



EPX EDUCATION AND RESEARCH  
REQUEST FORM TO ACCESS THE FULL VERSION



1. Identification			
Research Unit		Technical Contact	
Name and Address		Name and Address	
		Phone	
		E-mail	
Website		Supervisor <sup>(*)</sup> ( <b>mandatory for student applicants</b> )	
		Name and Address	
		Phone	
		E-mail	

(\*) Permanent member of the Research Unit who can be contacted for information about the request

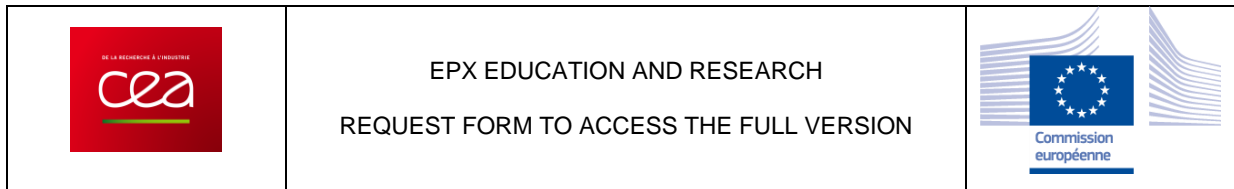
2. Software Usage		
Description of the Scientific Area of Use	Requested Version(s)	
	System	License type
	<input type="checkbox"/> Linux <input type="checkbox"/> Windows <input type="checkbox"/> Mac OS	<input type="checkbox"/> Nodelocked <input type="checkbox"/> Network

3. Date and Signatures		
Technical Contact	Supervisor (if necessary)	Head of the Research Unit <b>(official stamp mandatory)</b>
		Name
<input type="checkbox"/> I accept the terms of the Licence Agreement below		

To send back to:  
**CEA SACLAY**  
**DEN/DANS/DM2S/SEMT/DYN**  
**Monsieur Hariddh BUNG**  
**Bât 607 – PC 116**  
**91191 GIF SUR YVETTE CEDEX**

or by e-mail to [hariddh.bung@cea.fr](mailto:hariddh.bung@cea.fr)





## EDUCATION AND RESEARCH USER LICENSE AGREEMENT FOR EUROPLEXUS SOFTWARE

USE OF THE EUROPLEXUS SOFTWARE IS SUBJECT TO THE FOLLOWING TERMS AND CONDITIONS. IF YOU DO NOT ACCEPT THESE TERMS AND CONDITIONS, DO NOT LOAD THE SOFTWARE.

NON-PROFESSIONAL USERS ARE NOTIFIED THAT THE SOFTWARE AND THE RISKS INHERENT TO ITS USE ARE NOT COVERED BY ANY WARRANTY ON THE PART OF THE CEA AND THAT ITS SPECIFICITY MAKES IT COMPLEX TO OPERATE. THIS IS WHY IT IS HIGHLY RECOMMENDED THAT YOU ONLY LOAD AND/OR USE THE SOFTWARE IF YOU HAVE SPECIALIZED IN-DEPTH INFORMATION TECHNOLOGY KNOW-HOW.

THE COMMISSARIAT A L'ENERGIE ATOMIQUE ET AUX ENERGIES ALTERNATIVES (FRENCH ATOMIC ENERGY AGENCY), a public scientific, technical and industrial establishment, having its registered office at 25 rue Leblanc - bâtiment le Ponant D - 75015 Paris cedex, hereinafter referred to as "CEA", hereby licenses the right to use the EUROPLEXUS software as per the terms and conditions set out below.

This license is granted to the natural or legal person -hereinafter the "Licensee" - having completed the application form and loaded the Software.

### SECTION 1 - DEFINITIONS

In this Agreement the following capitalized words shall have the following meanings:

- "Agreement": refers to this agreement, its schedules and any amendments thereto.
- "Software": refers to both the binary code of the fast transient fluid-structure simulation software program called "EUROPLEXUS, in its version in force on the date of acceptance of the license, the operational features of which are described in the Software's notices (internal documentation and "<http://www-epx.cea.fr>"), and the Software's notices, the documentation and the examples of data sets ("<http://www-epx.cea.fr>").
- "Application Form": the application form to be filled by the Licensee on the website: « "<http://www-epx.cea.fr>".

