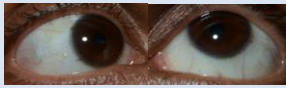


SSBC 2019

Sclera Segmentation Benchmarking Competition 2019



[Call for Participation](https://sites.google.com/view/ssbc2019/home)



<https://sites.google.com/view/ssbc2019/home>

Important Dates

Site opens:
31st Oct 2018

Registration starts:
31st Oct 2018

Test dataset available:
1st Nov 2018

Registration closes:
10th Feb 2019

Algorithm submission
deadline: 10th Feb 2019

Results announcement:
11th Feb 2019

Organizers



Dr. Abhijit Das
Post-Doc
STARS, Inria Sophia
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Prof. Umapada Pal
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Sclera biometrics have gained significant popularity among emerging ocular traits in the last few years. In order to establish this idea and to evaluate the potential of this trait, various pieces of work have been proposed in the literature, both employing sclera individually and in combination with the iris. In spite of those initiatives, sclera biometrics need to be studied more extensively to ascertain their usefulness. Moreover, the segmentation task of sclera should receive more attention due to the challenges. In order to fulfill the above-mentioned aims and to attract the attention/interest of researchers, we are planning to host the competition. Moreover, for benchmarking sclera segmentation, three competitions were organized namely SSBC 2015, SSRBC 2016, SSERBC 2017 and SSBC 2018 in conjunction with BTAS 2015, ICB 2016, IJCB 2017 and ICB 2018 respectively. Due to the overwhelming successful completion of SSBC 2015, SSRBC 2016, SSERBC 2017 and SSBC 2018, we plan to organize this proposed competition to benchmark sclera segmentation on both low and high resolution images.

We will welcome the top ranking participant to join as co-author of the technical report of the competition that will be submitted to ICB 2018.

Registration The competition registration can be done by email. If you would like to register and receive the training dataset, please send an email to abhijit.das@griffithuni.edu.au with subject line as SSBC 2019, with the following information: Name, Affiliation, Email, Phone number and Mailing Address:

Benchmark datasets: The competition aims to benchmark the sclera segmentation task with both low and high resolution image datasets. Two different datasets will be employed, the first one is acquired by DSLR while the second one by a mobile camera. The first database consists of 2624 RGB images taken from 82 identities and images were collected from both the eyes of each individual so 164 different eyes. Here for each individual image, four multi-angles (looking straight, left, right and up) are considered and for each angle 4 images are considered. The individual comprises of both male and female and different colours, few of them were wearing contact lenses and images were taken in different times in the day. The database contains images with blinking eyes, closed eye and blurred eye images. High-resolution images are provided in the database (300 dpi resolution and 7500 x 5000 dimensions). All the images are in JPEG format. A NIKON D 800 camera and 28300 lenses were used for image capturing. A ground truth or manual sclera segmentation of this dataset is prepared. For development purposes, a subset of the database, both eye images and ground truth (1 image for each angle of first 30 individual's i.e. 120) will be provided to the participants.

This second database consists of 500 RGB images from both eyes of 25 individuals (in other words 50 different eyes). For each eye, 10 sample images were captured. The database contained blurred images and images with blinking eyes. The individuals were comprised of both males and females (12 males and 13 females), of different ages and different skin colours, 2 of them were wearing contact lenses and the images were taken at different times of the day. Variation in image quality (blur, lighting condition etc.) and different acquisition conditions was included intentionally in the database to investigate the performance of the framework in non-ideal scenarios. High-resolution images (3264 x 2448) of 96 dpi are included in the database. All the images are in JPEG format. The images were captured using a mobile camera with an 8-megapixel rear camera.

They need to submit the binary mask in .csv file per image. The proposed algorithms of the participants will be evaluated by the organizer. The evaluation measures will be the precision and recall (recall will consider the prior measure for ranking the algorithms).

Method of participation for those that enter the competition Training dataset will be made available. The naming convention of the eye image will be as E-xxx-y-z-n.jpg, where E signifies eye image, xxx signifies class in number e.g. 001, 061, 142, y signifies left = l or right = r eye, z is gaze angle i.e. l = left, r = right, s = straight or t = top and n is the number of the samples in that particular angle. The naming convention of the mask image will be as M-xxx-y-z-n.jpg, where M signifies mask image and xxx-y-z-n signify the same as for the eye images.