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Stipend

The fellow will receive a monthly stipend of $3,083 on the last business day of the month starting September 30th of each year. The fellow's check will be directly deposited into a savings or checking account that is provided to the DOE CSGF coordinator. The fellow must download the direct deposit form from the on-line page and send in to the Krell Institute.

In some cases, the stipend funds can be directed through the University if it provides benefits to the fellow such as lowering the tuition rate or allowing for health coverage through the university. In this case, please contact the Department of Energy Computational Science Graduate Fellowship (DOE CSGF) coordinator to make arrangements. A check will be sent to the University Coordinator and dispersed to the fellow.

Krell does not withhold income taxes from the stipends or augmented stipend during the practicum, so it is up to the fellow to keep track of the stipend amount and report it to a tax adviser. Krell Institute cannot lend tax advice. If you have any questions regarding your taxes please consult your tax advisor.

Full-time Study

During the fellowship period, we expect you to be enrolled as a full-time graduate student for at least nine months of every year. During the remainder of the year, if you are not enrolled as a full-time student, you must be engaged in full-time research related to the completion of your degree or participating in your practicum assignment.

Each fellow must agree to the conditions contained in the Terms of Appointment. One such condition is that during the time of your fellowship you may not accept other employment or other work, including voluntary, without explicit permission. If additional responsibilities, such as a teaching assistantship, are required by your department to qualify for the doctoral degree, the teaching must adhere to the DOE CSGF teaching policy and must be approved in advance.

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Verification of Enrollment

DOE CSGF fellows must be enrolled full-time at their university during the fellowship period. An enrollment certificate is sent to the University Coordinator every August. The form must be signed by the University Coordinator verifying full-time enrollment and returned to the Krell Institute no later than August 31st. This form and the other verifications listed below are used as proof that the fellow is enrolled full-time. Once the form is received, the academic allowance check will be sent to the University Coordinator. The DOE CSGF Coordinator will e-mail the University Coordinators in the spring and summer terms to verify enrollment or practicum/research status.

Tuition

Krell Institute will pay full tuition and any fees that are **required for all students**. Summer tuition and fees will be paid if the fellow is enrolled as a full-time student and if required by the university. **Basic health insurance** will be paid by Krell for the DOE CSGF fellow only. Normally, full-time enrollment involves on-campus study and research for at least nine months of the year with additional research, full-time study or a practicum assignment for the remaining three months. Exceptions to this are if the practicum lasts longer than three months.

Krell will mail a letter to the Bursar's office in the summer notifying them of the fellow's award. The billing statement will be sent directly from the tuition billing office to Krell.

Academic Allowance

In September, a $5,000 academic allowance for first year fellows or a $1,000 academic allowance for renewing fellows will be sent to the University Coordinator. These funds can be used for expenses to support the fellow's research and professional development such as publication/printing, books/supplies, travel to meetings/conferences, software, and purchase of a computer workstation and/or laptop. **Please see the Workstation Purchase guidelines regarding the procedures and limitations when purchasing a workstation, as prior approval is required.** The fellow should submit receipts to the University Coordinator for reimbursement of research and professional development expenses.

Any unused funds will be rolled over to the following year, provided that the fellow is renewed. The University Coordinator will provide Krell with an accounting of the fellow's use of the academic allowance for each year. The report should detail how the funds were used. The fellow should keep a record of expenses and the balance.

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An additional allowance of $1,000 per year may be requested after the end of the fellowship period provided the fellow remains enrolled full time in their doctoral program. The additional academic allowance can be requested for up to two years beyond the fellowship. Academic allowance funds accumulated during the fellowship but not expended may be used with the additional allowance, as long as the student is enrolled fulltime in their doctoral program, the University Coordinator verifies such enrollment, and the University Coordinator is willing to account for the expenditures of such funds. Any funds remaining when the fellow leaves the university or is no longer enrolled fulltime must be returned to the Krell Institute.

Workstation Purchases with Academic Allowance Funds

Academic allowance funds can be used to purchase a computer workstation, provided all the requirements described below are fulfilled.