### SECTION 2 - PURPOSE

The purpose of this Agreement is to grant to the Licensee a free of charge, non-exclusive, non-transferable worldwide user research license, on one desktop or one server if its access rights are limited to one research or educational team, over the Software for five (5) years

### SECTION 3 - ACCEPTANCE

By loading the Software, the Licensee accepts the terms of this License.

The Licensee acknowledges that the Agreement shall prevail on Licensee's general terms of purchase. The Licensee's general terms of purchase are unenforceable in whatever form.

### SECTION 4 - SCOPE OF LICENCE

4.1 The user right granted in Section 2 to the Licensee, which it accepts, comprises the right to use the Software for its own research purposes, in accordance with its intended use such as described in its associated documentation and with the terms and conditions set out below.

5.2 The Licensee agrees not to use all or part of the Software to provide services to third parties or for any advertising or commercial use. For the purposes of the Agreement, "commercial use" notably includes (i) any disclosure, supply, transfer, sale, rental, distribution and/or making available of the Software to a third party, (ii) any supply of information and/or studies to a third party obtained by using the Software, and (iii) any use of the Software in research, consulting or collaboration agreements with a commercial company and/or with a third party if this use results in marketing.

4.3 Any use of the Software that is not in compliance with its intended use is prohibited.

4.4 The Licensee may not reproduce the Software in whole or in part, regardless of the form or format:

- - except as strictly required to load, display, run, transfer or store the Software for the sole purpose of its use,
- - or to make one (1) backup copy, by taking all necessary precautions to avoid its disclosure.

4.5 Any use not expressly authorized by the Agreement or by law is prohibited.

4.6 The Licensee expressly agrees not to assign, transfer or convey to a third party, with or without consideration, the user right granted hereunder.

#### SECTION 5 - INSTALLATION OF THE SOFTWARE

5.1 The Licensee shall load and install the Software at its own expense and risks. The Licensee shall be responsible for any environment and installation constraints required for proper operation of the Software, as described in schedule 2 to the Agreement.

5.2 The Licensee shall only install the Software on one desktop or one server if its access rights are limited to one research or educational team. Any installation on an additional desktop, or any extension of server's access rights, shall be the subject of a prior written request for authorization to the CEA.

#### SECTION 8 - FEEDBACK

In consideration for the rights granted hereunder, the Licensee agrees to use its best efforts to inform the CEA, free of charge and within a reasonable period of time, of its experience in connection with use of the Software, including, but not limited to, any errors or defects detected, inconsistencies between the program and the associated documentation, restrictions to the Software's applications not mentioned in the associated documentation and any developments and improvements that could be made to the Software.

#### SECTION 7 - LICENSEE'S COMPLIANCE WITH ALL IMPORT REGULATIONS IN LICENSEE'S COUNTRY OF ORIGIN

Inasmuch as the Software is imported by the Licensee, the Licensee is required to contact the competent national authorities so as to ensure compliance with all tax (specifically in the field of VAT) and customs (i.e. import license) regulations that may apply to the import of the Software. Any costs in connection therewith shall be borne by the Licensee.

#### SECTION 8 - WARRANTY IN RESPECT OF THE SOFTWARE



The Licensee hereby recognizes that the Software is experimental software and that the current state of scientific and technical knowledge at the time of its release does not allow testing or verifying all possible uses or detecting the existence of any defects.

The Licensee hereby recognizes that the Software is supplied "as is" by the CEA, without any warranty whatsoever, express or implied, in particular without any warranty as to its merchantability, secure or innovative nature and fitness for a particular use.

The CEA does not warrant that the Software is error-free, or will operate without interruption, or that it will be compatible with the Licensee's equipment and software configuration or that it will meet the needs of the Licensee.

#### SECTION 9 - ASSOCIATED SERVICES

Technical support and maintenance services on the Software are not included in the Agreement. The Licensee may request services that will be accepted or rejected by the CEA at its sole discretion, depending on means

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(personnel, financial) at the date of request. Upon CEA's acceptance, it will send to Licensee an estimate. If it is accepted by the Licensee, the Parties will execute a separate document.

