

*X World Conference on Computers in Education
July 2-5, 2013; Toruń, Poland*

On-line Contests Hosting Service as a Tool to Teach Computer Science Students Programming

Marek Nowicki, *faramir@mat.umk.pl*

Łukasz Mikulski, *frodo@mat.umk.pl*

Marcin Piątkowski, *martinp@mat.umk.pl*

Rafał Kluszczyński, *klusi@mat.umk.pl*

N. Copernicus University, Faculty of Mathematics and Computer Science,
Chopina 12/18, 87-100 Toruń, Poland

Piotr Bała, *bala@mat.umk.pl*

N. Copernicus University, Faculty of Mathematics and Computer Science,
Chopina 12/18, 87-100 Toruń, Poland

University of Warsaw, ICM, Prosta 69, 00-878 Warszawa, Poland

Abstract

Computer science education is composed of two main approaches. One is to get students familiar with information technology where students learn how to use modern applications for information processing. Second approach is teaching students how to solve problems with the help of computers. This is always related with programming skills and abstract thinking. In this paper we describe developed by us service called *ZawodyWeb*. It checks on-line computer programs sent by students and allows the creation of assignments, to submit, compile and run solutions. We present also validation of the services based on experience gathered during teaching of computer science students.

Keywords

distance learning, programming, computer science, higher education

Biographies



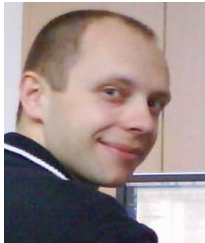
Marek Nowicki is a PhD student at the Nicolaus Copernicus University (Toruń, Poland) since 2010, majoring in Computer Science, especially in parallel and distributed calculations using Java language. He is main developer of *ZawodyWeb* system. Additionally, he takes part in translating Scratch, developed by the Lifelong Kindergarten Group at the MIT Media Lab, into a Polish language.



Łukasz Mikulski – computer scientist working in the areas of concurrency and algorithms. Academic teacher preparing students to participate in the national and international programming contests. He prepared on-line modules and programming workshop for secondary school students.



Marcin Płatkowski – computer scientist working in the area of formal languages and concurrency. Academic teacher preparing students to participate in the national and international programming contests. He prepared on-line modules and programming workshop for secondary school students.



Rafał Kluszczyński is a computer scientist at the Interdisciplinary Centre for Mathematical and Computational Modelling UW. He is currently involved in "PL-Grid Plus" project. Most of his teaching experience he has gained at N. Copernicus University where he taught students programming and trained them in programming. He prepared on-line modules and programming workshop for secondary school students.



Piotr Bała, physicist and computer scientist – academic teacher, instructor at courses for teachers and school students, organizer of the competitions and teaching activities in programming for children. Active researcher in the area of new technologies such as high performance computing and web technologies. Has extended experience in parallel and distributed computing. Recipient of numerous national and international research grants in the area of ICT.

Copyright

This work is licensed under a Creative Commons Attribution-NonCommercial-NoDerivs 3.0 Unported License. To view a copy of this licence, visit <http://creativecommons.org/licenses/by-nc-nd/3.0/>