1. All workstation purchases **MUST be approved in advanced**. Approval can be obtained by submitting a statement indicating the use of the proposed funds, a quote showing the total cost (screenshot of checkout cart will suffice) and an itemized accounting of all the components of the purchase. The request must first be approved by the DOE CSGF Program Coordinator, then the request must be approved by the University Coordinator before purchasing the workstation.
2. The purchase total must be $4,950 or less.
3. Fellows may purchase multiple workstations or laptops throughout their fellowship, provided they have adequate funds remaining in their academic allowance account and provided each purchase is less than $4,950, and has been approved in advance.
4. The funds can be used to purchase a computer workstation, laptop or an upgrade to an existing workstation, or any combination of the three options.
5. The workstation cannot be purchased until after approval is granted.
6. Once the purchase is complete, the fellow must submit the purchase receipts and the packing slips, to the DOE CSGF coordinator who will authorize reimbursement. The fellow must submit the purchase receipts, authorization for reimbursement from the DOE CSGF Program Coordinator, and any other required documentation to the University Coordinator for reimbursement.
7. If purchases are made without prior authorization, future funds will be in jeopardy and the Krell Institute reserves the right to recoup any funds inappropriately distributed.
8. The workstation must be reserved for the fellow's exclusive use during their doctoral studies and will be considered the fellow's property at the end of the fellowship provided the total expense is less than $4,950.

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Practicum

The practicum is required for all fellows before starting their third year of the fellowship. It must be conducted on-site at an approved DOE research laboratory for at least one twelve-week period. The practicum is intended to broaden the fellow's experience outside the main thesis area and to allow them to apply their skills to a problem that requires them to become better aware of all areas that define computational science. At the time of the practicum, most fellows will have chosen a thesis topic and perhaps a general approach. The practicum should not be used to merely continue along this established research path. Rather, it is an opportunity for the fellow to become exposed to alternative methods or tools, or to related problems where the fellow's approach might be applicable. In some cases, it may also be appropriate and valuable for the fellow to explore an area unrelated to the chosen thesis topic.

The fellow will complete the practicum request on-line in conjunction with renewal. Directions to complete the practicum proposal and resulting documents are provided in the Practicum Information link under Instructions. The fellow will receive an augmented stipend and travel expenses. The travel reimbursement form and travel reimbursement guidelines can be found under "Downloadable Forms". All receipts should be included along with the signed form. Make sure that the exact time and dates are entered so that the per diem can be calculated. If you traveled by car, please note the route that was used to help verify mileage. We cannot reimburse for travel via plane before the actual flight.

The fellow can be reimbursed with a maximum $2,500 allowance for one trip to visit to multiple lab sites before the practicum begins. The practicum visit travel guides are found on the secure web site under "Downloadable Forms".

Once the practicum has ended, the fellow and the practicum supervisor are each asked to complete an evaluation on-line. These evaluations will be reviewed as a part of the fellow's renewal of the fellowship.

Program of Study

A central element in the DOE CSGF program is a requirement of breadth in the coursework leading to the doctoral degree. The fellow is required to fulfill a Program of Study (POS) that includes graduate coursework in three areas: a scientific or engineering discipline, computer science, and applied mathematics. The POS is a formal agreement between the student and the DOE CSGF program that is ratified by the fellow's advisor.

The Program of Study (POS) is considered a de facto contract and an agreement to complete the courses specified with a grade of B- or above within the required timeframe. Any change in the POS **must be approved in advance** by the review committee *(details outlined on page six of this document)*. The fellow should allow up to two weeks for the approval process and must be sure to submit any requests for changes allowing sufficient time for the approval process. The fellow should propose the changes on-line through the secure web site and submit them for

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approval. The changes will be approved or other recommendations made. The DOE CSGF coordinator will e-mail the approval or recommendation to the fellow. After the approval is made official, the fellow is asked to email the signed POS form to the Krell Institute. The Program of Study should remain up to date at ALL TIMES unless you are going through the process of proposing a change.

Acceptance of the fellowship constitutes an explicit commitment by the fellow and his/her advisor to follow an approved Program of Study leading to a doctoral degree that meets these minimum requirements:

For a Science/Engineering Major
In addition to graduate courses in the major field;
1 year of computer science courses
1 year of applied mathematics courses

Computer Science Major
In addition to graduate courses in computer science;
1 year of science/engineering courses
1 year of applied mathematics courses

Mathematics Major
In addition to graduate courses in mathematics;
1 year of science/engineering courses
1 year of computer science courses

(1 year = 2 courses if the university is on a semester system; 3 courses if the university is on a quarter system)

A course that exposes you to the concepts of parallel computing or high-performance computing is required.

