ENEA INTERNATIONAL FELLOWSHIP PROGRAMME

OPEN CALLS

RESEARCH FIELDS

I - ADVANCED PHYSICAL TECHNOLOGIES AND NEW MATERIALS

FIM 1 (Ref. Code)
Research field: Analysis of SPARC radiation: characterization of coherent synchrotron (non sybchrotron) radiation; undulator spontaneous emission and of spiking in SASE regime
Experienced: PhD in physics + 2 years of post-doc experience
Research center: Frascati

FIM 2
Research field: Development of electromagnetic technologies applied to health applications (microwave systems for early detection of breast and prostate tumors, microwave tomography, wearable sensors and devices for wireless telemedicine for home and hospital applications)
Early-stage, knowledge of the physics of electromagnetic fields, antenna and microwave techniques and programming languages for scientific applications
Research center: Casaccia

FIM 3
Research field: Syntesis of ceramic/polimeric nanocomposite materials for application in advanced electronics and energy scavenging by means of standard and advanced (laser) chemical methodologies.
Early stage: Chemistry, engineering, physics degree
Research center: Faenza

II - BIOTECHNOLOGIES, AGRO-INDUSTRY AND HEALTH PROTECTION

BAS 1
Research field: Immune/allergic response to environmental and food contaminating compounds
Experienced researcher
Research center: Casaccia

BAS 2
Research field: Sequencing and annotation of the tomato genome
Early-stage
Research center: Casaccia

BAS 3
Research field: In vivo transcriptome modular after low dose of high energy neutron irradiation of cosmic rays and therapeutic interest
Research center: Casaccia
Early stage: Molecular and Cellular Biology

III - ENERGY TECHNOLOGIES, EFFICIENCY AND RENEWABLE SOURCES

TER 1
Research field: Flow Boiling Heat Transfer and Flow Pattern Identification in Microgravity
Research center: Casaccia
Experienced: PhD in Mechanical Engineering, with knowledge of heat transfer and fluid mechanics

TER 2
Research field: CO_2 Capture and Storage in Fossil Fuel (Mainly Coal) Power Plants
Research center: Casaccia
Early stage: basic knowledge of chemical reactors engineering and modelling

TER 3
Research field: Concentrating Solar Power Technology
Research center: Casaccia
Early stage: knowledge in renewable energies

IV - ENVIRONMENT, GLOBAL CHANGE AND SUSTAINABLE DEVELOPMENT

ACS 1
Research field: Large-scale climate and water cycle variability diagnostics studies using observational and modeling data
Early stage applicants with a background on climate sciences (Degree in mathematics or physics)
Research center: Casaccia

ACS 2
Research field: Multi scale air pollution modelling: development of the eulerian chemical transport model for supporting national and regional air pollution policies.
Experienced: PhD in physics or mathematics
Research center: Bologna

ACS 3
Research field: Sustainability assessment of innovative technologies based on a life cycle approach
Early stage: Degree of Economics or Scientific discipline, with knowledge of one or more among: Life Cycle Assessment, Material Flow Assessment, Scenario Development, Environmental Input Output Analysis
Research center: Bologna

V - NUCLEAR FUSION AND FISSION, AND RELATED TECHNOLOGIES

FPN 1
Research field: Density fluctuation measurements on FTU with a microwave reflectometer
Experienced researcher
Research center: Frascati

FPN 2
Research field: Development of neutron diamond detectors
Early-stage
Research center: Frascati

FPN 3
Research field: Role of zonal flows and geodesic acoustic modes in turbulent transport
Early stages
Research center : Frascati