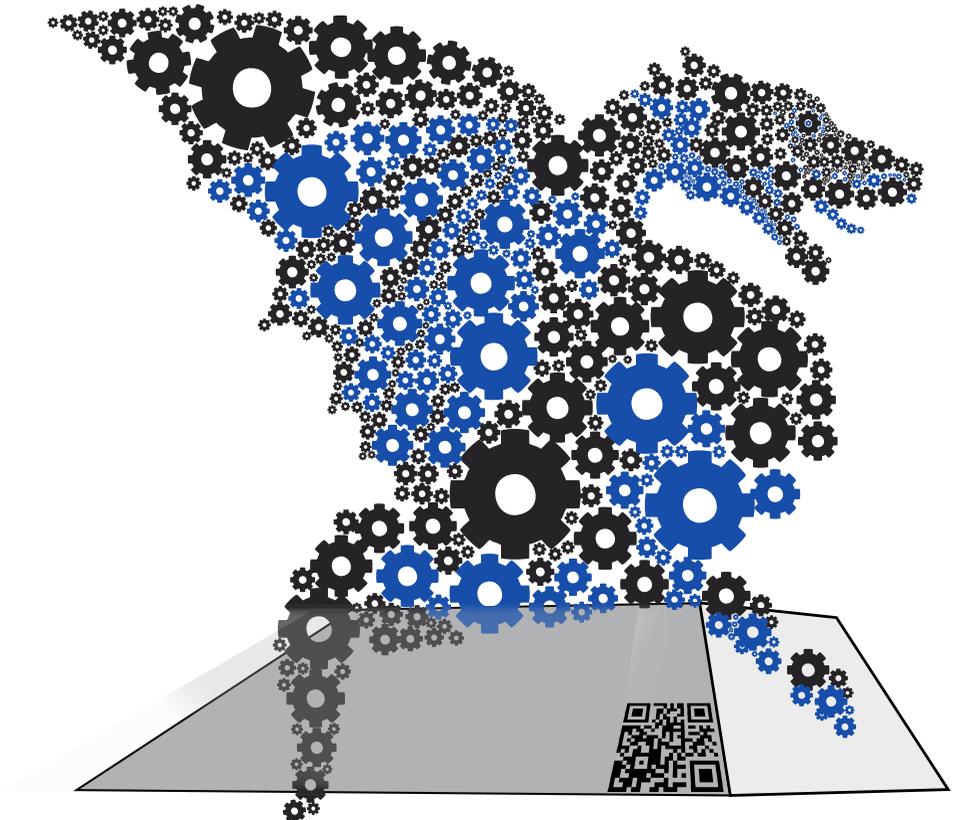


International Conference on Informatics in Schools

ISSEP 2015

September 28 - October 1, Ljubljana, Slovenia



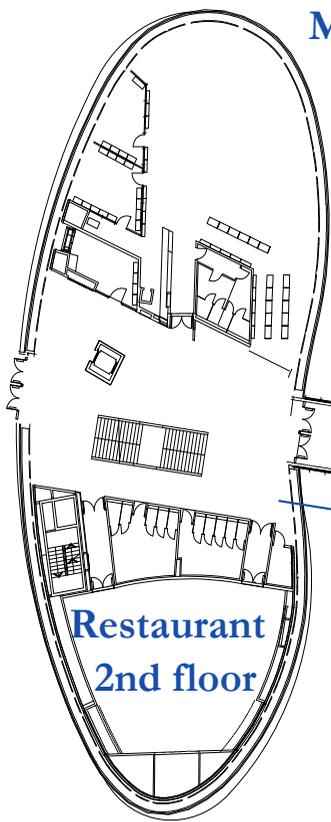
<http://issep15.fri.uni-lj.si>

Faculty building
1st floor

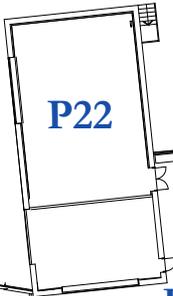
LPP bus station
»Živalski vrt ZOO«

Building X

Main entrance
Ground floor



Restaurant
2nd floor



P22



P18

P19

P20

Registration
desk

Coffee
break

Posters

P01

PR09

LPP bus station
»Viško polje«

International Conference on Informatics in Schools

ISSEP 2015

September 28 – October 1, Ljubljana, Slovenia

University of Ljubljana
Faculty of Computer and Information Science

Dear colleague and guest,

let me first on behalf of the ISSEP 2015 Organization Committee warmly welcome you to Slovenia and Ljubljana. Warm welcome also on behalf of the University of Ljubljana and its Faculty of Computer and Information Science. We will try our best to make it a pleasant and memorable event.

The conference starts on Monday, Sep 28th with a national Teacher Conference. Indeed, ISSEP has a tradition to federate with a local conference. However, this time the local conference is different in two aspects at least. The first one is that we federated ISSEP with a local long running conference VIVID – Education in Information Society, which resulted in a rich contribution and participation of local teachers. On the other hand when we started to prepare the Teacher Conference we intended to have participants “only” from the neighbouring countries of Austria, Italy and Slovenia, which reflects in its programme committee. It turned out that we got contributions and participation also from a number of other countries, which resulted in three international sessions. Consequently we are most sincerely looking forward to the possibility of establishing direct international contacts between the teachers from different countries that they themselves can foster and improve their work and even better accomplish their mission – teaching children about Informatics and also teaching using ICT. In fact, the federation of conferences was also just a step to offer teachers the possibility to attend CSER (Computer Science Education Research) talks and get ideas that will help them in a classroom. Of course, we hope that the flow of information will be bidirectional and that also the established researchers will have a better possibility to hear how teachers are accomplishing their mission in practice.

