



A 1 FP5HFP

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ANNEX 1

For guidelines see relevant "Guide for Proposers"

**Proposal submission form
for financial support from the EC:**

MARIE CURIE HOST FELLOWSHIP

**EACH APPLICANT MUST RETURN COMPLETED ADMINISTRATIVE SECTION A
AND THE RELEVANT PROJECT SECTION B**

A. GENERAL ADMINISTRATIVE INFORMATION (PAGES A1-A5BIS)

B. PROJECT DESCRIPTION

- 1. MARIE CURIE INDUSTRY HOST FELLOWSHIP (PAGES B1-B2)**
- 2. MARIE CURIE DEVELOPMENT HOST FELLOWSHIP (PAGES B3-B4)**
- 3. MARIE CURIE TRAINING SITE (PAGES B5-B6)**

If possible, these forms should be prepared using the Proposal Preparation Tool (ProTool), which is available via the Commission Internet site <http://www.cordis.lu/fp5>, by E-mail or on CD-ROM. Use of the Proposal Preparation Tool is preferred by the Commission. However applicants may also use the forms in the Guide for Proposers. Using the ProTool, forms may be submitted electronically, or printed out and returned on paper.

Information on the Proposal

Proposal Full Name ¹ (max. 10 words)	Computer Algebra for Differential Equations and Pure Algebra		
Proposal Acronym ²	CADEPA		
Call Identifier ³	IHP-MCHT-99-1		
Research Programme ⁴	1.4.1		

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POST STAMP :

 / /

RECEPTION DATE :

 / /



EUROPEAN COMMISSION
RESEARCH DIRECTORATES
GENERAL
MARIE CURIE HOST
FELLOWSHIP PROPOSAL

B 1 FP5HFP

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Proposal Acronym²

CADEPA

1. GENERAL PROPOSAL INFORMATION

Type of Fellowship⁵
(IND, DEV, PHD)

PHD

Research Programme⁴

1.4.1

Applicant

Organisation Legal Name⁶

Queen Mary and Westfield College

Less-Favoured Region⁷Y N If Yes, give name of Less-Favoured Region⁷

Proposal

Proposal Full Name¹
(max. 10 words)

Computer Algebra for Differential Equations and Pure Algebra

Describe the research to be supported⁸
(in 3 lines)

Development and implementation of computer algebra algorithms applicable to differential equations and/or the interactions of computational group theory, graph theory, design theory and finite geometry.

Evaluation panel code⁹
(only for proposals to the Human Potential Programme)

MAT

Sub-disciplines/areas¹⁰
(in order of priority, max. 4)

1	M-06	2	M-04	3	M-08	4	M-02
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Free keywords describing this research (max. 4)

1	Computer algebra	2	Differential equations
3	Algorithms	4	Group theory

Fellows requested¹¹

Postgraduate level

Number of researcher-months requested¹²

48

Indicative number of fellows¹³

4

Post-doctoral level

Number of researcher-months requested¹²Indicative number of fellows¹³

Previous Marie Curie Fellowship Contracts

Has your Research Group been involved directly in a Marie Curie Fellowship before?
If yes, please details :Y N

Programme Name

Contract No

Programme Name

Contract No

Programme Name

Contract No

Programme Name

Contract No

Marie Curie Host Fellowship Proposal Form – Form A2



EUROPEAN COMMISSION
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GENERAL
MARIE CURIE HOST
FELLOWSHIP PROPOSAL

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CADEPA

2. ADMINISTRATIVE INFORMATION

Legal information on the participating organisation

Registration No with the European Commission's Research Programmes ¹⁴Organisation Legal Name ⁶

Queen Mary and Westfield College

Short Name ¹⁵

QMW

Legal Registration No ¹⁶Activity Type ¹⁷

HES

Legal Status ¹⁸

GOV

If 'PRC', Specify ¹⁹Business Area ²⁰ (NACE)

80

For Companies only : Organisation details

Annual turnover ²¹Annual Balance Sheet Total ²²Number of employees ²³Is your Organisation independent ²⁴?

