

# Call for Papers for a Special Session on

## **Game Data Science (GDS 2016)**

### Aims and Scope

In the past years, both traditional video game platforms and emerging mobile games have tended to become always connected to the internet. This allows game developers to collect a huge amount of data in real time while maintaining an active relationship with the players.

This evolution also contributed to the reach of a wider audience for video games (casual gamers) and to the appearance of new economic models (in-app purchases, Free-To-Play) that are taking more and more importance in a sector traditionally monetized by expensive one-time purchases or sometimes subscriptions.

This recent revolution of the video-game industry creates a broad range of new challenges for both research and business applications. The interest of the industry is reflected by the quickly growing number of job openings for data scientists in game companies.

The current trend to include social features and in-app purchases to games, combined with the exceptional level of granularity of the data collected makes game datasets a unique source of information to observe and analyze human behavior, including social and consumer dynamics. Therefore, it can be anticipated that the outcomes of game data science research will benefit other sectors e.g. other emerging mobile data-driven applications, online marketing, retail, e-commerce.

It is paramount that research efforts focus on the development of adequate statistical and learning methods able to model and predict player behavior, that scale to big datasets and allows an intuitive visualization of the results.

In this special session on Game Data Science we aim to bring together experts from research and industry, providing a stimulating atmosphere to promote collaborations and mutual exchange. The goal of the GDS session is to gather outstanding contributions, pursuing the development and application of new technologies towards a new paradigm in video-games. This special session calls for work on data science that help to understand and predict player behavior, addressing this challenge from three points of view: the statistical/machine learning methodology, visualization analysis and data science product deployment.

# Topics of Interest

## Machine learning applied to game data

- Advanced methods
- Dimensionality reduction and feature extraction
- Modeling of the player behavior and social interactions
- Churn prediction
- Forecast of time series of player activity
- Forecast of the impact of game and marketing events on player behavior
- Clustering of player profiles and activity
- Virality models

## Deployment of game data science in products

- Big data architecture challenges
- Novel algorithms that scale with big datasets
- A/B testing of game data science features
- Visualizations and visual analytics
- Novel visualization techniques for time-series analysis
- Game data science product management
- Game data science applied to game development

# Special Session Website

<http://gamedatascience.org/>

# Submission

Please follow the [special session papers guidelines](https://www.ualberta.ca/~dsaa16/cfSSpapers.html) (<https://www.ualberta.ca/~dsaa16/cfSSpapers.html>), and select the track "Special session" on the [submission website](https://easychair.org/conferences/?conf=dsaa2016) (<https://easychair.org/conferences/?conf=dsaa2016>).

## Highlights

- Conference paper submissions should be limited to a maximum of 10 pages, in the [IEEE 2-column format](http://www.ieee.org/conferences_events/conferences/publishing/templates.html) ([http://www.ieee.org/conferences\\_events/conferences/publishing/templates.html](http://www.ieee.org/conferences_events/conferences/publishing/templates.html)).
- All paper submissions should be prepared for Double Blind reviewing. That is neither the reviewers are revealed nor the author information is disclosed.
- All accepted papers will be published by IEEE and included in the IEEE Xplore Digital Library. The conference proceedings will be submitted for EI indexing through INSPEC by IEEE.
- Longer versions of papers on visualization could later be submitted to the [Special Issue on Visual Game Analytics of the Information Visualization Journal](https://sivga.wordpress.com/) (<https://sivga.wordpress.com/>).
- Top quality papers accepted and presented at the conference will be selected for extension and publication in the special issues of some international journals, including Journal of Data Science and Analytics.

# Important Dates

**Paper Submission deadline: 12 June, 2016**

Notification of acceptance: 15 July, 2016

Final Camera-ready papers due: 19 August, 2016

Conference: 17-19 October, 2016

## Chairs

**Alain Saas**, Silicon Studio (Japan) - [alain@gamedatascience.org](mailto:alain@gamedatascience.org)

**Africa Perianez**, Silicon Studio (Japan) - [africa@gamedatascience.org](mailto:africa@gamedatascience.org)

## Program Committee

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**Julian Runge**, Wooga (Germany) and Humboldt University of Berlin (Germany)

**Rafet Sifa**, Fraunhofer IAIS (Germany)

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