## SECTION 10 - LIABILITY

10.1 If the CEA does not comply with all or part of its obligations under this Agreement, the Licensee shall have the possibility, subject to proving the commission of a breach by the CEA, of seeking damages for any direct damages the Licensee can prove it has incurred.

10.2 The CEA's liability cannot be incurred by reason of (i) damages arising out of the non-performance, in full or in part, of its obligations by the Licensee, or (ii) indirect damages, even if the CEA knew of the possibility of the occurrence of such damages. The Parties expressly agree that any financial or business loss (including without limiting to lost data, lost profits, loss of customers or orders, loss of earnings, commercial disturbances) or any lawsuit directed against the Licensee by a third party, constitutes indirect damages for which no remedies are available.

## SECTION 11 - INTELLECTUAL PROPERTY RIGHTS

11.1 The Parties recognize that the Software is and shall remain the exclusive property of the CEA and the European Commission, which reserves all ownership rights on such basis. The license subject matter of this Agreement does not entail the transfer of any intellectual property right over the Software to the Licensee.

11.2 The Licensee expressly agrees:

- - not to delete or otherwise modify in any manner the intellectual property notices or other ownership notices displayed on the Software; and
- - to reproduce as is the said intellectual property notices or other ownership notices on the backup copy of the Software.

11.3 Similarly, no other right over a trademark, trade name or other distinctive sign is conferred to the Licensee by the Agreement.

11.4 The Licensee agrees not to directly or indirectly infringe the intellectual property rights of the CEA and the European Commission and to take the necessary measures with respect to its staff so as to ensure their compliance with the intellectual property rights of the CEA and the European Commission.

## SECTION 12 - INFRINGEMENT

12.1 Any use of the Software outside the scope of the license grant by CEA shall constitute infringement and warrant proceedings being brought by the CEA against the Licensee.



12.2 If proceedings based on a patent, software, or any other third-party intellectual property right are brought against the Licensee on the basis of the use of the Software, the cost of such proceedings, as well as any verdicts that may be entered against it shall be borne by the Licensee, and Licensee may not claim any indemnity whatsoever from the CEA on such basis. At the Licensee's request, however, the CEA agrees to provide it with its technical and legal assistance, it being understood that any associated costs shall be borne by the Licensee.

12.3 The Licensee shall notify the CEA of any act of infringement or unfair competition by a third party of which the Licensee has knowledge, and the CEA shall bring proceedings if it deems fit.

## SECTION 13 - PUBLICATIONS

In all of the Licensee's publications concerning studies resulting from the Software, the Licensee is required to indicate that these studies were carried out through use of the Software and expressly mention (i) the CEA's

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name as the holder of the associated intellectual property rights on the Software and (ii) the website “www-epx cea.fr”.

The CEA reserves the right to include the Licensee’s name among its references.

#### SECTION 14 - TERM

Subject to the provisions of Section 16 of the Agreement, the Agreement shall be valid for all the duration of the intellectual property rights on the Software from the date of its acceptance in accordance with Section 3.

#### SECTION 15 - TERMINATION

15.1 In the event of breach by one of the Parties of its contractual obligations, the other Party may send it a notice of breach and opportunity to cure within the period indicated, by registered letter with notice of receipt. If the breaching party does not cure the breach within such period, this Agreement shall be terminated automatically.

Termination on this basis does not release the breaching Party from the obligations contracted by it towards the other Party on the date of termination. Similarly, termination may under no circumstance be deemed a waiver, by the other Party, of the right to seek any damages for any loss sustained by reason of the termination of the Agreement, whether arising before or after termination.

15.2 In the event contractual relations cease for any reason whatsoever, the Licensee agrees to:

- immediately cease all use of the Software,
- return to the CEA all of the components of the Software, in accordance with the Agreement, and destroy or return to the CEA all copies or reproductions that may have been made by Licensee in any form or format.

The Licensee shall further provide the CEA with an official certificate that it has duly fulfilled this obligation, detailing any components destroyed as well as the corresponding date, within one (1) month of the term of the Agreement.