Y

N

If No, please indicate name(s) of owner(s) who own 25 % or more ²⁵

Address of the legal entity

PO Box ²⁶

Street Name and Number

Mile End Road

Post Code ²⁷

E1 4NS

Cedex ²⁸

Town/City

London

Country Code ²⁹

UK

Country Name ²⁹

United Kingdom

Internet homepage of organisation

<http://www.qmw.ac.uk>

Administrative officer authorised to sign the contract

Title (Dr, Prof., ...)

Dr

Gender ³⁰

F

M

X

Family Name

Westlake

First Name

David

Telephone No ³¹

(44-20)78825021

Fax No ³¹

(44-20)89819110

E-mail

D.J.Westlake@qmw.ac.uk

I declare that I have read and accept the rules governing the Marie Curie Host Fellowship Scheme for which my organisation is applying. I certify that the information about my organisation in this proposal is accurate and that, if this proposal is selected, my organisation will facilitate the proposed research.

STAMP OF COMPANY

DATE (DD/MM/YYYY)

SIGNATURE OF ADMINISTRATIVE OFFICER ³²

Marie Curie Host Fellowship Proposal Form – Form A3



EUROPEAN COMMISSION
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MARIE CURIE HOST
FELLOWSHIP PROPOSAL

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CADEPA

2. ADMINISTRATIVE INFORMATION (CONTINUED)

Co-ordinator of the proposal

Title (Dr, Prof., ...)	Prof.	Gender ³⁰	F	<input type="checkbox"/>	M	<input checked="" type="checkbox"/>
Family Name	Leedham-Green					
First Name	Charles					
Name of research group ³³	Computer Algebra					
Number of full-time researchers in research group ³⁴	5	Number of technical support staff in research group	1/2			
PO Box ²⁶						
Street Name and Number	Mile End Road					
Post Code ²⁷	E1 4NS	Cedex ²⁸				
Town/City	London					
Country Code ²⁹	UK	Country Name ²⁹	United Kingdom			
E-mail	C.R.Leedham-Green@qmw.ac.uk					
Internet homepage of research group	http://www.maths.qmw.ac.uk/CARG					

I declare that I have read and accept the rules governing the Marie Curie Host Fellowship Scheme for which my organisation applies. If this proposal is selected, I agree to act as co-ordinator in charge of the implementation of this proposal and that the Commission may publish, including on its Internet Site, details of this proposal. I agree that the information provided on page A4 may be used as an advertisement for fellows on the Commission Internet Site. I declare that there is no other proposal from this research group for the same or similar research pending or awaiting a decision for Community funding.

DATE (DD/MM/YYYY)

SIGNATURE OF CO-ORDINATOR ³²

Previous contracts

Has the research group already held a Marie Curie Host Fellowship? (Put a cross)	Y	<input type="checkbox"/>	N	<input checked="" type="checkbox"/>
If yes, please give details of the contract : name of programme, contract number, type of fellowship and the contract period (DD/MM/YYYY)				
Programme name			Contract No	
Type of fellowship ⁵ (IND, DEV, PHD)	Contract period :	From	To	



EUROPEAN COMMISSION
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3. ADVERTISEMENT FOR RECRUITMENT OF FELLOWS TO BE PUT ON COMMISSION INTERNET SITE

Organisation Legal Name ⁶

Queen Mary and Westfield College

Contact details for interested researchers

Contact person

Prof. Charles Leedham-Green

Telephone No ³¹

(44-20)78825478

Fax No ³¹

(44-20)89819587

E-mail

C.R.Leedham-Green@qmw.ac.uk

Internet homepage where interested researchers can find further information

<http://www.maths.qmw.ac.uk/CARG>

Recruitment advertisement ³⁵

Write an advertisement for the fellowships, which will be available within your research group, if this proposal is selected. Use a maximum of 2000 characters of plain typed text, preferably in English.

Pre-doctoral Fellowships under the Marie Curie Training Site Scheme are offered in Computer Algebra for Differential Equations and Pure Algebra. Special interests are: development and implementation of algorithms to relate, simplify and solve ordinary and partial differential equations; interfacing of computer algebra systems, both locally and via the internet; developing algorithms for computing with matrix groups over finite fields, and nilpotent and soluble groups; design of algorithms and software for computing with groups, graphs, designs and finite geometries.

