Computer Science Projects Developed inside (in connection with)

Department of Mathematics, Mechanics and Computer Sciences / SFedU

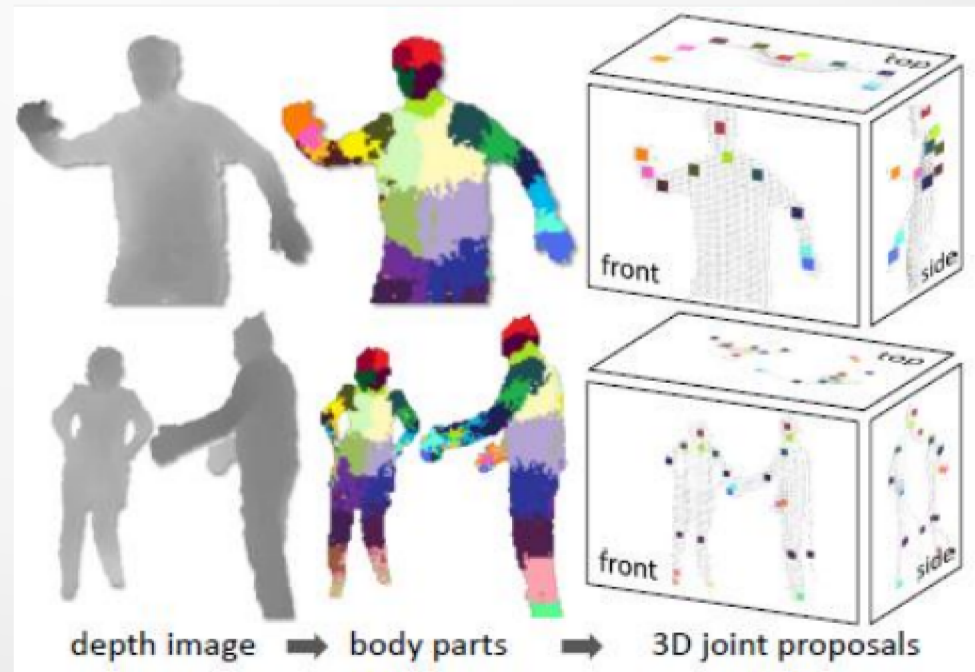by Artem Pelenitsyn / apel@sfedu.ru

Some of our projects

- Bioinformatics (together with
Research Institute of Biology / SFedU)

- Computer Vision and Human Behavior
(together with
Research Institute of Neurocybernetics / SFedU)

- Theoretical Computer Science with
Practical Tools: Open Parallelizing System

- Free Educational Resourses:
PascalABC.NET and ProgrammingABC.NET

CV: Microsoft Kinect Technology

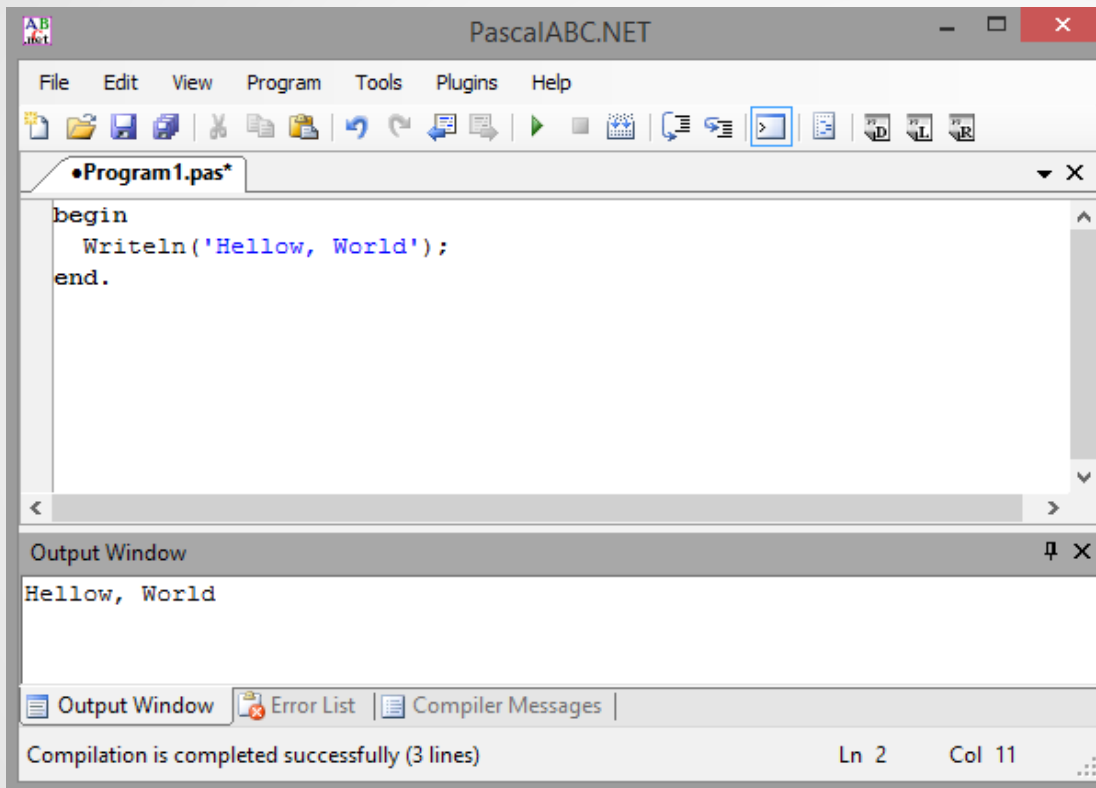"Nonintrusive human's functional state monitoring system"

project won

Microsoft Research Computer Vision Contest 2011

depth image ➡ body parts ➡ 3D joint proposals

Open Parallelizing System (ops.rsu.ru)

- modern computers are hugely parallel
- how to use this fact in a new software?
  - new programming languages and technologies
  - intellectual compilers from old PLs
- employ many code transformations
- try it online: http://ops.opsgroup.ru/en/

PascalABC.NET: IDE for beginners

- Started in 2002

- Educational purpose PL + Modern GUI (IntelliSense etc.)

- Extended with modern concepts (classes, exceptions, generics, etc. + whole .NET)

- units: Graphics, GUI Form Designer, etc.

- English language in GUI

- http://pascalabc.net/

Programming Taskbook http://ptaskbook.com/

- integrated into PascalABC.NET, Microsoft Visual Studio, etc.

- automated testing (shows input, reference output and actual output)

- 1100 learning tasks

ProgrammingABC.NET:
Web Development Environment