

Post-doctoral research fellow

Astronomical Institute AS CR, Ondřejov, Czech Republic

Job Purpose

The post-doctoral fellow will undertake high-quality research in solar physics, in particular the development and usage of numerical radiation hydrodynamic codes to model flare processes and an analysis and interpretation of multi-wavelength solar data in collaboration with solar physics group and members of EC FP-7 F-CHROMA network.

Main Duties and Responsibilities

1. To assist in the development of research projects consistent with the activities of the F-CHROMA project in the area of the numerical Fortran code development, simulations, and interpretation of results.
2. To maintain collaborative projects with European teams of the F-CHROMA network, in particular providing simulations for other members of the network and testing results of simulations against other codes.
3. To aid in presenting work at group/departmental seminars and national/international meetings.
4. To work towards joint publication(s) in leading international journals with members of the solar physics research group and F-CHROMA team.
5. To attend and participate in appropriate team meetings (including overseas meetings) research seminars and conferences.
6. To keep up to date with current developments in subject field.
7. To write up research papers and present research findings at national and international meetings.

Knowledge/Qualifications

Essential:

A1 A PhD in solar physics or a related area by the start of contract.

A2 Research experience in scientific programming and modelling, Fortran code development in the field of astrophysics, and experience in both independent and collaborative research.

Desirable

B1 Knowledge of non-LTE radiative transfer and (radiation) hydrodynamics.

Skills

Essential:

C1 Good technical skills related to the project research area.

C2 Good communication skills, both oral and written.

C3 Good interpersonal skills and presentation skills.

C4 Good time-management skills.

C5 Ability to work independently and as part of a team.

C6 Ability to work with modest supervision.

C7 Self-motivation and scientific creativity.

Desirable:

D1 IDL data analysis skills.

Experience

Essential:

E1 1 - 2 years research experience in solar physics or a related area.

E2 Experience of leading research papers for publication in peer reviewed journals.

E3 Presentation of research results at meetings.

E4 Experience with computer simulations in astrophysics.

E5 Experience of working in a research team.

Desirable:

F1 Experience in the IDL programming environment

Job Features

Dimensions

Develop and maintain an international research reputation for excellence in an appropriate field of research activity consistent with the research plans of the F-CHROMA network and the solar physics group. Produce publications as appropriate to subject specialism within appropriate agreed timescales.

Planning and Organising

Plan and organise research activities and administrative tasks related to own work. Bring issues quickly to attention of Co-I. React to project needs, which may vary on a short timescale.

Decision Making

Prioritise own work. Contribute to team decisions about research directions.

Internal/External Relationships

Internal Frequent liaison with project investigators for exchanging information, research strategy. Participate in scientific discussions with staff/research students .

Maintain links with other international members of F-CHROMA team. Maintain links with key researchers outside F-CHROMA. Maintain links with journals (publishing) and conference organs.

Problem Solving

All aspects of high-quality scientific research activity, including repetitive problem solving, technical issues, and flashes of inspiration.

Terms & Conditions

Salary will be effectively comparable to a European post-doc level. The position is extendable up to December 31, 2016 depending on research achievements and the available funding.

The succesfull candidate will be eligible to apply for the Institute accomodation/flat.

Application submission

The application deadline: March 10, 2014

Application should contain cover letter, curriculum vitae including a list of publications and research interests, and copies of three representative publications, all preferably in pdf. Applicants should send their applications and arrange to have two letters of support sent to sekretariat@asu.cas.cz

Contact person

Petr Heinzl, Co-I of the F-CHROMA project
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