On the Monday afternoon is also scheduled the first of three ISSEP Workshops. This year we decided not to put the workshops on a separate day that they can better contribute to the content of the conference. For example, the second workshop on Bebras is scheduled for Tuesday, when the whole day is devoted to Bebras – International Challenge on Informatics and Computational Thinking. Wednesday topics cover country reports and professional development and conclude with a workshop on teaching software engineering, indeed the topic which is becoming more and more important in education. It introduces the main topic of Thursday on teaching programming. The programming session is in the morning accompanied with a session on competence

modelling (including the programming ones) and classroom experience. Besides the regular talks we have also three distinguished plenary speakers with diverse and very interesting topics, and 12 posters. To offer poster authors a better possibility to present their work, we set up a special session for their brief introduction. We believe this might be one of particularly interesting sessions.

All together we will enjoy in 79 talks at the Teacher Conference and 18 regular talks at the ISSEP. The first one are scheduled, including questions and discussion, for 13 minutes and the second ones for 23 minutes. Two minutes are scheduled for the change of speakers. To make easier for you to change the sessions we will use CoSeSy system that will help us to strictly follow the time limitations and also to start individual talks on time. The ISSEP sessions have at the end also scheduled some time that the session chair will have possibility to wrap up the talks and invite audience to a possible discussion.

At last but far from least, it is my great pleasure to extend sincere thanks to the colleagues who made this conference possible with their work. Not only the members of the organizing committee, but also the our students, who kindly volunteered to help during the conference.

Dear guests, thanx again to come to ISSEP 2015 and we hope you will enjoy it!

Sincerely,

Andrej Brodnik

General Chair of ISSEP 2015

University of Ljubljana, Faculty of Computer and Information Science



Dear participants of the ISSEP 2015, dear colleagues,

University of Ljubljana is an institution with rich tradition, opening its doors in 1919. Today 40.000 students in 23 faculties and 3 art academies form a vibrant academic community in which knowledge is created, shared and put into practice. According to ARWU Shanghai, Times THES-QS and WEBOMETRICS rankings the University of Ljubljana is listed amongst the top 500 universities in the world.

The Faculty of Computer and Information Science at the University of Ljubljana is the leading institution in

the field of computer and information science in Slovenia. It was founded in 1996, when the Faculty of Electrical Engineering and Computer Science split into two separate faculties.

The study of computer science itself began at the University of Ljubljana back in 1973, first as an elective programme after the 2nd year of electrical engineering study, and has been an independent study programme since 1982. In the following decades the importance of computer and information science has been rapidly growing, so did study programmes and research capabilities of the faculty. In summer 2014 we moved to new premises. The new Faculty building, which was funded by EU, gives us excellent working conditions that allow us to prosper in our endeavours.

Quality of computer and informatics education in primary and secondary schools is the foundation for computer literacy among the general population, as well as a necessary step towards good students and successful graduates of the Faculty of Computer and Information Science. In that regard the faculty needs to be an important partner in educating and training primary and secondary school teachers, and we are actively pursuing that goal.

In cooperation with the Faculty of Education at the University of Ljubljana we established an interdisciplinary Master's programme in

Computer Science Education. Graduates from this programme get extensive knowledge of computer science, while also receiving training in pedagogy.

To keep pace with rapid developments in computer and information technologies a lifelong learning process is also necessary. We therefore offer specially designed workshops that provide teachers of primary and secondary schools additional training on current topics in the field. Because we are very passionate about the quality and development of computer and information science, it is an honour for us to host ISSEP – The International Conference on Informatics in Schools: Situation, Evolution and Perspectives. I hope the participants will find many new ideas, contribute to inspiring debates and establish new connections that will further computer and science education, and consequently lead to a better society.

Nikolaj Zimic

Dean

University of Ljubljana, Faculty of Computer and Information Science

Ljubljana airport – city connections

Recommended way of getting from the airport to Ljubljana city is using public buses which operate every hour on working days and every two hours on weekends. Bus takes around 55 minutes and costs 4.10€ one way. Please note that the bus arrives to Ljubljana central bus station which is not in a walkable distance to the conference venue. For information on schedules check <http://ap-ljubljana.si/eng>. Airport is called “Letališče Brnik” in Slovenian and the central station is called “Ljubljana AVTOBUSNA POSTAJA” or “AP Ljubljana” in short.

