# Participatory development of serious educational games with dynamic difficulty adjustment

#### Olena Pastushenko

Brno University of Technology, Faculty of Information Technology
Božetěchova 1/2. 612 66 Brno - Královo Pole
login@fit.vutbr.cz



# Teaching Activities



Year	Class	Туре	СН
2017/18	IIS	Project	98,8
	ITW	Lab	48
		Project	56
		Exam	10,5
	WAP	Project	65
		SP	12
		BP	36
		Summary	326,3

Table: Teaching activities overview.

### **Accomplishments**



- Article presentation at WorldCIST'18 conference
- Collaboration on writing the project task and computer exersices for ITW
- Development of new gamified computer exercise for learning jQuery for ITW students
- Created presentation about grid layouts and CSS frameworks usage for ITW course
- Questionnaires studies about students satisfaction with the new exercises approach

#### Publications 2018 I





Olena Pastushenko; Jiří Hynek; Tomáš Hruška. "Generation of Test Samples for Construction of Dashboard Design Guidelines: Impact of Color on Layout Balance". In: Trends and Advances in Information Systems and Technologies. 746 (2018), pp. 980–990. DOI:

https://doi.org/10.1007/978-3-319-77712-2\_93.



Olena Pastushenko. bombsQuery - A game for learning basic jQuery. (Computer Software). 2018.

## Publications 2017 I





Olena Pastushenko. Generator of dashboards interfaces based on selected attributes and XML model. (Computer Software). 2017.

## Publication Summary



Туре	Accepted	Rejected	Review	Total
Conference paper	1	0	0	1
Journal entry	0	0	0	0
Invited speech	0	0	0	0
Software	2	0	0	2
Poster	0	0	0	0
	0	0	0	0

Table: Summary of overall publication activities.





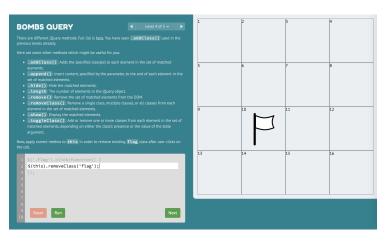


Figure: bombsQuery level example

#### Tasks



- I am going to finish the article about the recognition of areas of significance on dashboards, in collaboration with Jiri Hynek
  - Studying the impact of Gestalt principles on the location and content of dashboards widgets
  - Using developed Generator to create a set of dashboards interfaces for testing purposes
  - Testing and evaluation
- I am going to finish the article about the impact of using gamification in higher education
  - Study the results of students questionnaires
  - Create participatory scheme for further gamified tasks development
  - Describe the use case of the bombsQuery game for teaching iQuery

Thank You for Your Attention!