

MICCAI 2017 Challenge Proposal

Title

Organizing Team

Please provide names and affiliations of the organizing team.

Contact Person

Is the proposed Challenge part of a Workshop? If **yes** you need to complete and submit a Workshop proposal as well.

Yes No

Duration

Half Day Full Day

Expected Number of Participants

An important prerequisite for a successful challenge is sufficient number of participants.

Please explain the basis of your estimate (e.g. numbers from previous challenges) and/or provide a list of potential participants and indicate if they have already confirmed their willingness to contribute.

Website

Please provide a link to the website where your challenge will be posted and maintained.

Space and Hardware Requirements

Please list any technical equipment or support needed (e.g. projectors, computers, monitors, microphones)

Challenge Description

The objective for any challenge should be to provide a fair and direct comparison of different methodological solutions to important research problems of clinical relevance.

Please provide a detailed description of the specific task that will be addressed in the challenge.

Data Quality

It is important to provide sufficient data with variability to be representative of the problem. If relevant, it is preferred to have data obtained with different protocols or workflows as used in clinical practice worldwide, and/or from different institutions or populations.

Training Data

Prospective participants to challenges often appreciate the availability of ample training data. Provide this data if appropriate to the task. Training data should be representative of testing data. Please indicate in the rules of your challenge how participants should use this training data, e.g., are they allowed their own training data as well or not? How many cases will be provided? What general pre-processing steps will be performed? When will the data be available?

Please provide a detailed description of the training data set as well as a link to representative sample training images. Plans to change or augment the dataset prior to the workshop should be made clear.

Test Data

Make sure you properly separate training and test data.

Please provide a detailed description of the test data set as well as a link to representative sample test data. Plans to change or augment the test dataset prior to the workshop should be made clear.

Reference Standard

The methods of defining the reference standard (“gold standard”) and of evaluating the results of the algorithms must be clearly defined. The challenge is unlikely to attract interest from serious contenders if these methods are poorly considered or open to question. For a reference describing procedures to define reference standards see http://www.hal.inserm.fr/file/index/docid/185431/filename/Jannin_Manuscript-revised3IJCARS2007.pdf

Please provide a detailed description of the reference used to assess the quality of the results and how it is relevant to the problem addressed in the challenge (e.g. why is it clinically important). While most challenges have clinical goals, some may address problems prior to clinical translation. If this is the case for your challenge, please explain.

Please provide a description of how reference gold standard was obtained, (e.g. clinician- or graduate-student-annotated). Write the justification for reference standards provided by non-experts, or from the output of an algorithm. If this is not applicable to your challenge, please justify the omission of the relevant clinical expertise.

Evaluation Metrics

Provide a justification of the validation metrics that will be used.

Conflict of Interest

Preference will be given to challenges where organizers are not participating in challenge. If organizers wish to participate in the challenge, they should clearly state precautions taken to avoid conflicts of interest (e.g. participating but not taking part in any ranking of methods).

Please indicate if you plan to participate in the challenge and if so, what precautions you have taken to ensure that there are no conflicts of interest

Open Data

MICCAI 2017 open data policy. Please indicate if you are willing to make the data you contribute publically available. If you will restrict the use of the data, justify the reasons and explain your policy. Overly restrictive policies or licenses (e.g. with regards to any derived results) will not be permitted.

Publication and Future Plans

Please indicate if you plan to coordinate a publication of the challenge results.

Explain your strategy for permitting new submissions after the challenge is over.

Computing Environment

Organizers of on-site challenges must provide a fair computing environment for all participants. For instance, algorithms should run on the same computing platform provided to all.

Please explain platform used for any online challenge. For on-site challenges, indicate how you plan to provide a fair computing environment.

Reviewers

Challenges will be formally reviewed. Please see CFP for details. You have the option of suggesting three reviewers that are at arms length, ideally one of which has the clinical expertise for the challenge.

Other Comments