Public transportation in Ljubljana

ISSEP 2015 is held in the new building of the Faculty of Computer and Information Science. The postal address is Večna pot 113 and the nearest LPP bus stations are called “Živalski vrt ZOO” (bus lines 18 and 18L) and “Viško polje” (bus lines 14 and 14B). The frequency of both lines is four buses per hour before 17:00 and two buses per hour after 17:00. A detailed map of LPP bus lines is located on pages 18/19 of the Tourist guide of Ljubljana. In order to use LPP buses, one must buy the Urbana single city card, available at 39 Urbanomats across the city near the bus stations. Participants staying at Four Points by Sheraton Ljubljana Mons have an organized transportation provided by the hotel from the hotel to the faculty and back each morning and afternoon.

Entrance to the faculty and parking

The main entrance to the faculty is through Building X. Parking slots for ISSEP participants are available in the upper garage and at the eastern side of the main faculty building. Since the parking space is limited we recommend using the public transportation.

Information desk, registration

From Monday to Thursday the conference information and the registration desk will be located in the yellow facility in the main hall of the faculty from 8:00 to 18:30. Moreover, our students and other staff are around and are more than happy to answer your questions.

Internet access

There is a freely accessible 802.11n WLAN available. Participants can use either the Eduroam account, or connect to ISSEP15 wireless network and enter password Ljubljana113.

Technical support

ISSEP 2015 employs technical staff in all lecture rooms. They wear a badge with a red rectangle and an “Organizer” or “Staff” label. If you encounter technical problems, do not hesitate to contact any of them.

Session organization

ISSEP 2015 features workshops in up to three parallel sessions. In order to allow attendees to easily switch sessions between talks, we synchronize all the lecture rooms with a Conference Session Synchronizer (CoSeSy). Both rooms are equipped with a big screen that indicates the remaining time for each talk. All slots except from the Teacher's conference (VIVID) are 25 minutes long and speakers are requested to observe the time: 20 minutes for the talk (green color+orange at the end of the talk), 3 minutes for questions (red) and 2 minutes for breaks between talks for changing the speaker and set up equipment (blue). Teacher's conference slots are 15 minutes long: 10 minutes for the talk, 3 minutes for questions and 2 minutes for breaks. CoSeSy timers can be accessed by anyone by visiting the following URLs ranging from Monday to Thursday:

<http://coseasy.mpi-inf.mpg.de/index.php?id=issep2015mo>

<http://coseasy.mpi-inf.mpg.de/index.php?id=issep2015tu>

<http://coseasy.mpi-inf.mpg.de/index.php?id=issep2015tu-vivid>

<http://coseasy.mpi-inf.mpg.de/index.php?id=issep2015we>

<http://coseasy.mpi-inf.mpg.de/index.php?id=issep2015th>

Each speaker will have a laser pointing device, presentation computer with a display and a video projector available. Presentation computers run Windows 8.1 Enterprise and have Microsoft Office 2013 Professional+, LibreOffice 5.0.1.2, Acrobat reader 2015 and VLC 2.2.1 installed. All speakers should report to the session chair before the session starts.

The main responsibility of the session chair is to keep the session running on schedule as indicated by the provided timer. Session chairs should arrive early and before the start of the session invite speakers to

upload their presentations to the presentation computer. If a speaker needs to use her/his own equipment, (s)he should test it before the session starts. Most importantly, please ensure that speakers start and stop on time. If talk ends early, we would kindly ask you to wait until the break between talks ends and the timer turns green again. In case of any technical issues, there will be a member of staff available in each lecture room.

Catering

Lunches are organized in faculty's restaurant on the 2nd floor of Building X. Coffee breaks and snacks are located in a separated part of the faculty's main hall. Lunches are organized as a self-serviced standing buffets. All ISSEP 2015 attendees are required to show their badge when entering the restaurant.

Welcome reception, Social event and the Conference dinner

Welcome reception (barbecue) on Monday at 18:00 will be at the faculty. On Wednesday afternoon will be a tour to Ljubljana castle with the transport from the faculty to downtown and back. Rough schedule:

16:15 – Bus leaving in front of Building X

19:35 – Bus leaving downtown from bus station “Drama”

20:00 – Conference dinner at the faculty's restaurant

Organizing Committee

ISSEP 2015 is organized by the University of Ljubljana, Faculty of Computer and Information Science. Organizing committee:



Andrej Brodnik

Boštjan Borič



Gašper Fele-Žorž

Matevž Jekovec



Nataša Mori

Jure Rogelj



Plenary talks

Tuesday	Doubtology Miha Kos Hiša Eksperimentov – Hands-on science center in Slovenia	
Wednesday	Surprising Computer Science Tim Bell University of Canterbury in Christchurch, New Zealand	
Thursday	The Theory Behind Theory – Computer Science Education Research Through the Lenses of Situated Learning Maria Knobelsdorf Computer Science Education, Universität Hamburg, Germany	

The International Teacher's conference

Up to now, for Italian teachers of Informatics it has not been customary to organize regular meetings in order to address educational, curricular and pedagogical issues of their discipline. Also the most self-motivated among them had few occasions for discussion and for sharing their experience with colleagues facing similar problems elsewhere. Thus, the idea of having international teacher sessions within the IS-SEP conference is very welcome, in that it offers a valuable opportunity of professional enrichment.

The contributions from Italy (5), Hungary (1) and Austria (2) encompass all levels of school education and present interesting approaches to the teaching of computing topics.

