



Physical Sciences & Social Sciences

Call for Proposals

U.S.-Netherlands PRICE Privacy Research in Cyber Environment

2016 Funding Round

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1 Introduction

1.1 Background

In this brochure you will find information about the submission of joint research proposals for privacy research in the cyber domain, for Netherlands-based researchers to collaborate with U.S.-based researchers.

In fall 2015, the U.S. National Science Foundation (NSF) and the Netherlands Organisation for Scientific Research (NWO) jointly funded a workshop between U.S. and Dutch researchers¹ to help build long-term research collaboration among scientists from the two countries who are studying technical and social aspects of privacy. This setup creates opportunities for trans-Atlantic collaboration both mono disciplinary and multidisciplinary, i.e. combinations like technical-technical, social-social or social-technical research are possible. The research topics formulated during the workshop (refer to Annex 6.1) are a non-exclusive basis for collaborative research in privacy.

Netherlands and U.S.-based researchers who would like to start a joint research project within the framework of this programme should apply.

A two-step approach has to be followed. The first step consists of submitting a jointly written two page research summary, the second step is the submission of a full proposal.

Due to differences in administrative processes between NWO and NSF there are two parallel but separate channels for submission. Note however that despite small differences in submission guidelines or templates, both summary and full proposal should be jointly written by a Netherlands-based researcher and a U.S.-based researcher. The Netherlands-based researcher is responsible for submission through the NWO-channel, while the U.S.-based researcher is expected to submit the same proposal through the NSF-channel.

This brochure is the guiding document for Netherlands-based researchers. U.S.-based researchers should follow the instructions explained on the NSF website².

1.2 Available budget

The maximum total budget available for funding the Netherlands-based researchers participating in selected joint research projects is M€ 1,25. The NSF has a similar amount available to fund the U.S.-based researchers selected under this call. Only proposals that are assessed as excellent or very good will be eligible for funding.

1.3 Validity call for proposals

This call for proposals is valid until the deadline date April 1st 2016, 14:00 CET. That means **full proposals** must be submitted before this deadline.

PLEASE NOTE: The closing date for the compulsory two page **research summary** is January 15th , 2016, 14:00 CET.

¹ For the workshop report refer to <http://www.heinz.cmu.edu/~acquisti/NSFNWO/index.htm>.

² http://www.nsf.gov/publications/pub_summ.jsp?ods_key=nsf16027

2 Aim

With this programme NWO (physical and social sciences) and NSF expect to fund a small number of grants to enable Netherlands-based researchers and U.S.-based researchers to collaborate with each other and to help build long-term research collaboration among scientists from the two countries. Given the interdisciplinary nature of this type of research, scientists skilled in areas computer science, legal, ethical, social, and economic aspects of privacy are invited to submit proposals.

Frame of reference for NWO is the [National Cyber Security Research Agenda](#) (NCSRA II), in particular themes 1 and 5 (*identity, privacy and trust management* and *data, policy and access management*). Frame of reference for NSF is their [Secure and Trustworthy Cyberspace](#) (SaTC) program. Research proposals submitted in this call should be aligned to the research themes mentioned within these two broad documents. Furthermore the research topics formulated during the collaborative workshop (refer to Annex 6.1) can form an inspiration for research proposals in this call.

Netherlands-based and U.S.-based researchers interested in submitting a proposal within the scope of this PRICE programme are required as a first step to submit a jointly written two-page research summary or description of the proposed joint research via the NSF and NWO channels, using a template in which most fields are common but, when required, also adhering to organization-specific rules and processes. The second step is submitting a full proposal.

3 Guidelines for applicants

3.1 Who can apply

Applications can be submitted by full, associate and assistant professors and other researchers with a comparable appointment if they:

- hold an appointment/a position at a Dutch university or a research institution acknowledged by NWO³ and
- possess at least a Master's degree or a comparable qualification.
- have a contract (appointment) for at least the duration of the anticipated research project for which the grant is being applied for.

In the U.S. the *Principal Investigator* (PI) is the person who takes direct responsibility for completion of a funded project, directs the research and reports directly to the funding agency. In the Netherlands we refer to the *Main Applicant* as the person who takes direct responsibility for completion of a research project once the funding agency has granted the proposed research project. Because of the trans-Atlantic nature of this call in the remainder of this document we will use the term PI as a synonym of Main Applicant.

Netherlands-based PIs are only allowed to submit one application to NWO within the context of this PRICE call. Each applicant however is allowed to create a link with a complementary application of another applicant in order to strengthen their proposal. The optional link between two complementary applications should be mentioned and explained in the proposals by both applicants. However, applicants should realize that each research proposal is assessed on its own merit.

