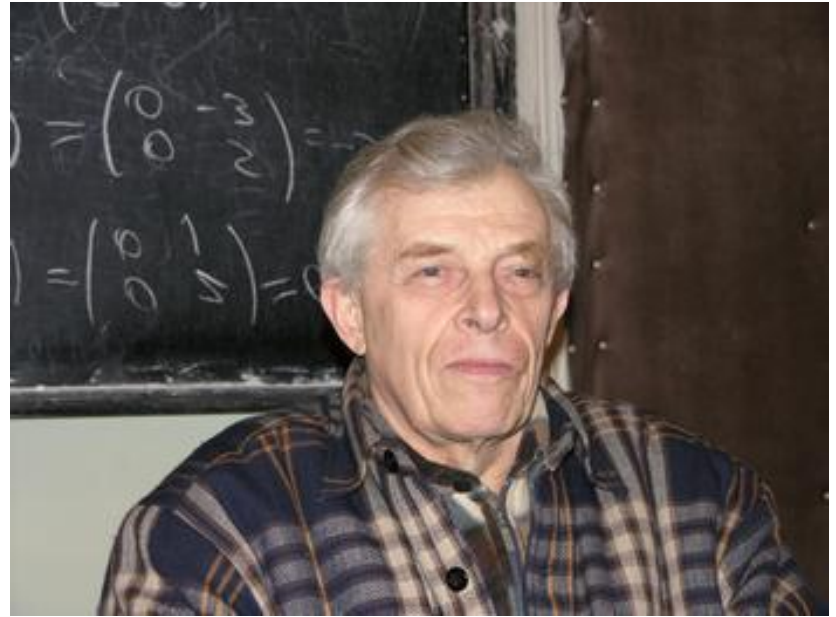


Department of Algebra and Discrete Mathematics

Founder of the Department of Algebra and Discrete Mathematics Simonenko Igor Borisovich (1935-2008)

The Department of Algebra and Discrete Mathematics was founded by Professor Igor Borisovich Symonenko. His research interests were broadly in the areas of algebraic topology, mathematical physics, game theory, mechanics, math, programming, etc. The widest range of mathematical interests of Igor Borisovich influenced the structure of the scientific interests of the department.



Pedagogical talent of Igor Borisovich manifested itself most strongly in his individual work with students. 4 doctoral dissertations and 22 candidate dissertations were defended under his direct supervision. Also Igor Borisovich was a co-director in 8 Ph.D. theses.



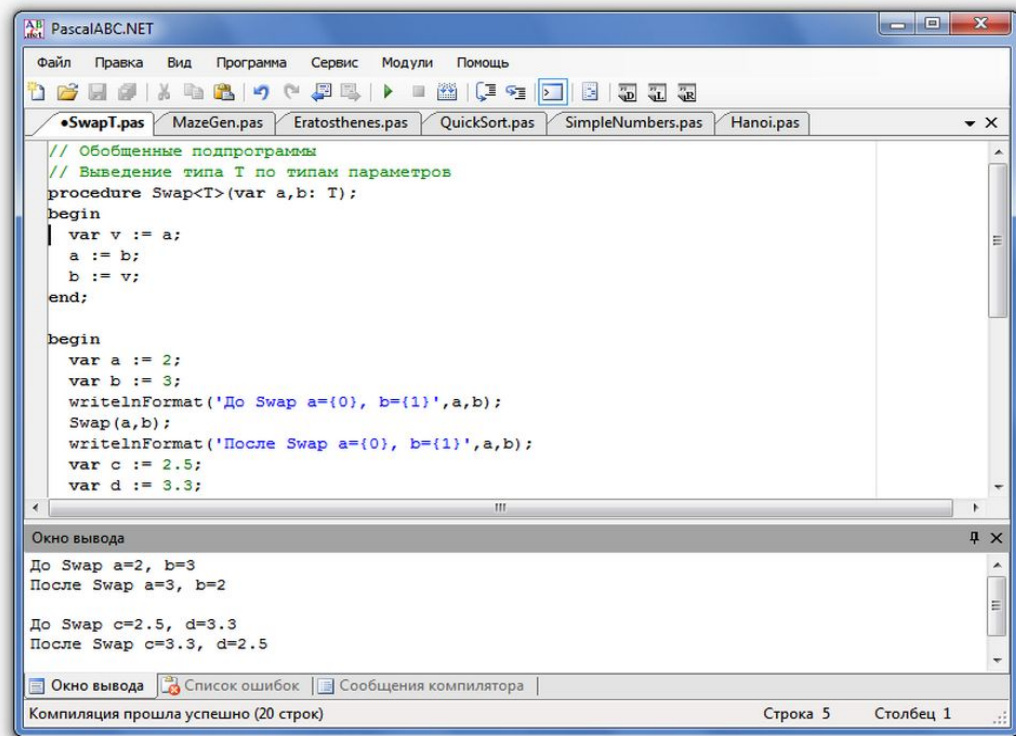
Scientific fields

- Programming technology
 - Compiler development
 - Image processing
 - Neural networks
 - Internet programming
- Continuous Mathematics
 - Functional analysis
 - Financial Mathematics
- Discrete Mathematics
 - Coding Theory and Information Security
 - Graph theory

Facultative courses

- Automatic program parallelization
- Algebraic Coding Theory
- Heuristic Algorithms
- Bioinformatics

One of the most famous achievements of the department is the popular programming language PascalABC. It was developed in 2003 by Associate Professor of the Department Mikhalkovich Stanislav Stanislavovich. PascalABC is actively used in a number of secondary and higher educational institutions in Russia.



The screenshot shows the PascalABC.NET IDE interface. The main window displays a Pascal program named 'SwapT.pas'. The code defines a generic procedure 'Swap' and a main program block. The output window shows the results of the program execution, demonstrating the swap operation for integers and floating-point numbers.

```
// Обобщенные подпрограммы
// Выведение типа T по типам параметров
procedure Swap<T>(var a,b: T);
begin
  var v := a;
  a := b;
  b := v;
end;

begin
  var a := 2;
  var b := 3;
  writelnFormat('До Swap a={0}, b={1}',a,b);
  Swap(a,b);
  writelnFormat('После Swap a={0}, b={1}',a,b);
  var c := 2.5;
  var d := 3.3;
```

Окно вывода

```
До Swap a=2, b=3
После Swap a=3, b=2

До Swap c=2.5, d=3.3
После Swap c=3.3, d=2.5
```

Окно вывода | Список ошибок | Сообщения компилятора

Компиляция прошла успешно (20 строк) Строка 5 Столбец 1

Graduate student employment

Graduates of the department can work in different areas, such as development of programming languages, development of image processing software, etc. Many graduates of the department successfully work in different countries: Germany, USA, Mexico, Israel, UK