Primary and lower-secondary teachers have taken a trans-disciplinary “computational thinking” perspective and view the learning within the field as a peculiar component of scientific education. More specifically, a main concern in Ferrari, Rabbone and Ruggiero's paper is interplay between unplugged activities and coding in order to design a sustainable curriculum for the elementary school. A balanced mix of unplugged tasks and work with computers is also central to the experiences described by Palazzolo, who in addition points out the need of engaging a larger number of middle-school teachers in similar projects. Moreover, Erdősné Németh addresses a classical topic in computing education: how to teach recursion to young pupils. Her proposal revisits the traditional approach of exploring graphical recursive structures in Logo.

High school teachers, on the other hand, seem to focus on “active learning” with some significant technological support. Boscaini and Valente discuss the educational implications of projects aimed at participating in robot contests, in particular as to the tradeoff between theoretical knowledge and practical skills learned by students. Brocato reports on her experience of teaching database fundamentals following a flipped-classroom approach with the aid of a learning management system. Finally, Danesino describes an introductory unit where the students are encouraged to analyze and explain network-related concepts by producing learning materials themselves. Her students use specific applications that allow them to apply augmented-reality techniques.

The two Austrian contributions provide a cursory and deep insight into all levels of Informatics education.

Peter Antonitsch takes a “A Cautious Look at Coding in Primary Education” where he reports on an action research project in a primary

school. He elaborates on two antagonistic viewpoints, one propagating that programming at this early stage fosters the intellectual development of pupils, and the other pointing at developmental risks when children are exposed too early to virtual environments.

In their contribution “Selected Spotlights on Informatics Education in Austrian Schools” Peter Micheuz and Barbara Sabitzer take a look at current developments going on in Austrian general Informatics education. They provide an overview with some insights about initiatives at primary education, insights into competence models and their impact on Informatics at secondary level, including curricula issues in the grade 9. Finally they present first results of a major reform of the final school leaving exam in Informatics (Matura).

Peter Micheuz
University of Klagenfurt

Barbara Demo
University of Torino

Claudio Mirolo
Università degli studi di Udine

Slovenian Teacher's conference

Modern life can no longer be imagined without information and communication technologies (ICT). It is impossible to conceive that once upon a time communication mostly involved personal contact. Many believe that today's youth lost the ability of creating personal contacts and became asocial. However, the fact that ICT is enabling us to plan and organise not only our work but also our private lives, which tend to be increasingly limited in time, in a much easier manner, is obvious in every fact of everyday life.

In pedagogic terms, ICT increases both the level of motivation among learners as well as their creativity; it allows teachers to present complex knowledge and skills in a much clearer manner and illustrate intricate issues through play, practical examples and interactive learning. Even though geography lessons might be boring for many of us, ICT provides an array of possibilities for presenting the complexities of world geography through visual representations, which usually contribute to a much faster comprehension of the matter. Similarly, the use of ICT also proves advantageous when learning about other subjects and the world in general. Teachers have been dealing with the issue of motivation at school on a daily basis; at the same time, they are asking themselves how to arouse interest in learners and increase the potential for their development.

Flipped learning is one of the possibilities of achieving the aforementioned objectives. It enables learners to be active at different levels, while stimulating their critical thinking as they search for a solution to a given problem. This learning method allows learners to independently achieve key goals in their home environment and with the use of ICT. In turn, the school environment enables them to upgrade their knowledge with the help from their teachers. The use of ICT is thus changing the role of learners, who are no longer mere observers, but are becoming active participants not only in mastering the necessary knowledge, but also in developing critical and creative approaches to problem solving.

Apart from the use of ICT in the scope of contemporary teaching methods, one must also not ignore the fact that ICT increases the general sustainability or durability of knowledge. This is enabled by the different applications we use on our mobile devices, which provide continuous access to information and better time organisation. Google or Apple Maps applications represent one of the most efficient examples of

the practical application of technology, of overcoming complexities when presenting individual topics to learners, of the vast amount of data and the user-friendly presentation of such data. These applications enable us to look into the most remote places on our planet, show us the way to reach them and provide us with important facts regarding their location.

This year's 18th VIVID 2015 Conference will present both the modern teaching methods as well as the use of modern ICT at the primary, secondary and tertiary level of education. It will also analyse the situation in Slovenia and inform us of developments elsewhere in Europe. The conference will see the participation of more than 60 presenters from Slovenia and abroad. They will all attempt to answer the following question: How can the use of ICT be brought closer to the learners and how can we raise the level of computer literacy without loosing individuals' personality in the process?

Mojca Bernik and Uroš Rajkovič
University of Maribor, Faculty of Organizational Sciences

Poster session (Tuesday – Thursday)

Poster presentations are an integral part of this conference including a session with a fast-forward presentation of the poster's summary to all conference attendees. Twelve posters are presented, with various interesting topics. In addition, an extended abstract of each poster is published in the Local Proceedings. Topics covered are quite diverse ranging from describing the situation with computer science in different countries to various approaches in learning and teaching programming. Altogether, 24 authors coming from nine different countries are authors of these posters.

