



Ph.D. Opening in Biometrics Research

Multispectral Imagery Laboratory

School of Electrical and Computer Engineering

Principal Investigator: Dr. Thirimachos Bourlai

<https://engineering.uga.edu/people/profile/thirimachos-bourlai>



Research Topic: Rapid Detection of High Quality Physiological and Behavioral Biometrics using *Deep Learning and Computer Vision Algorithms*

MILAB Overview: The Multispectral imagery lab (MILAB) conducts research, development, evaluation and testing of multi-modal and multi-spectral data processing technologies to address national security challenges. Our core research competences are data collection activities, computer vision, machine and deep learning, data analytics, computational modeling, data visualization, image restoration, signal and image processing, and computer science. MILAB's activities involve first-class interdisciplinary research with other research groups, collaborations with private industry and academic partners across the nation, and mission-specific support for national security sponsors. *MILAB thrives in a culture of respect, diversity, curiosity, and discovery.*

- Dr. Bourlai's multispectral imagery laboratory (<https://milab.uga.edu/>) is an ~800 ft² facility located in the Boyd Graduate Studies building on campus. The lab has several PhD, MS and undergraduate researchers.

MILAB's Mission: *To advance human identification technology in the areas of biometrics (including but not limited to face, ears, iris and fingerprints) systems when operating under challenging, real-world conditions.*

Job description -- Research Topic: Rapid Detection of Physiological and Behavioral Biometrics

MILAB provides leading biometric solutions for various agencies and commercial companies. To do that and depending on our active projects, various positions need to be filled in. In one of our new projects we will be hiring several students (GRA). The primary responsibility of the GRA student positions will be to (a) advance the field of computer vision and biometrics using either face, iris or voice as the primary biometric trait; (b) lead, participate and support data collection activities, i.e. capturing biometric images and videos using different sensors. The student will be involved in a highly interdisciplinary research that overlaps with electrical and computer engineering, computer science, data analytics, big data and forensics.

Desired Skills and Experience:

- Students from the College of Engineering: ECE (preferable) or CS.
- Experience in data Collection activities and in developing algorithms to analyze signal/image data sets.
- Experience in signal/image processing and/or Machine and Deep Learning; Skilled in programming development and testing: coding experience in any of the following programming languages/platforms, namely Matlab, C++, C#, Python.
- Ability to work effectively in a team environment; Proven ability to meet project goals and timelines; Strong analytical skills.
- Experience developing user interfaces and object-oriented programming.
- *Previous research experience as undergraduate or Masters student in areas related to computer vision is preferred.*
- *High GPA and strong references letters will boost admission chances.*

Application Procedure:

- Interested students must apply to the **Ph.D. in Engineering (Biometrics) program** in the college of engineering.
- More information about the application procedure, eligibility requirements, deadlines and assistantships can be found at: <https://engineering.uga.edu/graduate-programs/admissions>