15.3 The Licensee shall hold the CEA harmless from and against any loss arising out of the non-compliance with any one of its obligations under this section.

15.4 Unless the official receiver opposes the end of this Agreement, the CEA may also terminate it by right in the event of judicial receivership or liquidation of the Licensee.

#### SECTION 16 - LANGUAGE


This Agreement is drawn up in English, which language shall govern all documents, notices, meetings, arbitral proceedings and processes relative thereto.

#### SECTION 17 - MISCELLANEOUS

17.1 The Parties shall not be liable for any breach of one of their obligations arising out of circumstances outside of their control, such as strikes, exceptional weather conditions, acts of war, terrorism, riots, fires, natural disasters, malfunction or interruption of means of communication or telecommunication, including networks.

17.2 No failure, by either of the Parties, even if repeated, to assert one or more provisions of the Agreement, may be construed in any circumstance as implying a waiver by the Party concerned of its right to assert said provision(s) subsequently.

17.3 Under no circumstance may this Agreement and/or the rights set forth herein be transferred or assigned by the Licensee.

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17.4 This Agreement cancels and supersedes any prior agreement, whether written or oral, between the Parties with respect to the same subject matter and sets forth the entire agreement between the Parties as to its subject matter. In particular, no general condition appearing in the documents sent or exchanged by the Licensee can be incorporated into this Agreement, including the Licensee's terms of purchase. No addition or modification to the terms of this Agreement shall be effective as between the Parties unless in writing and signed by their duly authorized representatives.

17.5 In the event one or more provisions of this Agreement were to conflict with a statute or legislative provision, existing or future, such statute or legislative provision shall prevail, and the Parties shall make the necessary amendments so as to comply with such statute or provision. All other provisions shall remain in effect.

#### SECTION 18 - DISPUTE RESOLUTION

18.1 This Agreement is governed by French law.

18.2 The Parties agree to endeavor to seek an amicable solution to any disagreements or disputes that may arise out of or in connection with the Agreement. Failing an amicable solution within two (2) months of the date on which they arise, disagreements or disputes shall be referred to the competent courts of Paris by the more diligent Party.



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**SCHEDULE 1**

**DESCRIPTION OF SOFTWARE**

EUROPLEXUS is simulation software dedicated to the analysis of fast transient phenomena involving structures and fluids in interaction. The program is co-owned by the Commissariat à l’Energie Atomique et aux Energies Alternatives (CEA) and the Joint Research Center of the European Commission. Its development is carried out through a Consortium involving the co-owners and so-called major partners who are granted a complete access to the source code and developments tools.

EUROPLEXUS is based on a space discretization by means of Finite Elements, SPH Particles (*Smooth Particle Hydrodynamics*) or Discrete Elements for structures, or by means of Finite Elements, Finite Volumes or SPH Particles for fluids. Time integration is achieved through a conditionally stable explicit scheme.

The solving algorithm is completely non-linear, at both geometric level (large displacements; large rotations) and material level (constitutive laws implementing plasticity or damage for example).

The programme provides a large number of kinematic links between entities, for instance for boundary conditions, contact between structures or fluid-structure interaction. EUROPLEXUS is characterized by its minimal use of non-physical parameters to enforce these links, such as penalty coefficients. It relies on direct methods to compute the link forces whenever it is possible and otherwise, the links are dualized by means of Lagrange Multipliers, the unknown forces being then deduced from the resolution of an additional linear system.

The developments at CEA are carried out in the Mechanical and Thermal Studies Service of the Systems and Structures Modeling Departement of the Nuclear Energy Division. It relies the experimental knowledge of the service to characterize models and on its numerical knowledge to implement them, their validation being performed by comparison with actual mechanical systems.

**SCHEDULE 2**

**ENVIRONMENTAL CONSTRAINTS**

***Required minimum configuration***

Workstation with processor x86 32 or 64 bits (recommended : CPU clock speed > 1 GHz, memory > 1 Go)

***Required environment software***

Operating system among the following :

- Linux 32 or 64 bits (recommended distributions : Fedora, Suse, Debian, Mageia)
- Windows (XP, Vista, 7) 32 or 64 bits
- MacOS X 64 bits