The overview of current state of computer science in Swiss high schools is reported by Jean-Philippe Pellet, Gabriel Parriaux, and Morgane Chevalier, contrasting the presentation by Okan Arslan and Selcan Kilis on Informatics Teacher Education in Turkey. The most represented topic is teaching computer programming, presented in various posters. Greg C Lee and Ling-Chian Chang talk about transition from visual programming language to C, Zsuzsanna Szalayne Tahy is approaching teaching programming indirectly with the use of “Paint” programme and Boštjan Resinovič uses a humanoid robot in teaching computer programming. Michele Moro and Luigino Calvi discuss concurrent programming basics through Snap! Gregor Jerše, Sonja Jerše, Matija Lokar and Matija Pretnar present their YASAAPE – a system for automatic assessment of programming exercises. Paul Libbrecht and Wolfgang Muller describe a vision of supporting the teachers towards the choice and adoption of ICT-based learning scenarios. The influence of teaching methods during technical e-safety instruction is analysed by Vaclav Šimandl, Vaclav Dobiaš, and Michal Šery. Martina Palazzolo and Paolo Mauri report how they used PirateBox to teach how to create simple web pages. Wolfgang Pohl and Jorg Westmeyer propose content categories for Informatics Tasks while Paul Libbrecht discusses alternatives for publishing open educational resources (OERs) and how they can be found using regular tools on the web.

Matija Lokar
University of Ljubljana

The ISSEP workshops

Workshops are distinguished meeting points for getting informed about the ongoing work in our relevant fields; current topics preferably in practical informatics at all school levels.

The ISSEP series started in 2005 in Klagenfurt/Austria. Five "tutorials" as a synonym for "workshops" have been offered then, covering rather soft Informatics topics as Security and Dependability in E-Learning, a presentation of Moodle, Didactic Aspects of e-Learning Contents Development, Fundamentals of Human-Computer Interaction and last, Insights into the functionality of a model search engine. Ten years later, within the call for the 8th ISSEP conference following rather genuine Informatics topics have been proposed:

- Maker movement (e.g. robotics)
- CS unplugged activities and informatics contests/challenges
- Development environments and programming interfaces
- Web applications, web collaboration and production tools (e.g. moocs and e-books)
- Good practice and worked out examples
- Short and long term lesson plans, reference models and special curricular issues

Finally, the call yielded the three proposals "Teaching Software Engineering in Primary and Secondary Schools" from the Informatics Didactics team at Klagenfurt University in the neighbourhood Carinthia, "A web service for teaching programming" from an Slovene team and third, "Learning Computational Thinking through Bebras Tasks" as an Lithuanian/Austrian co-production.

*Peter Micheuz
University of Klagenfurt*

Schedule

Monday, September 28, 2015		
08:00	Registration – Registration booth	
08:45	Opening Teacher Conference VIVID – Lecture room P01	
09:00	Teacher conference – Lecture room P19 Chair: Gašper Strniša ICT in STEM	Teacher conference – Lecture room P20 Chair: Davorin Kofjač ICT in post-secondary education 1
	Nataša Zabukovšek: The Use of ICT in Physics Lessons at Secondary School: Yes or No? How much? How?	Saša Podgoršek and Brigita Kacjan: The role of the teacher in ICT-supported foreign language instruction in Slovenian secondary schools
09:15	Nataša Junež: Impact of the use of information and communication technology in the teaching of chemistry in the context	Helena Jošt: Business and Professional English at the Vocational College - a step from applicability to application
09:30	Aljaž Rogelj: Manufacturing of 3D printer during the project week	Karmen Grudnik and Janja Razgoršek: Flipped Learning in Business Mathematics with the Support of ICT
09:45	Andrej Šuštaršič: Project based learning work in Information science, when students learn from each other	Timotej Lazar, Ivan Bratko and Aleksander Sadikov: CODE Q: A programming tutor
10:00	Gašper Strniša: Teaching computer programming to students of a different perceptual types	Tilen Markun, Marko Urh, Rok Pintar and Davorin Kofjač: Game mechanics in educational processes
10:15	Boštjan Resinovič: Using visual programming languages and robots to teach programming	Miha Debeljak, Davorin Kofjač, Rok Pintar and Marko Urh: Use of game mechanics in faculty environment
10:30	Lea Červan: Change of physical state	Sašo Bizant: E-learning - an opportunity for developing individual
10:45	Coffee break	
11:15	Teacher conference – Lecture room P19 Chair: Marko Urh ICT in elementary schools 1	Teacher conference – Lecture room P20 Chair: Branka Balantič ICT in post-secondary education 2
	Tina Pajnik: The first steps in the world of astronomy using the program Celestia and Google Earth in the early grades of elementary school	Alenka Baggia, Mirjana Kljajić Borštnar and Andreja Pucihar: Using ICT for study purposes and its impact on information literacy of organizational sciences students
11:30	Anja Janežič: Use of multimedia in teaching fractions	Robert Leskovar and Alenka Baggia: Crime and punishment: Participation in auditoria and videoconference lectures and problem solving performance

