

Job title : Full time Professor - Medical Imaging for Interventional Therapies

Professorship as part of a chair INSERM / Telecom Bretagne

Location: Brest, FRANCE

Image & Information Processing Department, Institut Mines Telecom / Telecom Bretagne
Laboratory of Medical Information Processing : LaTIM - UNSERM U1101

Job's environment:

The Laboratory of Medical Information Processing - LaTIM, develops multidisciplinary research activities. The group includes members from the "Université de Bretagne Occidentale", Telecom Bretagne, INSERM and the University Hospital of Brest. LaTIM's research is positioned on the Optimization of Therapeutic Actions by Multimodal Information Integration, and has two major research axes, "non-interventional therapies" and "Interventional Therapies", and a cross-disciplinary axis "Shared Multimodal Medical Data Management for Decision Support". LaTIM is a founding member of two Laboratories of Excellence (Labex) programs: CominLabs (Communication and Information Science Laboratories), the National Labex CAMI (Computer Assisted Medical Interventions), and the Technological Research Institute B-COM,

The selected candidate will strengthen the team on "Interventional Therapies". The research interests of the successful candidate should concern Image Analysis, Medical Imaging, Modeling and/or Representation of Dynamic forms. The increasing number of modalities and scales in medical information acquisition, requires the development of methodologies in the field of multi-modal, multi-scale, spatio-temporal information fusion, and the establishment of conceptualization processes and mathematical formulations specific to information fusion problem. Hierarchical modeling of multi-scale phenomena observed (from the molecule to the individual organ and the whole body) will be also part of the responsibilities of the position.

The application domain concerns orthopedic surgical procedures, mainly optimization and prediction of the consequences of therapeutic intervention through the integration of new data and knowledge in orthopedic surgical procedures. Taking into account the quality of information and decision-making throughout the integration process will require interaction with the research team on "Shared Multimodal Medical Data Management for Decision Support".

The selected candidate will benefit from a support environment for evaluation and validation methodologies and theoretical concepts that will be developed, thanks to the multidisciplinary laboratory culture of facilitating access to the University Hospital resources (technical trays imaging, motion analysis, anatomy lab,) and the existence of an Image Guided Therapy platform, allowing access to heavy equipment (low dose whole body X-ray EOS, 3T MRI, fMRI, dedicated operating room ...). The CominLabs and CAMI LabEx and the TRI B-COM, will provide a new dimension to the dynamics of collaboration.

Teaching activities will concern Mathematics and Signal Processing and require skills in Applied Mathematics and Image Processing.

The candidate will explore opportunities to develop new courses in Mathematics & Imaging, in particular in the field of ICT for Health, in the third year of STI (Systems for Information Processing) engineer training program, Master of Science and inter-semester.

EDUCATION, SKILLS AND EVALUATION CRITERIA

Level of training and / or experience required:

- PhD or equivalent with professional more than 8 years experience
- Habilitation/ accreditation to supervise research (HDR) or equivalent

Abilities and skills

- Excellent interpersonal skills and ability to integrate teams of research and teaching multi and inter-disciplinary, open-mindedness, ability to self

- Ability to supervision (PhD students, masters, researchers) and animation of a team or group.
- Ability to finance research activities
- Ability to coordinate research projects (national or international) partnerships.
- Ability to provide education and to coordinate an educational team.

Theoretical knowledge and practical techniques to hold the post:

- Knowledge and skills in the areas listed below:
 - Mathematics
 - Analysis and Image Processing
- Knowledge of medical community
- Fluent English
- Knowledge of ICT field
- Knowledge in Human Machine Interfaces, Augmented Reality, immersive environments, are appreciated
- Knowledge of Biomechanics

Evaluation criteria

- Project in line with the profile of the position described above, emphasizing its originality and its position with respect to the state of the art in an international context. The degree of initiative, autonomy, assessment of the methodological and financial feasibility, valuations (or potential recovery) will be so many things to consider in the proposed project.
- Teaching (pedagogic) project related to research activities in the field of ICT for health.
- Ability to define, direct, and organize a large science projects and programs.
- Ability to supervise research and directing theses, participation in PhD board of examiners
- Ability to take responsibility and studies, research and development (industrial / European / International partnership projects)
- Ability of coordinating research: organization and participation in conferences, lectures, session chair, program committee, publishing magazines.
- Ability to promote research:
 - o Number and quality of original publications
 - o Inventions, technical innovation, patenting, ...; support for business creation
 - o Invited conferences
 - o Awards, Honors, ...

Your application must include:

- The application form containing the elements listed below (next pages)
- A proposal for Research and Teaching in accordance to the job description.

Please send all these items with a covering letter at the following Email address:

recrut14-profchaire@mlistes.telecom-bretagne.eu

Deadline for application : November, 4th, 2014