**ISBI 2019 Challenge Proposal Form**

*Please fill in this form and submit the proposal as a PDF document by sending it by email to the ISBI 2019 Challenge Co-Chairs:*

* Ivana Isgum (I.Isgum@umcutrecht.nl)
* Tom Vercauteren (tom.vercauteren@kcl.ac.uk)

**Title**

*Please provide a title for your challenge*

**Organizing Team**

*Please provide names and affiliations of the organizing team.*

*Diversity in the team of challenge organizers is generally recommended. It is good to include a number of people from different backgrounds with experience in the field. These might include researchers from a number of different academic institutes, as well as from industry, who have worked on a variety of projects related to the topic of interest. This will ensure access to a larger pool of data and contacts, as well as a balanced set of opinions on how to define the reference standards and evaluate algorithm performance.*

**Contact Person**

*Please provide a name and email address of the contact person*

**Space and Hardware Requirements***Please estimate how many participants you expect and list any technical equipment or support needed (e.g. projectors, computers, monitors, microphones)*

**Challenge Description**

**Problem description**

*Please provide a description of the problem that your challenge is going to address, why this problem is relevant for the community to work on and who is the target audience for whom the problem is of interest?*

**Data Quality and Availability Post-Challenge**

*Please provide a description of the evaluation data available for the challenge and how the data is sampled (random or purposive sampling, exclusion criteria, etc.).  
Please include information on Ethics approval (available, to be obtained, not needed).*

*It is important to provide sufficient data that contains enough variability to be representative of the problem. In general, it is preferred to have data from different scanners or devices, obtained with different protocols or workflows as used in clinical practice worldwide, and from different institutions or populations.*

*Also describe if and how the data, or some portion of it, will be made available to the community after the challenge. In general, it is preferred that challenges make (some) data openly available.*

**Training & Testing Data***Please describe the training and testing data. What type of sampling is used to ensure that the training data is representative of the test data? Are participants allowed to use their own training data as well or not? How many cases will be provided for training and testing? What general pre-processing steps will be performed? When will the data be available?*

**Reference Standard**

*Please describe how the reference standard (“gold standard”) used to evaluate the results of the submitted algorithms was obtained and how it is relevant to the problem that the challenge is going to address. In case of annotations, please clarify who made the annotations (clinical expert, student, …)*

*For relevant resources describing procedures to define reference standards see:*

[*http://doi.org/10.1007/978-3-319-28549-8\_9*](http://doi.org/10.1007/978-3-319-28549-8_9)

[*http://doi.org/10.1007/s11548-006-0044-6*](http://doi.org/10.1007/s11548-006-0044-6)

**Evaluation Metrics**

*What evaluation metrics are you planning to use? How are they related to evaluating the described problem? Will the code for the evaluation metrics be open source? Or are you planning to re-use existing code?  
Specify how the evaluated methods will be compared.*

**Website and computing facilities**

*Please describe how you are planning to set up your website and submission system (submission of algorithms, running algorithms in a cloud, or submission of algorithm results). Should submitted algorithms be open source?*

*A good challenge should not end with a workshop at a conference. Make sure you include a high quality website with your challenge, set up in such a way that for many years to come, new submissions can be processed quickly and efficiently. Using a framework for hosting your challenge and/or your data is recommended. Suggestions are provided here:*

[*https://grand-challenge.org/Create\_your\_own\_challenge*](https://grand-challenge.org/Create_your_own_challenge)

**Publications**

*Please describe whether you are planning to write an overview paper of the proposed challenge, or workshop proceedings. Also, a list of existing publications describing the dataset or previous versions of the proposed challenge, if available, should be provided.*