific characteristics and constraints.

- **Co-Design of Network, Storage, and Computation Fabrics for Disaggregated Datacenters** led by PI Sylvia Ratnasamy: Traditional datacenters are built using servers, each of which tightly integrates a small amount of CPU, memory and storage onto a single motherboard. The slowdown of Moore's Law has led to surfacing of several fundamental limitations of such server-centric architectures (e.g, the memory-capacity wall making CPU-memory co-location unsustainable). As a result, a new computing paradigm is emerging --- a disaggregated datacenter architecture, where each resource type is built as a standalone "blade" and a network fabric interconnects the resource blades within and across datacenter racks. PI Sylvia Ratnasamy has a collaboration with Intel that has spanned multiple years. Many ICSI PIs have also received grants and gifts from industry partners such as Google, Comcast, Cisco and others.

- **Visiting programs**

  In addition to the Fulbright-Italy and the German DAAD visitor programs (425+ German postdocs have visited ICSI since its inception), ICSI has had research exchange agreements with the governments of Brazil, Finland, Italy, Spain, Singapore and Switzerland.

- **Recent press highlights**

  - [Vanity Fair](#) feature on grad student Bill Marczak and researcher Nicholas Weaver
  - Serge Egelman interviews on [NBC with Lester Holt](#), in [NY Times](#), and in [CNET](#)
  - Nicholas Weaver featured in [Ars Technica](#)
  - [More press mentions](#)
Additional Information of Interest

- Industry sponsored research
- Highlights from ICSI’s first 20 years
- Links to presentations from ICSI’s 30th Anniversary event

Leadership

C. Raymond Perrault, Ph.D., Chairman, ICSI Board of Trustees

Ray Perrault is Distinguished Computer Scientist in SRI International’s Artificial Intelligence Center, of which he was Director from 1987 to 2017. His main research interests are in natural language processing and speech act theory. From 2002 to 2009, he was co-Principal Investigator of the CALO Project, a large, multi-institutional, DARPA-funded project whose objective was to build an intelligent office assistant that learns through interaction with its user and the world. Several technologies developed on that project (e.g. Siri) have been transitioned to commercial and military applications. He has been President of the Association for Computational Linguistics, and IJCAI Inc; and co-Editor-in-Chief of Artificial Intelligence Journal. He is Fellow of AAAI and AAAS and received IJCAI’s Donald E Walker Distinguished Service Award.

Scott Shenker, Ph.D., Chief Scientist

Scott Shenker is a professor in the Electrical Engineering and Computer Sciences Department at UC Berkeley. He is also the chief scientist and the leader of the New Initiatives Group at ICSI, where he was a founding member of the ICSI Center for Internet Research. He received his doctorate in physics in 1983 from the University of Chicago, and was later awarded an honorary doctorate from the same university in recognition of his contributions to Internet architecture. He has received both the SIGCOMM and IEEE Internet awards. Along with Martin Casado and Nick McKeown, he has been a leader in the movement toward Software-Defined Networking. In terms of commercial activities, he was co-founder (with Casado and McKeown), founding CEO and chief scientist of Nicira.
Berkeley, California

Located on the east shore of the San Francisco Bay across from the cosmopolitan and stunning city of San Francisco, Berkeley is considered one of the most socially progressive cities in the United States, famous around the world as a center for academic achievement, scientific exploration, free speech and the arts. Home to over 112,000 residents, nearly 40,000 of whom are attending school; Berkeley boasts one of the best-educated populations in the country. The high value residents place on education translates to strong support for Berkeley’s public and professional schools.

UC Berkeley is the largest employer in the city, followed by Lawrence Berkeley National Laboratory, Alta Bates Summit Medical Center and the City of Berkeley.

The city leads the East Bay in the creation and support of music, theatre and dance, and the supply of cultural opportunities makes Berkeley a destination for music, theatre and art fans from all over the Bay Area. Berkeley is home to 130 arts and cultural organizations, including two arts districts. The Berkeley Civic Arts Program supports this vibrant arts ecosystem.

Berkeley’s citizens are very civically involved and invested in the well-being of their community. More than 35 boards and commissions allow residents to advise City Council on everything from aging to zoning. Public transportation is robust, every Berkeley resident lives within a quarter mile of a bus stop, and there are more than 36 miles of designated bike routes through the city.

Berkeley enjoys more than 300 days of sun each year, allowing residents and visitors to attend festivals, farmer’s markets and enjoy the more than 80 acres of state park within city limits. Berkeley also borders the 2,077-acre Tilden Park, and is in close proximity to many other state parks.
Procedure for Candidacy

All applications, nominations and inquiries are invited. Applications should include, as separate documents, a CV or resume and a letter of interest addressing the themes in this profile.

WittKieffer is assisting International Computer Science Institute in this search. For fullest consideration, candidate materials should be received by September 4, 2020.

Submit application materials to WittKieffer’s candidate portal. Direct confidential nominations and inquiries to:

Suzanne Teer, Greg Duyck and Jen Meyers Pickard, Ph.D.
ICSIExecutiveDirector@wittkieffer.com

ICSI is an equal opportunity employer and makes employment decisions on the basis of merit. The Institute is committed to having the best available persons in every job. To this end, ICSI prohibits discrimination based on race, color, creed, gender (including gender identity and gender expression), religion (all aspects of religious beliefs, observance or practice, including religious dress or grooming practices), marital status, registered domestic partner status, age, national origin or ancestry, physical or mental disability, medical condition (including cancer or a record or history of cancer, and genetic characteristics), sex (including pregnancy, childbirth, breastfeeding or related medical condition), genetic information, sexual orientation, military and veteran status, or any other consideration made unlawful by federal, state, or local laws. ICSI also prohibits discrimination based on the perception that anyone has any of those characteristics, or is associated with a person who has or is perceived as having any of those characteristics.
Appendix