**CAMPAGNE D’EMPLOIS 2018**

FICHE DE POSTE

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| Composante :  **SCIENCES**Laboratoire : **LISA** | Localisation de l’emploi demandé :**Campus centre** |

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| **Identification de l’emploi**Nature de l’emploi (PR, MCF) : **MCF**Poste n° :Discipline CNU: **30, 37**Profil du poste : **Observation de l'atmosphère terrestre: de la spectroscopie moléculaire à l’exploitation des données satellitaires**Job profile**: Observation of the Earth's atmosphere from molecular spectroscopy to satellite data exploitation**Research Fields EURAXESS (se référer à la liste des champs de recherche européens): **Molecular spectroscopy, molecular physics, optics, atmospheric sounding, Earth observation**Mots-clés(se référer à la liste)**: spectroscopie moléculaire, physique moléculaire, optique, télédétection spatiale, observation de la Terre****Nature du concours** (PR ou MCF) (se reporter aux articles 46 et 26 du décret n°84-431du 6 juin 1984 modifié) :  |

**Enseignement**

**Lieu principal d’exercice** : Campus Centre – 61 avenue du Général de Gaulle – 94000 CRETEIL

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| Nom de la personne à contacter : |  |
| Courriel : |  |
| Téléphone :  |  |

**Scientific context**

Remote sensing of the chemical composition of Earth's atmosphere from space has seen major progress over the past decade, in particular by increasing the number of detectable species in the troposphere and providing higher sensitivity. Today, satellite observations allow for unprecedented atmospheric monitoring leading to a better understanding of the atmospheric system. LISA’s team SpecAt is deeply involved in the scientific exploitation of satellite missions, and has acquired internationally recognized expertise in the fields of spectroscopy and the development of innovative methods for satellite data inversion.

Future space missions, such as IASI-NG, TROPOMI, MICROCARB, Sentinel 4 & 5, etc., aim to embark instruments with unrivaled performances. This new generation of instruments allows for detection and quantification of new atmospheric species of interest for air quality and / or climate. However, the objectives of these missions often touch the frontier of knowledge in molecular spectroscopy. Accurate spectroscopic data are essential for the retrieval of atmospheric mixing ratios with highest precision. In order to meet this challenge and make the best use of the potential of the new instruments, a synergy between spectroscopy and satellite observations has to be developed.

**Needs:**

LISA's team SpecAt includes specialists in high-resolution molecular spectroscopy (theoretical and experimental) and atmospheric physics. Its needs concern the development of a research activity at the interface between remote sensing and molecular spectroscopy. This will effectively respond to the demands and expectations of the atmospheric community in the next decade.

The future teacher-researcher is expected to strengthen the bridges between spectroscopy and remote sensing of the Earth's atmosphere. He/she will contribute to improving the quantification and accuracy of measurements of atmospheric species either by (i) spectroscopic studies, or (ii) the development of radiative transfer codes and inversion methods. He/she is expected to contribute to the synergy between both fields.

**Required skills:**

The ideal candidate will possess either (i) excellent knowledge of experimental and/or theoretical tools required for spectroscopic analysis of high resolution molecular spectra, or (ii) an excellent knowledge of atmospheric inversion methods.

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