Applicants are allowed more than one co-applicant for their application. One of the co-applicants should be the U.S. based project partner and should be eligible for funding in the NSF EAGER program⁴. The parallel submission through the NSF channel by the U.S.-based PI is compulsory.

3.2 What can be applied for

The maximum NWO-funding for the Dutch side of a joint research project is k€ 250. Through the Dutch NWO channel applicants can request one Netherlands based research position (PhDs or postdocs) and k€ 40 in additional funding for the benefit of the research proposal. (Likewise through the U.S. NSF channel a second research position can be applied for.) The NWO funding can be used for:

- PhDs or two or three-year postdocs on the basis of a full-time position. An individual bench fee (€ 5.000) will be allocated to each PhD or postdoc to partly cover expenses like travel costs and the costs of printing a thesis (the bench fee is not part of the additional funding);
- equipment/software for the project if costs are above € 5.000. The equipment must be specifically intended for the project described in the proposal. The requested equipment/ software should benefit the Dutch applicant and his/her local research team. Costs for software/equipment for

³ See NWO Regulation on Granting <http://www.nwo.nl/en/documents/nwo/legal/nwo-regulation-on-granting-may-2011>

⁴ Early Concept Grants for Exploratory Research: http://www.nsf.gov/pubs/policydocs/pappguide/nsf09_1/gpg_2.jsp

the U.S. based applicant cannot be applied for through NWO. The relationship with the project and the **need** for the equipment should be clearly **justified**. Equipment/software valued below € 5.000 is considered to belong to the infrastructure of the research institution and cannot be applied for;

- travel costs for the purpose of the requested research positions in so far as these are not covered by the bench fee. The requested travel costs should benefit the Dutch applicant and his/her local research team. Travel costs for the U.S. based applicant should be applied for by the NSF. The **need** to travel for the project, in particular for the research positions requested, should be clearly **justified**;
- other activities in the framework of the project, such as non-scientific personnel, travel and accommodation costs for guest researchers and costs for symposia, for example in relation to the PhD graduation. These should also be clearly **justified**.

Funding may not be requested for tenured staff, student assistants, cost of overhead, general laboratory equipment (this also includes general software and hardware such as computers and laptops for which it may be expected that these belong to the standard equipment for a scientific position), maintenance and insurance costs and publication costs.

Personnel costs are fundable in accordance with the most recent version of "Agreement for Funding Scientific Research", which has been signed by NWO, VSNU, NFU, ZonMW, KNAW and VFI. The agreement and the maximum payments for personnel costs can be found at <http://www.nwo.nl/akkoordbekostiging> and www.nwo.nl/salaristabellen.

3.3 When can applications be submitted

A summary of the joint research proposal must be submitted (i.e. is compulsory) before the deadline on **Friday 15 January 2016** at 14.00 hours CET. Summaries submitted after the deadline will not be included in the procedure.

The deadline for the submission of full proposals is **Friday 1 April 2016** at 14.00 hours CET. Proposals submitted after the deadline will not be included in the procedure.

3.4 Drawing up and submitting an application/summary

Applications can only be submitted to NWO via the electronic application system ISAAC. Applications not submitted via ISAAC will not be admitted to the selection procedure. A Netherlands-based PI is obliged to submit his/her application via his/her own ISAAC account.

If the Netherlands-based PI does not yet have an ISAAC account, this should be created at least one day before the submission. Then any possible registration problems can still be solved on time. If the Netherlands-based PI already has an ISAAC account then he/she does not need to create a new account to submit a new application.

Research Summary

- i. Each summary/proposal must include a Netherlands-based PI and a U.S.-based PI.
- ii. There is a limit of one joint proposal per PI. In other words a PI cannot submit two or more proposals through either the NWO or the NSF-channel.

- iii. U.S.-based PIs should send their summaries via e-mail to the cognizant program directors, including the name(s) and biographical sketch(es) of the U.S.-based principal investigator(s) and their intended Dutch collaborator(s), the proposed collaboration plan and a list of references.
- iv. Netherlands-based PIs submit their summaries through the NWO web portal (<https://www.isaac.nwo.nl/>), including the name(s) of the Netherlands-based PI(s) and their intended U.S. collaborator(s), the proposed collaboration plan and a list of references.