11:45	Mateja Štefančič: Sets, Revision of Number Sets and Relationships Between Them Through a Video	Nastja Beznik: Establishing the most significant moral values of the Vocational College of Kranj School Centre using the LimeSurvey web-based survey tool
12:00	Mojca Pev: Using a Tablet PC in Math Class	Davor Orlič and Mitja Jermol: ExplorEdu: Artificial Intelligence based technology to support Open Educational Resources (OER)
12:15	Mitja Luštrek, Božidara Cvetković, Vito Janko, Boro Štrumbelj, Jožef Štihec and Tanja Kajtna: Mobile application encouraging physical activity of schoolchildren for more effective physical education	Vlado Stankovski: C-EXHIBITION: Advanced Cloud Service for Exhibitions Using Mobile Sensors and RFID/NFC Technologies
12:30	Robert Grom: Juggling and information technology	Zvone Balantič and Branka Balantič: Evaluation of bachelor degree during development
12:45	Domen Ambrož: A multimedia presentation of gymnastic elements	Uroš Sterle: Generation of random questions using MySQL and import in Moodle quiz
13:00	Lunch, Restaurant	
14:30	Teacher conference – Lecture room P19 Chair: Alenka Baggia Flipped learning	Teacher conference – Lecture room P20 Chair: Sašo Bizant ICT in high school
	Erika Grosar: Flipped learning in primary classroom – how to start?	Vlasta Rudar-Nenadović: Learn Vocabulary in a Fun Way! – ICT Supported Vocabulary Learning
14:45	Barbara Gabrijelčič: Flipped learning in 3rd classroom	Lea Janežič and Miha Povšič: Principles of cognitive theory of learning with multimedia at interactive workshops “Energy in past and today”
15:00	Mojca Pozvek: Weebly's classroom for flipped learning	Simon Ülen: The role of e-materials in conceptual learning of physics
15:15	Matevž Vučnik, Miha Smolnikar, Polona Šega, Alenka Mozer, Polonca Krašovec, Sonja Blažun, Petra Cifer and Mihael Mohorčič: OSU teaching tool - Observe, Infer, Act	Gregor Jerše, Sonja Jerše, Matija Lokar and Matija Pretnar: Preparing programming exercises with efficient automated validation tests

15:30	Coffee break		
16:00	Teacher conference – Lecture room P19 Chair: Anita Smole ICT in elementary schools 2	Teacher conference – Lecture room P20 Chair: Branislav Šmitek ICT in language education 1	ISSEP – Lecture room PR09 Workshop 1
	Anita Smole and Sonja Strgar: Health Day in the third class supported by ICT	Katja Knific and Maruša Bogataj: Slovangea - cross-curricular integration in the internet environment	Gregor Jerše, Sonja Jerše, Matija Lokar and Matija Pretnar: A web service for teaching programming
16:15	Anita Smole and Sonja Strgar: Morning workout with QR codes in ICT camp	Mateja Chvatal: How motivating third year pupils for creative writing through the computer education?	
16:30	Andreja Žavbi Kren: How independent can the fifth graders be?	Aleksandar Tonić: Voicethread: motivation, creativity and learner empowerment in TEFL in elementary school	
16:45	Nataša Grom: ECO BARBIES and e-education (with emphasis on learning about non-material distant cultural heritage)	Alan Paradiž: A picture is worth a thousand words – using infographics in foreign language acquisition	
17:00	Boris Volarič: Alternative approach to music theory learning in alternative music school	Sofija Baškarad: Mobile phones as teaching aid in German lessons	
17:15	Sandi Gec, Gregor Strle, Tadej Mittoni, Ciril Bohak and Matija Marolt: EtnoFletno: Slovene folksong on web and in mobile applications		
17:30-17:45	Lorena Mihelač: Use of computer for generating of algorithmic songs		
18:00-19:30			ISSEP Welcome reception

Tuesday, September 29, 2015			
08:00	Registration – Registration booth		
09:00	Opening of multiconference Information Society, ISSEP 2015 and Teacher Conference VIVID – Lecture room P01		
10:00	Plenary – Lecture room P01 Miha Kos: Doubtology Chair: Andrej Brodnik		
11:00	Coffee break		
	Teacher conference – Lecture room P19 Chair: Mojca Bernik International session 1	Teacher conference – Lecture room P20 Chair: Tomaž Skulj ICT in language education 2	ISSEP – Lecture room P01 Chair: Maciej M. Sysło Bebras 1
11:20	Sophia Danesino: Active learning in a “Introduction to networks” course	Katarina Šulin: Encouraging reading through ICT	11:20 Filiz Kalelioğlu, Yasemin Gülbahar and Orçun Madran: A Snapshot of the First Implementation of Bebras International Informatics Contest in Turkey
11:35	Fabrizio Ferrari, Alessandro Rabbone and Sandro Ruggiero: Experiences of the T4T group in primary schools	Maja Brezovar: Oral Presentation Using ICT Tools – More Than Oral Presentation	11:45 Françoise Tort and Béatrice Drot-Delange: Visual literacy in introductory informatics problems
11:50	Ágnes Erdősné Németh: Introducing recursion with LOGO in upper primary school	Sanja Leben Jazbec: Assessment as part of formative following of students progress	12:10 Break
12:05	Matevž Pesek, Daniel Kuhl, Matevž Baloh and Matija Marolt: ZaznajSpoznaj - a modifiable platform for accessibility and inclusion of visually-impaired elementary school children	Nataša Sadar Šoba: Creative Storytelling Through Lego Bricks	
	ISSEP – Lecture room P01 Chair: Matija Lokar Poster fast forward		
12:20	Jean-Philippe Pellet, Gabriel Parriaux, and Morgane Chevalier: Computer Science for All in Swiss High Schools: Current State, Issues, and Perspectives		
12:25	Greg C Lee and Ling-Chian Chang: Learning to Program: from VPL to C		
12:30	Vaclav Šimandl, Vaclav Dobiaš, and Michal Šery: The influence of teaching methods during technical e-safety instruction		

