



National Science Foundation
4201 Wilson Boulevard
Arlington, Virginia 22230



NSF 14-066

Dear Colleague Letter - I/UCRCs in Areas Relevant to the Forensic Sciences

May 7, 2014

Dear Colleagues,

The National Science Foundation (NSF) and the National Institute of Justice (NIJ) have partnered as co-sponsors to welcome proposals for establishment of Industry/University Cooperative Research Centers (I/UCRCs; see NSF 13-594; http://www.nsf.gov/publications/pub_summ.jsp?org=ENG&ods_key=nsf13594) in areas relevant to the forensic sciences. With permission from the Principal Investigator (PI), NIJ will share in evaluation of forensics-related I/UCRC proposals, and may co-sponsor successful proposals.

We envision this mechanism as a means to convene experts with knowledge of the needs and challenges of forensics, vendors and developers of state-of-the-art tools, and academic researchers at the frontiers of disciplines with applicability to the forensic sciences, to address the broad challenges outlined in a recent Foundation-wide "Dear Colleague Letter" (NSF 13-120; <http://www.nsf.gov/pubs/2013/nsf13120/nsf13120.jsp>). This letter supplements the earlier one, which remains in effect. Current I/UCRCs seeing potential forensics-related links to their research agendas may wish to discuss those with their cognizant NSF program officer.

The I/UCRC program develops long-term partnerships among industry, academia, and government. The centers are catalyzed by a small investment from NSF; their research is primarily funded by center members, with NSF playing a supporting role in the development and evolution of the center. These sponsorship roles can be shared by NSF and NIJ for forensics-relevant I/UCRCs, providing additional valuable perspective.

Industrial and other institutions, including local, state, and Federal agencies and private philanthropic foundations, may be members of I/UCRCs. Each center is established to conduct pre-competitive research (i.e., research for which members agree *a priori* to share outcomes) that is of interest to both the members and the center faculty. An I/UCRC contributes to the nation's research infrastructure base and enhances the intellectual capacity of the engineering and science workforce through the integration of research and education. As appropriate, an I/UCRC can use international collaborations to advance these goals within the global context. Various spin-offs, including proprietary research collaborations, leverage center portfolios.

The I/UCRC program has supported 170 centers since its inception in 1979; 67 of these are currently supported, and many others have "graduated" from the program to become independently self-sustaining. While these centers cover a range of topics (see the I/UCRC website, at <http://www.nsf.gov/eng/iip/iucrc/>), none has specifically focused on forensic science research. It is the desire of NSF to bring this powerful networking and collaboration tool to bear on the significant fundamental research challenges facing the forensic science community. While NIJ is interested in co-sponsorship, the additional Federal agencies listed at the conclusion of this letter have expressed interest in potential membership in forensics-related I/UCRC(s). These agencies have a direct interest in strengthening the forensic sciences and would be pleased to explore partnership opportunities with a

broad range of stakeholders through this unique model.

As described in the [I/UCRC solicitation](#) and a monograph describing the model (*Managing the Industry/University Cooperative Research Center: A Guide for Directors and Other Stakeholders*, D.O. Gray and S.G. Walters, Eds.; Battelle Press: Columbus, OH, 1998; available on-line at <http://www.ncsu.edu/iucrc/PurpleBook.htm>), each center supports pre-competitive, fundamental, but targeted research selected by center management in consultation with an advisory board comprised of voting representatives of contributing companies, agencies, and/or foundations.¹ Projects often entail multidisciplinary collaborations not only among academics at one or more universities, but between these researchers and contributing member scientists and engineers. Hence, a forensics I/UCRC with Federal agency members could offer a unique opportunity for academic participants to develop and test their ideas in collaboration with and in the milieu of a practicing crime laboratory. It is anticipated that these interactions will facilitate progress not only toward advancing the state-of-the-art in acquiring, preserving, analyzing and interpreting evidence, but also toward enhancing the scientific grounding of evidence-based decisions. A third benefit would be workforce development in forensic science, a field with increasing academic and popular public interest.

Proposals are welcome on a range of topics relevant to the forensic sciences. Examples of center foci that would be considered relevant and of interest include but are not limited to: human judgment and decision making (including the potential role and mitigation of cognitive bias and human error in the collection, processing, analysis and interpretation of evidence and reporting of results); new principles and approaches for remote and field-based chemical measurement and imaging; and pattern-based analysis. Proposals submitted in response to this letter should adhere to the terms and guidance in the [I/UCRC solicitation](#), including requirements for a letter of intent. The title should begin with the phrase "Forensics I/UCRC:" followed by a brief descriptor or center title that conveys the main focus or foci. Investigators are urged to read and carefully follow the guidance in the solicitation, and to consult the I/UCRC program staff listed therein prior to submission. Relevant topics may engage disciplines in any NSF directorate as well as at other agencies. Questions addressing NSF support of fundamental research relevant to forensics challenges may be addressed by e-mail to forensic-science-inquiries@nsf.gov.

Federal agencies interested in potentially collaborating as members of proposed centers include:

Department of Defense:

Defense Forensic Science Center (Rick Tontarski; Richard.e.tontarski.civ@mail.mil)

Defense Forensics and Biometrics Agency (Rick Tontarski; Richard.e.tontarski.civ@mail.mil)

Department of Homeland Security (Christopher Miles; Christopher.Miles@dhs.gov)

Department of Justice:

Bureau of Alcohol, Tobacco, Firearms, & Explosives (Greg Czarnopys; greg.czarnopys@atf.gov)

Drug Enforcement Administration (Nelson Santos; Nelson.A.Santos@usdoj.gov)

Federal Bureau of Investigation Laboratory (Marc LeBeau; marc.lebeau@ic.fbi.gov)

National Institute for Standards and Technology (Richard Cavanagh; richard.cavanagh@nist.gov)



¹ Any state or Federal agency except NSF can generally be a voting member of an I/UCRC, as can for-profit companies and other organizations; see the solicitation for details. NIJ envisions non-voting co-

sponsorship with NSF rather than voting membership.