

# PRIME-MICCAI workshop

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## Call For Papers

# 1<sup>st</sup> International Workshop on **P**redictive **I**ntelligence in **M**edicine (PRIME 2018)

In conjunction with MICCAI 2018  
September 16, 2018, Granada, Spain

## Context

Big and complex data is fuelling diverse research directions in both medical image analysis and computer vision research fields. These can be divided into two main categories: (1) analytical methods, and (2) predictive methods. While analytical methods aim to efficiently analyse, represent and interpret data (static or longitudinal), predictive methods leverage the data currently available to predict observations at later time-points (i.e., forecasting the future). For instance, a method which only focuses on classifying patients with mild cognitive impairment (MCI) and patients with Alzheimer's disease (AD) is an analytical method, while a method which predicts if a subject diagnosed with MCI will remain stable or convert to AD over time is a predictive method. Similar examples can be established for various neurodegenerative or neuropsychiatric disorders, degenerative arthritis or in cancer studies, in which the disease/disorder develops over time.

## Topics of interest

The topics of interest include predictive methods but are not limited to:

- ✓ Modeling and predicting disease development or evolution from a limited number of observations;
- ✓ Computer-aided prognostic methods (e.g., for brain diseases, prostate cancer, cervical cancer, dementia, acute diseases, neurodevelopmental disorders);
- ✓ Forecasting disease/cancer progression over time;
- ✓ Predicting low-dimensional data (e.g., behavioral scores, clinical outcome, age, gender);
- ✓ Predicting the evolution or development of high-dimensional data (e.g., shapes, graphs, images, patches, abstract features, learned features);
- ✓ Predicting high-resolution data from low-resolution data;
- ✓ Prediction methods using 2D, 2D+t, 3D, 3D+t, ND and ND+t data;
- ✓ Predicting image modality from a different modality (e.g., data synthesis);
- ✓ Predicting lesion evolution;
- ✓ Predicting missing data (e.g., data imputation or data completion problems).

## Why predictive intelligence?

Despite the terrific progress that analytical methods have made in the last twenty years in medical image segmentation, registration or other related applications, efficient predictive intelligent models/methods are somewhat lagging behind. As such predictive intelligence develops and improves—and this is likely to do so exponentially in the coming years—this will have far-reaching consequences for the development of new treatment procedures and novel technologies.

## Paper submission

- Papers are limited to eight pages, and formatted in Springer LNCS style
- PRIME reviewing is double-blind
- Submission website:  
<https://cmt3.research.microsoft.com/PRIME2018>

## Highlights

- Proceedings will be published in **Springer Lecture Notes in Computer Science (LNCS)**.
- The **PRIME 2018 Best Paper Award** will be granted to the best scientific paper.

## Key Dates

- Full Paper Deadline: **June 11, 2018**
- Notification of Acceptance: **July 15, 2018**
- Camera-ready Version: **July 20, 2018**
- Workshop: **Sept 16, 2018**

## Workshop Organizers

- Islem Rezik (University of Dundee, UK)
- Gozde Unal (Istanbul Technical University, Turkey)
- Ehsan Adeli (Stanford University, US)
- Sang-Hyun Park (Daegu Gyeongbuk Institute of Science and Technology, South Korea)