Applicants should have a good first degree in Mathematics or Mathematics and Computing. Some programming experience is required.

Fellows will be paid reasonable return travel costs and a subsistence of 1200 euros/month, and will be treated in the same way as full-time graduate students of London University. The College is committed to an equal opportunities policy and applications from women and other previously disadvantaged groups are welcomed.

Indicative Recruitment Plan

Year of contract	Calendar year of recruitment of fellows	Number of fellows to be recruited
1st	2000–1	1
2nd	2001–2	1
3rd	2002–3	1
4th	2003–4	1



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CADEPA

PROPOSAL ABSTRACT FOR MARIE CURIE TRAINING SITES

Proposal Full Name ¹

Computer Algebra for Differential Equations and Pure Algebra

Summary of proposal

Give a brief description under the following headings. This summary should be preferably in English, avoiding formulae and other special characters.

Description of research area of the doctoral training (max. 1500 characters)

The Differential Equations area includes:

- development and implementation of algorithms for the solution of overdetermined PDE systems;
- combination of these low level programs into higher level programs for determination of symmetries, conservation laws and Lagrangians of DEs, equivalence of DEs, linearization of DEs;
- application of these high level programs to mathematical and physical problems;
- interfacing of the high level programs through interactive web pages and OpenMath links with other Computer Algebra systems;
- development of strategies for the automatic solution of arbitrary ODEs;
- developing and implementing algorithms in REDUCE and/or Maple.

The Pure Algebra area includes:

- almost all aspects of computational group theory; in particular developing algorithms for computing with matrix groups over finite fields, and nilpotent and soluble groups;
- interactions of computational group theory, graph theory, design theory and finite geometry;
- design of algorithms and software for computing with groups, graphs, designs and finite geometries;
- applications of the software to mathematical problems;
- developing and implementing algorithms in GAP and/or MAGMA.

Expected benefit and impact of the research training for the fellows (max. 1000 characters)

Fellows will experience a broad training in computer algebra (REDUCE, Maple, GAP, MAGMA), modern approaches to analysing, simplifying and solving ordinary and partial differential equations and/or computational group theory, graph theory, design theory and finite geometry. Theory and applications will be included.

They will participate in the group's regular seminars and discussion meetings in Computer Algebra, Pure Algebra and Dynamical Systems. They will have the opportunity to attend postgraduate taught courses if appropriate. The group, although broad in its range of skills, techniques and applications, is cohesive and includes researchers of international standing. Developing computational skills will benefit fellows by offering a wide range of future employment opportunities.



X	1	FP5HFP	<input type="checkbox"/>	<input type="checkbox"/>	
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DETAILED PROPOSAL INFORMATION FOR MARIE CURIE TRAINING SITES

The detailed proposal information described below must be provided in addition to the proposal form
(All pages must be numbered in a single series)

1. DESCRIPTION OF THE DOCTORAL TRAINING

(Preferably not more than 3 pages)

1. Detailed description of the scientific and technological significance of the doctoral training proposed, highlighting current state-of-the-art, innovative aspects including specific skills or techniques and description of training courses that may also be offered to fellows .
2. Specific benefits to fellows of undertaking part of their doctoral training at the proposed training site.

2. DESCRIPTION OF THE TRAINING SITE

(Preferably not more than 4 pages)

1. Presentation of the institution where the Training Site is located.
2. Presentation of the Training Site: detailed breakdown of research staff (doctoral students, post-doctoral researchers, technical and administrative staff), specifying number of persons involved in the implementation of the research training.
3. Description of the research quality of the training site: current research activities, national and international collaborative research activity, research profile of researchers who will supervise fellows proposed, list of most relevant publications, patents, and awards to staff of the training site.
4. Description of the research facilities, resources, equipment and arrangements, including supervision, to allow the implementation of this proposal.
5. Evidence of past successful international postgraduate and doctoral training; numbers of students trained over the past 5 years.

The Training Site is the research group or inter-related research groups, where the training will be provided.

If the Training Site consists of more than one research group, the above mentioned description must be provided for each research group.

Organisers of international doctoral studies involving at least five organisations in three different countries within the framework of a formal agreement should attach a copy of the agreement.