12:35	Gregor Jerše, Sonja Jerše, Matija Lokar and Matija Pretnar: YASAAPE – Yet Another System for Automatic Assessment of Programming Exercises		
12:40	Zsuzsanna Szalayne Tahy: Teaching Programming Indirectly with “Paint”		
12:45	Martina Palazzolo and Paolo Mauri: From Paper to Web - Some Help from PirateBox		
12:50	Boštjan Resinovič: The use of Nao, a humanoid robot, in teaching computer programming		
12:55	Wolfgang Pohl and Jorg Westmeyer: Content Categories for Informatics Tasks		
13:00	Okan Arslan and Selcan Kilis: Informatics Teacher Education in Turkey		
13:05	Michele Moro and Luigino Calvi: Concurrent programming basics through Snap!		
13:10	Paul Libbrecht and Wolfgang Muller: Can I do that? Scenario Feasibility as an Enabler of ICT Usage		
13:15	Paul Libbrecht: Publication of Learning Resources: Central or Interoperable?		
13:30	Lunch, Restaurant		
14:30	Teacher conference – Lecture room P19 Chair: Uroš Rajkovič International session 2	Teacher conference – Lecture room P20 Chair: Rado Wechtersbach Web tools in education	ISSEP – Lecture room P01 Chair: Valentina Dagiencé Bebras 2
	Martina Palazzolo: Algorithms and well formatted texts: Introducing Computer Science Activities in Lower Secondary Schools	Alenka Zabukovec and Saša Kastelic: The renovation the school website and post-publication-process	14:30 Wolfgang Pohl and Hans-Werner Hein: Aspects of Quality in the Presentation of Informatics Exam Tasks
14:45	Maria Concetta Brocato: Blended Learning Environments, Flipped Class and Collaborative Activities to Teach Databases in a Secondary Technical School	Barbara Abram: Monitoring with iTALC	14:55 Ekaterina Yagunova, Sergei Pozdniakov, Nina Ryzhova, Evgenia Razumovskaia and Nikolay Korovkin: Evaluation of Difficulty and Complexity of Tasks: Case Study of International On-line Competition “Beaver”
15:00	Peter Micheuz and Barbara Sabitzer: Selected Spotlights on Informatics Education in Austrian Schools	Marjan Kuhar: Informatization of the Teacher Substitution Process	
15:15	Agnieszka Borowiecka and Katarzyna Ołędzka: The Cat, the Turtle, the Snake and GCD	Andrej Koložvari and Davorin Kofjač: Hidden effects of internet use on youth	15:20 Wrap-up of Bebras 1 and 2

	ISSEP – Lecture room P01 Chair: Barbara Demo Special presentation		
15:45	Alison Cutler, Chris Stephenson: Google's Support of Computer Science Education in Europe: A Strategic Perspective		
16:45	Coffee break		
	Teacher conference – Lecture room P19 Chair: Matija Lokar International session 3	Teacher conference – Lecture room P20 Chair: Iztok Bitenc ICT in education for children with special needs	ISSEP – Lecture room P18 Workshop 2
17:00	Dejan Križaj, Marko Meža, Jurij Bajc, Alenka Kavčič and Borut Pečar: Modern teaching of natural sciences using flexible measurement system with open source software - eEksperiments	Marija Mohar: Using ICT in teaching children with special needs	Valentina Dagienė and Gerald Futschek: Learning Computational Thinking through Bebras Tasks
17:15	Maurizio Boscaini and Alberto Valente: Roboval: Robot Contest and Education with Arduino in High School	Miroslava Minić: Teaching with animation	
17:30	Peter K. Antonitsch; A Cautious Look at Coding in Primary Education	Tomaž Šef: Universal voice e-reader for the Slovenian language as a personal learning tool for people with dyslexia and different types of visual disturbances	
17:45	Mario Konecki: Adapted programming education for visually impaired	Vlasta Lah and Tina Črnič: Mobile application MojKommunikator	
18:00	Miha Povšič: Conceptual Learning of Photosynthesis by Using Computer Games	Damjan Kužnar, Miha Mlakar, Erik Dovgan, Jernej Zupančič, Boštjan Kaluža and Matjaž Gams: Metis: system for early recognition of learning problems	
18:15-18:30	Mladen Konecki: Adaptive drum kit learning system: User interface properties and features	Mojca Stergar and Aleksandra Vadnjal: Enhancing digital literacy also in the hospital school	
19:00-20:00	ISSEP – Lecture room P01 Business meeting		