Appropriate Departments and Courses

All POS courses, except where noted below, must be taken from the department associated with each of the major areas listed above. For example all courses satisfying the Mathematics requirement must be taken in the Mathematics or Statistics department and all courses satisfying the Computer Science requirement must be taken from the Computer Science or Computer Science and Engineering or Electrical and Computer Engineering, etc. If a university has an established department or center focused on computational science and engineering (CSE), courses from the CSE department or center may be approved provided the following conditions are met: the course is cross listed with the appropriate major area of study (science/engineering, computer science, or mathematics) department and the instructor's home department is in the appropriate major area of study.

Appropriate courses from the computer science department include data structure, compilers, visualization/graphics, architectures, parallel computing, high performance computing, software engineering, networking, databases, and theory of algorithms. The computer science requirement is not satisfied by courses in numerical analysis, numerical linear algebra, etc., even if they are

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offered in the Computer Science Department. Such courses may satisfy the applied mathematics requirement if they have appropriate content and are approved in advance.

Appropriate courses from the mathematics department include: numerical analysis, modeling, applied analysis, differential equations, asymptotics, linear algebra, Monte Carlo methods, statistics and/or probability, and stochastics. Mathematics-related courses offered in departments other than Mathematics (for example, in the Computer Science or an applications area) will satisfy this requirement only if approved in advance by the fellowship committee.

Academic Credit

All courses must be graduate level courses or accepted for graduate credit by the fellow's major department. POS courses MUST be taken for a grade when permitted by the university; auditing or taking a course Pass/Fail is not acceptable. A grade of B– or better must be achieved in courses designated to fulfill the Program of Study requirement. If a grade of B- or better is not achieved in an approved POS course, the fellow must immediately notify the DOE CSGF program by proposing to retake the course or take a substitute course within the required completion time.

Past Courses

Only courses taken in the academic year of application are allowed on the proposed POS. Any subsequent changes to the POS, must specify courses in the future. The major area of the POS may be completed upon start of fellowship if fellow was a first-year doctoral student upon offer of fellowship.

Change to the POS

During the application process significant consideration is given to the proposed POS, therefore substantive change to the POS is strongly discouraged. For example, if the proposed POS includes high-performance computing course(s), later elimination of such courses requires justification. As provided in the Terms of Appointment, the POS is considered a de facto contract to complete the courses as proposed in the fellow's application. All changes whether minor or substantive must be approved in advance by the DOE CSGF committee. Unapproved changes to the Program of Study may jeopardize renewal of the fellowship.

Any change in your POS must be communicated with Krell Institute in advance and approved by the DOE CSGF steering committee before it can be counted toward your POS requirement. Therefore fellows are advised to communicate requests for POS changes as early as possible. Changes not approved before the completion of the course will not be counted toward your POS.

Completion of the POS

Fellows must complete the approved Program of Study by the end of the second year of the fellowship. Fellows who begin their doctoral study at the same time as the fellowship have an additional year to complete this obligation.

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Other Work, Programs or Awards

Under normal circumstances a fellow may not engage in work for remuneration during the fellowship term. The policy regarding teaching is as follows:

The university will certify that either

1. no more than one term of teaching, grading, or other departmental support activities are required of students in the fellow's department, or
2. if there are requirements to teach, grade, or provide other departmental support for more than one term, they will be waived for the DOE CSGF fellows

If the fellow teaches during the fellowship period, the fellowship stipend will be decremented by the amount paid for the teaching or other departmental support activities. **All teaching must be approved by the DOE CSGF program in advance.**

The fellow must request prior approval for any work, remunerated or voluntary, during the fellowship period. The amount of work shall be such as not to interfere with the enrollment of the fellow in a full-time academic program and is subject to recommendation from the university coordinator and approval by the Krell Institute.

Krell will not duplicate financial aid a fellow may receive from a federal fellowship, scholarship, or another similar federal grant during the period of this appointment. Veterans Administration benefits to the fellow are excluded from this restriction. Acceptance of any other fellowship or award may be allowed provided it is **approved in advance.**

Annual Program Review

As a fellow in this program you are obligated to attend the Annual DOE CSGF program review where you will meet other fellows, learn about their research, and also be exposed to the computational science research at participating Department of Energy facilities.

Renewal

Renewal of the fellowship is not automatic. Renewal application and materials are made available to the fellow on the secure site in October and completion of these materials are due December 1st. The DOE CSGF Program Coordinator will notify the fellows when the application and materials are available. Completion of all sections of the application as outlined in the fellow's secure site should be filled out in detail. Any questions on renewal should be directed to the Program Coordinator.

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