The research summary consists of several parts: a factsheet, the two page research summary (the common part between the U.S. based and Netherlands based PI) and the list with possible referees (see also Section 4.1). The following instructions apply to these parts:

- The factsheet can be completed directly in ISAAC, the electronic application system of NWO. When you fill in the factsheet you can only make use of the ASCII symbols ('plain text'). Therefore (structural) formulas, illustrations, italics et cetera cannot be used in the factsheet. These can of course be used in the summary text itself.
- The application form can be found on the NWO programme website.
- Possible referees can be provided to NWO directly through the ISAAC grant application system.
- The actual joint application (two page summary and full proposal) should be written in English (like any other information to be provided) and must be added to the ISAAC factsheet as a PDF file.

In the assessment preparation the compulsory two page summary of the research plays an important role. The summaries will be helpful in determining the composition of the assessment committee with the right expertise to assess the expected full proposals.

In accordance with the agreement between NWO and the VSNU, PIs should inform their institution about the submission. That means the applicant should send a copy of the application to the scientific director or deacon of his/her institution or faculty. For each proposal submitted, NWO will assume that the university or the institute, the applicants works for, accepts the granting conditions of this programme.

3.5 Submitting an application/full proposal

Applications can only be submitted to NWO via the electronic application system ISAAC. Applications not submitted via ISAAC will not be admitted to the selection procedure. A Netherlands-based PI is obliged to submit his/her application via his/her own ISAAC account.

If the Netherlands-based PI does not yet have an ISAAC account, this should be created at least one day before the submission. Then any possible registration problems can still be solved on time. If the Netherlands-based PI already has an ISAAC account then he/she does not need to create a new account to submit a new application.

In order to submit your full proposal in ISAAC, you will be requested to fill in some additional (administrative) information. Please reserve a sufficient amount of time when submitting your proposal, to avoid running against the deadline.

Additional information in the form of annexes may **not** be added to the full proposal (for example, extra results, manuscripts, additional support letters etc.).

3.6 Specific conditions

The specific conditions applicable to the granting of a project in this call are the following:

The joint application (two page summary and full proposal) should be submitted both through the NWO channel (by the Netherlands based applicant) as well as through the NSF channel (by the U.S. based applicant). U.S. based applicants should follow the instructions as explained on the NSF website (See http://www.nsf.gov/publications/pub_summ.jsp?ods_key=nsf16027). NWO is responsible for the granting of the Dutch research endeavors. NSF is responsible for the granting of the U.S. based research endeavors.

Applications should be eligible for funding by both NWO and NSF in order to be considered for funding in this call.

If an application is granted, the research should start within nine months after the applicant is informed about this decision. If this condition is not met, NWO and NSF reserve the right to take appropriate measures.

A PRICE-grant from NWO has a maximum validity of four years. The NSF side provides only two years of funding. If the research exceeds the four year period, NWO EW and NSF reserve the right to take appropriate measures.

The NWO Regulation on Granting applies insofar as this does not deviate from the specific conditions and this call for proposals.

4 Assessment procedure

4.1 Procedure

General

The NWO Code of Conduct on Conflicts of Interest applies to all persons and relevant NWO personnel involved in the assessment and/or decision-making processes. For further information see: <http://www.nwo.nl/en/documents/nwo/legal/nwo-code-of-conduct-on-conflicts-of-interest>.

The NWO Regulation on Granting includes a clause that states that all research funded by NWO must be realised in accordance with the nationally and internationally accepted standards for scientific conduct as stated in the Netherlands Code of Conduct for Scientific Practice 2012 (VSNU). Further information about the NWO policy on scientific integrity can be found on the website: <http://www.nwo.nl/en/policies/scientific+integrity+policy>.

NWO gives all full proposals a qualification. The qualification will be made known to the researcher in the same letter in which he or she is also informed about NWO's decision whether or not to award funding. For further information about the qualifications please see: <http://www.nwo.nl/en/funding/funding+process+explained/nwo+qualification+system>.

Parallel summary submission

The U.S.-based PI is responsible for submitting (e-mailing) the mandatory two page joint summary to the responsible NSF program director. NSF assesses the appropriateness of the proposed research as described in their Dear Colleague Letter.

The Netherlands-based PI is responsible for submitting the mandatory two page joint summary to NWO via the electronic application system ISAAC.

The assessment of the applicability of two page joint summaries will be mainly a pro-forma check. Summaries will be judged on appropriateness for the aim of the call (see chapter 2), on the availability of a U.S.-based and Netherlands-based PI sharing the responsibility for the joint summary (see section 3.1).

As a result of the assessment, NWO and/or NSF will send out a coordinated 'Notification of interest' if the summary is deemed appropriate.

If checking a summary does raise questions or results in some feedback, then the applicant will be informed of this. Whenever applicable a non-binding coordinated NWO-NSF recommendation will be sent.

Referees

All full proposals will be submitted for assessment to members of the international assessment committee. Seeking referees will be a joint effort of NWO and NSF. Optional suggestions from PIs will be taken into consideration. This way deviations in assessment processes on both sides of the Atlantic are avoided.

Referees have a dual role: They will write a referee's report in which they state the strong and weak aspects of the proposal. Anonymised referees' reports will be sent to the PI who then subsequently will be given the opportunity to write a response (the rebuttal). After assessing the research proposals as external referees they serve as members of the assessment committee.

Assessment Committee

During the assessment meeting the committee's task is to make an evaluation based on the full proposals, the referees' reports and the rebuttal. Although the referees' reports have a strong bearing on the final assessment they will not be unquestioningly adopted by the assessment committee. The committee will consider the arguments of the referees (also between referees) and will examine whether a good response to the critical comments from the referees' reports has been formulated in the rebuttal. Furthermore the assessment committee can judge the quality of the other proposals submitted and the rebuttals.

The assessment committee will consist of international experts within the domain of this call for proposals.

Admissibility of full proposals

The NWO Physical Science Divisional Board, supplemented by a board member of the NWO Social Sciences Divisional Board will assess, on the advice of the Assessment Committee, the appropriateness of the full proposal for the aim of the call (see Chapter 2). NWO will also assess whether the proposal satisfies the formal requirements set (see Chapter 3).

Only full proposals that satisfy both conditions are admissible and will be considered by NWO.

If a full proposal does not satisfy the admissibility conditions then the PI will be informed of this in writing. If a full proposal has minor defects, NWO will grant the PI two working days to correct the defects. If a full proposal is not corrected within the given timeframe, or has large defects, the Board of NWO Physical Science supplemented by a representative from the Board of NWO Social Sciences will be advised to declare the full proposal 'not admissible' for this funding scheme.

Advise to the decision-making body

The assessment committee will advise the decision-making body about the quality of the research proposals. For this call the decision-making body is the NWO Physical Science Divisional Board, supplemented with a member of the NWO Social Sciences Divisional Board. The decision-making body will decide which proposals to award funding based on this advice and the funds available.

Decision making

The decision-making body decides on the granting and rejection of applications based on the motivated ranking of the assessment committee.

The decision-making body has the right to deviate from the motivated ranking of the assessment committee. The following grounds can affect the decision making:

To be funded a proposal should be eligible for funding both by NSF and NWO.

In case rankings differ between NSF and the assessment committee the decision-making body and NSF together will decide on a harmonized ranking.

Indicative timetable

15 January 2016; 14.00 hours CET	Deadline submission two page research summary via the ISAAC-system
1 April 2016; 14.00 hours CET	Deadline submission proposal via the ISAAC-system
April 2016	Hearing referees
May 2016	Rebuttal applicants
June 2016	Meeting Assessment Committee
July 2016	Decision GB CW/EW

Applicants can follow the progress of the assessment procedure via their account in ISAAC.

4.2 Criteria

The full proposals are first assessed by the referees, and later by the assessment committee based on the following criteria:

1. **Intellectual Merit:** The Intellectual Merit criterion encompasses the potential to advance knowledge;
2. **Trans-Atlantic cooperation:** The Trans-Atlantic cooperation criterion encompasses the added value of the cooperation between the US-based and Netherlands-based researchers;
3. **Broader Impacts:** The Broader Impacts criterion encompasses the potential to benefit society and contribute to the achievement of specific, desired societal outcomes.

The weighting of the criteria is as follows: 50% for the Intellectual Merit, 25% for the Trans-Atlantic cooperation and 25% for Broader Impacts.

Intellectual Merit

The Intellectual merit of the proposal will be assessed based on:

- the potential of the proposed research and approach to advance knowledge and understanding within its own field or across different fields;
- the creativity, originality and transformative concepts of the proposed research;
- the motivation, theoretical foundations and organization of the proposed research. The quality of the risk assessment;
- the quality of the research team with regards to the proposed research;
- the requested funding with regards to the proposed research.

Trans-Atlantic cooperation

The Trans-Atlantic cooperation will be assessed based on:

- the complementary nature of the expertise's of the US-based and Netherlands-based researchers;
- the relevance of the research topic from a US and Dutch perspective;
- the synergy created by the cooperation by the US-based and Netherlands-based researchers;
- the feasibility of the cooperation plan.

Broader Impacts

The Broader Impacts of the proposal will be assessed based on:

- the potential to benefit society or advance desired outcomes;
- the originality and creativity shown in the approach;
- the feasibility of the plans for creating broader impact with regards to the expected results;
- the fit between the research team and the proposed activities;
- the requested funding with regards to the planned activities.

5 Contact & other information

5.1 Contact

5.1.1 Specific questions

For specific questions about PRICE grants and this call for proposals please contact: Mr. Joep van Wijk, tel. +31 70 349 44 59, e-mail j.vanwijk@nwo.nl.

5.1.2 Technical questions about the electronic application system ISAAC

For technical questions about the use of ISAAC please contact the ISAAC helpdesk. Applicants are requested to read the [ISAAC manual](#) before they consult the help desk. The ISAAC helpdesk is available from Monday to Friday from 11.00 to 17.00 hours on +31 900 696 4747. Unfortunately not all foreign phone companies allow you to phone to a 0900 number in the Netherlands. You can also send your question by e-mail to isaac.helpdesk@nwo.nl. You will receive a reply within two working days.

5.1.3 NWO Objections Committee

There is an appeals procedure for the submission of formal objections against decisions taken within the framework of this programme. After the submission of an appeal the candidate is invited to a hearing of the NWO Objections Committee. Further information about the appeal and objection procedure can be obtained from the secretariat of the NWO Objections Committee, Ms. C. Hansildaar, +31 70 344 0807, e-mail: c.hansildaar@nwo.nl.

5.2 Other information

5.2.1 Open access

Please be aware that the NWO open access policy has been updated on December 1st, 2015. For more information, please consult www.nwo.nl.

6 Annexes

6.1 Research topics discussed during the October 2015 workshop (as a source of inspiration for this call)

1) Identity on the digital stage

Possible research topics:

- the normative notions of identity, particularly from the perspective of – but not restricted to – the rise of digital persons, i.e., the ‘data shadows’ of real-life persons in digital sets of data.
- technical approaches towards identity and identity-management, and how data protection rights and Privacy Enhancing Technologies can help and support individuals to manage their online identities throughout life
- map ‘privacy disasters’: in what ways, and to what extent, do individuals and society suffer from technical, organizational, or legal errors that hamper their right to privacy?
- Mobile devices such as GSM phones, PDA’s, RFID, offer a technological platform which can help solving the problems of ID management for the roaming user. They can be employed as trusted control interface for applications using personal and privacy sensitive information, and can help support the user to manage their online identities. The concrete objective is the development of the essential elements of an architecture (trust framework) for secure and realistic identity management solutions for mobile devices.

2) Beyond data minimization

Current approaches to privacy protection (both technical and legal) have largely focused on minimizing the amount of personal data being collected. This is problematic for platforms that are actually deployed to promote the sharing of personal data (like social networks), and equally problematic for the use of behavioral data to personalize services or improve their performance. Similarly there are so-called Big Data applications where allowing the use of personal data may benefit society as a whole (like for example medical research). But clearly any risk in the use of personal data in these applications need to be controlled. Research in this domain aims to develop a better understanding of the issues involved and to propose solutions to mitigate risks.

3) The confluence of the real and the virtual

The Internet of Things is nothing new. Yet the imminent confluence of cyberspace and physical space into one ambient intelligent system still poses fundamental research challenges in the area of security, privacy and trustability. In particular the conceptualization of identity in such an ‘ambient intelligent’ world deserves further study. How much of my identity is constructed consciously, and how much of it is constructed autonomously? Privacy protection in the Internet of Things involves much more than data minimization techniques like using pseudonyms and the like. In fact, the vision of an Internet of Things that intelligently supports us in our day to day activities needs to collect large amounts of personal information. The challenge is to accommodate this need for personal data, while maintaining privacy guarantees. Legal protection of individuals against (state) intervention is partly based on space (e.g. inviolability of the home). Technology increasingly obliterates the distinction between private and public space and thus poses challenges to the privacy of individuals.

4) Understanding and constructing privacy

How to construct privacy, both from a technical and a non-technical perspective, especially taking differences in legal regimes and ethical norms across the world into account. Improve the understanding of the meaning of privacy given the current changes in society.

Study methods to build more privacy friendly systems, based on privacy by design, and regulation by technology. Also study the organizational dimensions of privacy (such as organizational embeddedness of privacy impact assessments and determination of risk associated with privacy within organizational contexts) and participatory design methods including a multitude of stakeholders.

Study how the balance between security and privacy can be regulated by technology alone through, for example, the concept of "revocable privacy".

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