

## ATTACHMENT

### *RESEARCHER / SENIOR RESEARCHER IN COMPLEX SYSTEMS MODELING*

#### QUALIFICATIONS AND SPECIAL SKILL REQUIREMENT

- Degree in Physics, Computer Science, or Electrical/Electronics/Mechatronics Engineering, with interest/experience in any of the following areas,
  - *Non-linear systems modeling*
  - *Signal Processing (particularly in the visual modality),*
  - *Artificial Intelligence,*
  - *Statistics*
- Strong programming skills in C++/C, and Matlab is ESSENTIAL
- Analytical skills,
- Team oriented interpersonal skills,
- Fast learner,
- Strong communication skills (written and verbal),
- Results oriented, proactive and able to work independently,
- Postgraduate qualifications will be an advantage.

#### JOB DESCRIPTION

This position will require the candidate to assist the team to improve the performance of the core components for an intelligent surveillance system, particularly those components which require modeling of complex and non-linear systems to be implemented. The position will also involve the research and development of novel pattern recognition components, according to new requirements or subsequent phases of the project. This member-of-staff will be measured on his/her contributions over the following non-exhaustive key parameters (in no order of importance) viz.

- Efficiency and effectiveness of the improved core component(s)
- Ability to think of novel solutions to existing problems
- Ability to identify and analyze new problems
- Ability to implement novel solutions in terms of proofs of concept
- Ability to contribute to the lab's output with regards to Intellectual Property
- Ability to assist in appropriate administrative tasks
- Ability to gradually contribute to the theoretical depth of the lab
- Other measures as specified by either the organization and/or the Centre Director.