Wednesday, September 30, 2015	
09:00	Plenary – Lecture room P01 Tim Bell: Surprising Computer Science Chair: Jan Vahrenhold
10:00	Coffee break
10:20	ISSEP – Lecture room P01 Chair: Sue Sentance Country reports Fredrik Heintz, Linda Mannila, Karin Nygårds, Peter Parnes and Björn Regnell: Computing at School in Sweden - Experiences from Introducing Computer Science within Existing Subjects
10:45	Silvio Giaffredo, Luisa Mich and Marco Ronchetti: Computer Science Competences in Italian Secondary Schools: a Preliminary Study
11:10	Maciej M. Syslo and Anna Beata Kwiatkowska: Introducing a New Computer Science Curriculum for All School Levels in Poland
11:35	Wrap-up
11:45	Coffee break
12:00	ISSEP – Lecture room P01 Chair: Peter Micheuz Professional Development and Competitions Sue Sentance and Simon Humphreys: Online vs face-to-face engagement of Computing teachers for their professional development
12:25	Ronit Ben-Bassat Levy and Mordechai Ben-Ari: Robotics Activities-Is the Investment Worthwhile?
12:50	Vasily Akimushkin, Athit Maytarattanakhon and Sergei Pozdniakov: Olympiad in theoretical computer science and discrete mathematics
13:15	Wrap-up
13:30	Lunch, Restaurant
14:30-16:00	ISSEP – Lecture room P18 Workshop 3 Peter Antonitsch, Andreas Bollin, Stefan Pasterk and Barbara Sabitzer: Teaching Software Engineering in Primary and Secondary Schools
16:00	Excursion
19:00-...	Conference dinner

Thursday, October 1, 2015	
09:00	Plenary – Lecture room P22 Maria Knobelsdorf: The Theory Behind Theory - Computer Science Education Research Through the Lenses of Situated Learning Chair: Peter Hubwieser
10:00	Coffee break
10:30	ISSEP – Lecture room P22 Chair: Ralf Romeike Competence modeling Jonas Neugebauer, Johannes Magenheimer, Laura Ohrndorf, Niclas Schaper and Sigrid Schubert: Defining proficiency levels of high school students in computer science by an empirical task analysis - Results of the MoKoM project
10:55	Andreas Muehling, Peter Hubwieser and Marc Berges: Dimensions of Programming Knowledge
11:20	Wrap-up
11:35	Coffee break
11:50	ISSEP – Lecture room P22 Chair: Claudio Mirolo Classroom Experience Irena Demšar and Janez Demšar: CS Unplugged: Experiences and Extensions
12:15	Andreas Grillenberger and Ralf Romeike: Analyzing the Twitter Data Stream Using the Snap! Learning Environment
12:40	Wrap-up
13:00	Lunch, Restaurant
14:30	ISSEP – Lecture room P22 Chair: Françoise Tort Programming Franc Jakoš and Matija Lokar: A language independent assessment of programming concepts knowledge
14:55	Jiří Vaníček: Programming in Scratch Using Inquiry-based Approach
15:20	Violetta Lonati, Dario Malchiodi, Mattia Monga and Anna Morpurgo: Is coding the way to go?
15:45	Alexander Ruf, Marc Berges and Peter Hubwieser: Classification of Programming Tasks According to Required Skills and Knowledge Representation
16:10	Wrap-up
16:45	ISSEP – Lecture room P22 Conference closing Chair: Jan Vahrenhold and Andrej Brodnik

For your notes

ISSEP 2015 Schedule – Summary			
Monday, Sept 28	Tuesday, Sept 29	Wednesday, Sept 30	Thursday, Oct 1
8:45 – 9:00 Opening remarks	8:00 – 9:00 Registration		
9:00 – 10:45 VIVID	9:00 – 10:00 Official opening	9:00 – 10:00 Plenary talk Tim Bell	9:00 – 10:00 Plenary talk Maria Knobelsdorf
	10:00 – 11:00 Plenary talk Miha Kos	10:00 – 10:20 Coffee break	10:00 – 10:20 Coffee break
10:45 – 11:15 Coffee break	11:00 – 11:20 Coffee break	10:20 – 11:45 ISSEP	10:30 – 11:35 ISSEP
11:15 – 13:00 VIVID	11:20 – 12:20 ISSEP, VIVID	11:45 – 12:00 Coffee break	11:35 – 11:50 Coffee break
	12:20 – 13:30 Poster fast forward	12:00 – 13:30 ISSEP	11:50 – 12:55 ISSEP
13:00 – 14:30 Lunch	13:30 – 14:30 Lunch	13:30 – 14:30 Lunch	13:00 – 14:30 Lunch
14:30 – 15:30 VIVID	14:30 – 15:35 ISSEP, VIVID	14:30 – 16:00 ISSEP, Workshop	14:30 – 16:35 ISSEP
15:30 – 16:00 Coffee break	15:45 – 16:45 Special presentation		
16:00 – 17:45 VIVID, Workshop	16:45 – 17:00 Coffee break	16:00 – 18:00 Excursion	16:45 – 17:00 Conference closing
	17:00 – 18:30 VIVID, Workshop		17:00 – 19:00 Round table
18:00 – 19:00 Welcome reception			
	19:00 – 20:00 Business meeting	19:00 – 23:00 Conference dinner	

ISSEP 2015 sponsors and partners:

