SCRATCH

CREATIVE • COMMUNITIES

SCRATCH
CONFERENCE
2015
AMSTERDAM

My expectations...

WELCOME

SCRATCH CREATIVE COMMUNITIES

Here we are again, members of the Scratch family from at least 25 countries making the effort to spend four days in Amsterdam to share what we've learned and explore where to go.

Welcome to Amsterdam for the 7th international Scratch conference, the second one in Europe. Two years ago, while closing Scratch2013BCN, I invited you to join an Amsterdam Scratch conference around 2030. It has never been my intention to be in the conference business, and I thought that it would be easier for me to do it when I retire.

The reason you're here now, 15 years earlier, is that I realized last November that the situation around coding and learning in The Netherlands forces action now.

Though initiatives like Hour of Code and CodeweekEU are raising awareness and helping a lot in spreading Scratch, these initiatives are rooted in business needs and political agendas. But our concerns are more focused on education, learning and child development.

Teachers, librarians, and more generally the people teaching with Scratch may use this conference to get a good taste of where Scratch is going, and learn about connections, branches and dialects in development just now. But information flows both ways: the developers and inventors can check what's made possible by their work. In short, everyone in encouraged to share their stories. They are all valuable to the others here.

This year's conference introduces some new activities. You'll find peer reviewed articles bundled in a book, we've organized two pre-conference master classes, and we're dedicating two evenings for an unconference, a teachmeet, several Amsterdam walks and ten workshops for children in Amsterdam. We hope you enjoy it!

Joek van Montfort

on behalf of organising comittee:
Agnese Addone, Claude Terosier, Cobie van de Ven, Frank Sabate, Helen Fermate, Jens Mönig, Joek van Montfort, Linda Fernsel, Margaret Low, Martijn Stegeman, Menno Grootveld, Ralf Romeike, Samir Saidani, Susan Ettenheim

SCRATCH

FOUNDATION

Donate Your donation will help us support millions of young people around the world -- the next generation of makers, coders, innovators, and problem solvers.
scratchfoundation.org

Create

We provide funding to make Scratch and ScratchJr available on more platforms, such as mobile and tablet devices, with more features, and for broader audiences.

Connect

We support online communities and in-person events in the Scratch ecosystem, where people celebrate creativity, collaborate on projects, and share ideas with one another.

Share

We develop and disseminate materials that help young people and educators engage in creative learning activities using the Scratch coding environment.

INFO & LOCATIONS

University of Amsterdam's Faculty of Science
Conference August 13 + 14 / 9:00 am - 5.30 pm
Sciencepark 904
Railway station "Sciencepark"

Internet connection at Sciencepark:
When you have an Eduroam account, you're connected, if not:
1. Text our secret word **Appelboom** to + 31651287129
2. You receive a text with login data
3. Connect with wifi network Eduroam using these data.

public transport info: www.9292.nl/en

Waag Society
Masterclasses August 11 + 12 / 10:00 am - 17:00 pm
Unconference August 13 + 14 / 6:00 - 10:00 pm
Nieuwmarkt 4
Subway station "Nieuwmarkt"

Zuiderkerk and Doelenzaal
Conference August 15 / 9:00 am - 3:00 pm
Zuiderkerkhof 72 / Kloveniersburgwal 87
Subway station "Nieuwmarkt"

Central Library Amsterdam "OBA"
Seminar August 12 / 4:00 - 5:30 pm
Opening party August 12 / 5:00 - 9:00 pm
After Conference August 15 / 3:00 - 6:00 pm
Oosterdokskade 143
Subway station "Amsterdam Centraal" or "Nieuwmarkt"

Foreword

Connor Hudson

2015 Scratch Conference

I think if I had to narrow down a list of the most valuable things Scratch has taught me, I could pick two things: creativity and community. On Scratch the two ideas are intrinsically linked.

When I create a project on Scratch and then share it, I am inviting others to join in the process. Others suggestions help me refine or take the project further. Someone suggests a great piece of music to put behind my project or my younger sister volunteers to make an 8-bit character for me and it's no longer just my project but our project. It's not necessarily about what I can create but about what we, collectively can create. Creativity enhances community, and community enhances creativity.

The creative community has been a core element of Scratch. Creative collaboration over competition. We become better coders, create more interesting projects and learn when we work together in community. Scratch has had a vital role in teaching me to work and learn in community.

Largely because of my foundation with Scratch, computing has always been an inherently creative platform. I was introduced to Scratch by my Dad when I was eight and it almost immediately captured my imagination, not because of what I could program, but because of the worlds I could create.

I've always disliked the "get a better job" rationale as the sole reason for learning to code. Computing can, and should be so much more than just a tool. When I teach Scratch, I never do it because I expect my students to become computer scientists. I do it so that they have another outlet for creativity that they might not otherwise have access to.

Sometimes today's computing culture feels like a battle of designer vs developer - art opposing logic. If anything, CS should bridge the gap between hard logic and creative art. Computers are strictly logical at their core, but as a tool they can be used for unique experiences that are more art than anything else.

See, Scratch has never really been about programming to me. It has always been about programming as a medium for creative expression. Creativity through programming. And not only that, but sharing your experiences with others, for them to build on and improve.

I don't like coding. I like making.

Guest of honor

Cynthia Solomon

Paving the way with our guest of honor

It is wonderful to see so many people interested in attending a Scratch conference. It shows how much the community is growing and thriving.

There is an ongoing push to increase the Computer Science power of Scratch and increase it's ability to control anything physical or logical. Although this is good I see it as less important than filling out the wide walls with further explorations of ideas in math, science, and art.

One of the most compelling and empowering things about Logo was that it was a first step into Mathland. Turtle geometry personalized mathematical ideas and brought them to life. It provided synergy between math, art and technology. The turtle was a simple creature with a simple state. Despite the simplicity, the turtle provided lots of opportunity for discovery. Move a little, turn a little, repeat. A circle emerges. Generalize and formalize a little and this becomes the total turtle trip theorem. And that's just the starting point. The book by Abelson and diSessa pointed out the richness of Turtle Geometry.

Logo has turtles, Scratch has sprites. They may appear somewhat similar. The difference is that sprites are smarter about media and not so good about turtle geometry. This leads the Scratch culture to be most active around games and interactive stories. Snap!, a language built on Scratch, lets you do turtle geometry but its block programming environment is designed to introduce beginning computer scientists to computer science. So its ready-made libraries of costumes and sprites are limited making spontaneous story telling more difficult than in Scratch.

With Logo and with the pre-computer literacy times there was another intriguing aspect. We could introduce children to projects and activities that they would either find impossible or impossibly difficult without a computer. Offering ways for children to control objects in the physical world seems to follow in that constructionist tradition, but with it is a danger that we get carried away by building things and not thinking about thinking about building things.

Today's challenge is to find approaches in Scratch that allow the growth of powerful ideas in other domains. Not just the implementation of a beginner's programming environment or computer science curriculum but instead approaches that touch on ideas in math, science and art.

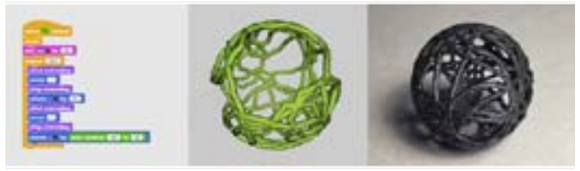
Room for thought...

OPENING

Scratch2015AMS will be opened with a reception. You're welcome to join us at 7th floor of Amsterdam Public Libray (Oosterdokskade 109) from Wednesday August 12, from 5 PM onwards. Between 7 and 9 we'll present a varied program in the theatre on the same floor.

Ubi de Feo will tell about his courses on computing using a more creative, human approach.

Hans de Zwart of BitsOfFreedom will give a short talk.



The Japanese Scratch Orchestra will perform together with some children that followed a workshop earlier in the day.

We'll share some of what happened during the two master classes on **Beetleblocks and TurtleStitch.**

Drew Buddie is preparing a Scratch-MakeyMakey powered game of Werewolf, but this may also happen earlier (during the drinks ...)

Cynthia Solomon will deliver a keynote address

Library closes at 10 PM.

More than Education and Expression

Creative Communities

Keynote Mitch Resnick

Lifelong Kindergarten MIT Media Lab

Mitchel Resnick, Professor at the MIT Media Lab, directs the team that develops, coordinates, and supports Scratch. His research group also developed ideas underlying the LEGO Mindstorms and LEGO WeDo robotics kits, and it co-founded the Computer Clubhouse network of after-school learning centers. Resnick earned a BS in physics from Princeton, and an MS and PhD in computer science from MIT. He was awarded the McGraw Prize in Education in 2011. His favorite Scratch sprite is Gobo.

Keynote Beat Döbeli Honegger

The Schwyz University of Teacher Training

Beat Döbeli Honegger is professor at the Schwyz University of Teacher Education in Switzerland (PHSZ). He iis cofounder both of a private company (infoSense) and a public agency (ICT-Kompetenzzentrum TOP) for consulting schools on the use of ICT. He is scientific director of the "Projektschule Goldau" a primary school well known for innovative projects in the field of mobile learning. Beat Döbeli Honegger is inventor of "Beats Biblionetz", a big german-speaking bibliographic website in the field of technology enhanced learning. His current research fields are personal mobile learning, knowledge management in a network society and didactics of computer science.

Keynote Linda Liukas

HelloRuby and Rails Girls

Writing software is about expression, creativity, and practical application. Our kids should learn to bend, join, break and combine code in a way it wasn't designed to. Just as they would with crayons and paper or wood and tools. I believe there's plenty to learn in programming logic and culture before showing children a single screen. - Linda Liukas author of Hello Ruby.
Apart from her plenary talk Linda Liukas will lead a workshop at Scratch2015AMS.

Keynote Michelle Thorne

Webmaker and Mozfest

Michelle Thorne is coming to Scratch 2015 to share her thoughts on creative communities and culture. Her role as Mozilla's Global Event Strategist and Director of the Mozilla Festival means she is immersed in a number of creative communities in the Mozilla Foundation.
She works to grow and strengthen communities around a number of Mozilla initiatives, including the Webmaker project, creating events for people to build, make, and learn from each other.
The range of activities and initiatives she is involved with gives her a valuable insight into what is a creative community and how to nurture these communities. The now annual Mozilla Festival (Mozfest) is a great example of her ability to bring people together to create a unique event, having grown from 350 attendees in 2010 to 1600 in 2014.

Inventing and thinking about EdTech

Time to tinker...

Keynote

Audrey Watters

Hack Education and Modern Learners

Audrey Watters reports on The History of the Future of Education Technology via hackeducation.com

"I am an education writer, a recovering academic, a serial dropout, a rabble-rouser, and ed-tech's Cassandra."

"To 'hack education' isn't something that just technologists should do or care about. Nor is this just a concern for teachers, administrators, parents, or students. We all should consider the implications of technology on how we teach and learn, lest the future of ed-tech be just like the history of ed-tech: learners as pigeons."

Keynote

Eric Rosenbaum

MakeyMakey, SingingFingers, BeetleBlocks

Eric Rosenbaum has a background in neuroscience, music, and education. In his work he explores the intersection of music, play and improvisation.
In 2012 he was co-inventor of MakeyMakey, He created Melody Morph, a new pathway into musical creation.
Currently Eric is working on BeetleBlocks, a graphical blocks-based programming environment for 3D design and fabrication.

UN CONFERENCE

Thursday August 13 - 17:30-22:00 - Waag Society

Thursday evening the theatrum anatomicum at Waag will be the decor of the first Scratch TeachMeet.
TeachMeet is a Scottish invention to exchange lots of interesting stories at high speed. Slideware is discouraged, sometimes even forbidden. Timeslots are strict 2 or 7 minutes. Any subject goes, and we prefer to hear stories that really matter to you. No need for professional polish. Every now and then there's lottery. The schedule is made up on the spot with a wheel of fortune (you have to announce your wish to speak before). As only 70 fit into the theatre it may be the case you only get in when you're at that wheel of fortune!

Don't worry, on the other floor the unconference has nice drinks, finger food and other sources of inspiration.

Host of that evening: **Drew Buddie**

TeachMeet

Friday August 14 - 17:30-22:00 - Safari / Waag Society

Friday evenings unconference has a special for those who want to explore a little of Amsterdam: Safari.

A safari is a 10-30 minutes walk ending at a special place where a program is waiting for you. Each group is limited to 25 people, so not everyone can join, the alternative of staying at Waag Society is a very good alternative.

Pianola Museum
The pianola is already a hundred years old, but we can still enjoy the music of these wonderful instruments, thanks to the smart technology that makes them work. Come and listen to the masters of the keyboard of 100 years ago.

Eye Film Museum
We'll visit If We Ever Get to Heaven, an exhibition with work by the celebrated South African artist William Kentridge (Johannesburg, 1955). Dutch attendees: please bring your Museumcard, it'll save us an entrance fee.

LLoyd Hotel
Around 15% of attendees are staying at Lloydhotel where they probably don't have time to explore the interesting history of the building.

Pluk de Nacht (Seize the night)
Worlds best open air film festival, on the shore of het IJ will screen will screen short Forever Over (Erik Schmitt) and Sam Klemke's Time Machine (Matthew Bate). This safari may start and end later then the others as screening has to wait for dark. Off course there's the option to just join for the walk along the water.

Kattenkabinet
(This safari is an after conference activity, the museum will be open for us Saturday between 3:30 and 5:00)
The Kattenkabinet is a small museum in a 1667 canal house. Apart form the art collection, all cats, the house itself is worth the visit.

ING is Europe's biggest online bank

ING is one of the biggest employers of IT professionals in The Netherlands.
More than 40 million customers depend on our 24/7 technology-related decisions.
Therefore ICT is an essential part of the bank's succes. We strongly encourage
professional and personal growth and stimulate an engineering culture.
By sponsoring the Scratch event we want to welcome you into this fascinating
IT landscape. Want to learn more? **Check ING.nl/careers**

ING

Hogeschool van Amsterdam

informatics mathematics

#SuperCoders

"Code" is the name typically given to computer programming,
or in other words, the concept behind digital applications that are now omnipresent in every sector and every profession.

With the support of Scratch and its community, Orange has been proposing a series of "#SuperCoders" workshops for young children in France, Spain, Poland, Romania and soon in other African and Middle East countries.

orange™

sQula® SCRATCH TOUR

TODAY I LEARNED A SUPER-POWER

KIDS WHO CAN CODE HAVE SUPERPOWERS.
BECOME A CODING CHAMPION WITH CODERDOJO.
#POWERFULPLAY
Find out more, CoderDojo.com

CoderDojo

Sponsored by: LIBERTY GLOBAL

SCRATCH CONFERENCE 2015


Cat


Gobo


Pico


Nano


Tera

	THURSDAY AUG 13	FRIDAY AUG 14	SATURDAY AUG 15
9:00	Plenary *Science Park*	Plenary *Science Park*	Plenary *Zuiderkerk Doelenzaal*
10:00 10:30	Break	Break	Break
	i1 t1 t2 w1 w2	i4 p1 t9 w11 w12	t15 w18 w19 w20
11:30 12:00	Break	Break	Break
	i2 t3 t4 w3 w4	i5 t10 t11 w14 w15	t16 w21 w22 w23 w20
13:00	Lunch	Lunch	Lunch Closing Plenary
14:30	i3 t5 w5 w6 w7	t12 t13 t14 w16 w17	
15:30 16:00	Break	Break	
	t6 t7 w8 w9 w10	Posters	
17:00 18:00	*Waag Society* Unconference + Teachmeet	*Waag Society* Unconference + Safari's	
22:00		*Eye* *OBA* *Pianola* *Lloyd Hotel*	

"After" events:
Visit NEMO science museum for free with your conference badge
Safari *Kattenkabinet*

SCRATCH
CREATIVE • COMMUNITIES

Programme WEDNESDAY AUG 12

Wednesday 15:00-17:00 – OBA Youth

Ten coding workshops for the children of Amsterdam
With participation of Stephen Howel (IE), Mike Chen (TW), Squla (NL), Linda Liukas (FI), Mindmingle (NL), Codeuur (NL), OBA RaspPi group (NL), Genevieve Smith-Nunes (UK), World Scratch Orchestra (JP)

Wednesday 16:00-17:30 – OBA Harry Mulish room

Seminar: Scaling creative communities through CoderDojo after school clubs
Speakers: National Coalition for Digital Jobs, CoderDojo and Liberty Global

Wednesday 17:00-21:00 – OBA 7th floor (Opening reception)

Please arrive before 19:00 when program starts in OBA Theatre

From 0 to C
Ubi de Feo (IT)

Bits of freedom
Hans de Zwart (NL)

Masterclass
We'll screen some video of the BeetleBlocks master class led by Eric Rosenbaum and the Turtlestich master class led by Andrea Mayr and Michael Aschauer

Werewolf
Drew Buddie (RMS/Naace GB)
In this fun session Scratch and MakeyMakeys will be used as an interface for a unique version of the well known party game 'Werewolf'.

Scratch Orchestra - creative learning community through collaborative performance
Yoshiro Miyata, Yasushi Harada, Nobuyuki Ueda, Tomohiro Ueshiba, Keiko Onishi (Chukyo University JP)
We will present the Scratch Orchestra, a new form of musical expression in which the high quality performance and the joy of making music together are united, and also local performance and global collaboration are united. We will demonstrate three learningscapes: learning through instruction, through design and through performance, to enjoy learning deeply and playfully.

Logo and Scratch
Opening talk by our guest of honor Cynthia Solomon

Programme THURSDAY AUG 13

Thursday 9:00-10:00 - Cat (Plenary 1)

Keynote session
Mitch Resnick (MIT Media Lab US)
Beat Döbeli Honegger (Schwyz University of Teacher Education CH)

Thursday 10:30-11:30 - Cat (Ignites 1)

Creative Computer Science | digital data driven dance
Genevieve Smith-Nunes (readysaltedcode CIC GB)

Design Thinking and Scratch?
Emer Beamer (Unexpect, The Designathon School, Freedom Lab NL)
How do children form their ideas of what they want to make and program in scratch? (and how Design thinking and project based learning play a role in this)

The 3 Rs are covered; we know how to Read, Write and do Arithmetic. Time to Teach the 3 Ds: Design, Develop & Debug
Stephen Howell (Microsoft IE)
This Ignite is a call to action for teachers everywhere, we must attack the digital literacy problem just as strongly as lexical literacy. Prof. Wing's Computational Thinking has emboldened a generation of teachers, but so many educators fear teaching technology that we must be evangelists in our schools and promulgate the 3 Ds of Design, Develop and Debug.

Turtlestitch
Andrea Mayr-Stalder, Michael Aschauer (AT)
Presentation of the project ""Turtlestitch"" which provides an interface between Snap! and a stitching machine for output. The aim of the project is twofold, to experiment is generative aesthetics and serve as an environment for workshops for introducing the basics of programming for young people.

A Makerspace in Library
Luca Colciago (Fabriano Public Library Makerspace IT)
The Fabriano public library (Marche, Italy) has created a Makerspace within the library . This makerspace intends to become an intergeneration opportunity for interaction and sharing of old and new technologies, old and new media, old and new experiences. Many activities and events involving our community are organized by passionate people, teachers, and students.

Physical computing in school with raspberry and scratch
Gerhard Hepp (DE)
Physical computing at school, programming computer games with 7th grade kids , constructing their own controllers. Platform is Scratch 1.4 on Raspberry Pi plus some electronics.

Thursday 10:30-11:30 - Gobo (Talks 1)

Using Scratch to develop computational thinking with primary age pupils
Phil Bagge (CAS GB)
Over the last three years Phil has taught over 1200 hours of primary computing science at six primary schools in the UK. As well as sharing his journey with lots of other teachers via his code-it.co.uk website. He is convinced that programming is the best way to use and teach about computational thinking and that Scratch is the premier tool for this.

Thursday 10:30-11:30 - Pico (Talks 2)

Computational Thinking in the Schools of Spain and Latin America: more than just a MOOC, a community

Juan Carlos Olabe & Xabier Basogain (University of the Basque Country ES)
The MOOC "Computational Thinking in the Schools" is a course offered through platform MiriadaX. Participants come from 35 countries. The course has been designed for teachers and those interested in learning how to solve problems through the use of the programming language Scratch. The paper describes the creation of an active learning community and summarizes its structure and initial results.

Scratch acivities in Hungary
Zsuzsa Pluhár (T@T Lab in Faculty of Informatics at Eötvös Lorán University HU)
We would like to present you our teacher training activities and our tutorials not only for jung programmers but for kids with human interest too and about a Scratch competition for girls in a special program together with an foundation called Skool.

Thursday 10:30-11:30 - Nano (Workshop 1)

The Beauty and Joy of Computing
Dan Garcia, Brian Harvey, Jens Moenig, Michael Ball (UC Berkeley US)
The Beauty and Joy of Computing (BJC) is a Snap!-based non-majors computer science curriculum aimed at bringing serious CS ideas such as recursion and higher order functions to a broad audience, with special emphasis on traditionally excluded groups including women and minorities. This workshop will allow participants explore the curriculum through gentle exercises, in a hands-on format.

Thursday 10:30-11:30 - Tera (Workshop 2)

Extend Scratch!
Shane Clements, Chris Willis-Ford, Sayamindu Dasgupta (MIT Media Lab US)
Scratch ""extensions"" let Scratch connect to the outside world, including web services (like weather databases and translation services) or physical devices (like sensors and robotics kits). This hands-on workshop will introduce extensions and help you make your own using the new ""scratchx.org"" extension development website. Some knowledge of JavaScript required for participation in this workshop.

Thursday 12:00-13:00 - Cat (Ignites 2)

NextGen Scratch Wizkids
Arteesha Bosamia, Matthew Healey, Andrew Sula, Stephen Pithouse and Robert Sandford (Technology Volunteers GB)
Technology Volunteers is an initiative where programmers and non-programmers work together to teach Scratch to children. With a live demonstration of ideas, this presentation will show how this cross-disciplinary team at University of Warwick in England brings a valuable range of perspectives to teaching Scratch. It will describe the impact Scratch has had on children in the local community.

Programmo anch'io
Alberto Barbero - Eleonora Pantò (DSCHOLA IT)
DSCHOLA is a nonprofit italian association working in the Piedmont area (NW of Italy) to promote the enhancement in schools of the use of ICT in teaching and learning . One of the latest project, called ""Programmo anch'io"", financed by the Foundation Cassa di Risparmio di Torino, has involved 150 classes in 75 JH&H schools for a total of 3000 students (75 full days of CS education with Scratch).

Scratch in the Italian CoderDojo community
Carmelo Presicce (CoderDojo IT)
CoderDojo is a global network of free, volunteer led, coding clubs for kids, in which young people usually start using Scratch, helped by mentors, following a constructionist approach. I'll talk about CoderDojo as a learning environment as well as a creative community, sharing experiences from CoderDojo Bologna and from many other dojos I had the opportunity to visit and help in Italy.

Cogitate - Create - Code your own cartoon with Scratch Jr
Fleur-Eve Le Foll (Cod Cod Codet, by Maker Mind MA)
With Scratch Jr and some unplugged activities, we are supporting 5-7 y.o. children, living in Morocco, to create their own cartoon via a 4 x 1.5 hours program.

Build your international Scratch-Wikis in your native language: World Wide Wikis
Martin Wollenweber & Linda Fernsel (DE)
Founders and members of the german language Scratch Wiki (www.wiki.scratch-dach.info) want to help international Scratch communities to establish Scratch-Wikis in their own language. After we launched the German Wiki in 2012, last year followed an Indonesian and a Russian Wiki we are actively supporting and all of us are connected through interwiki. What's about your language?

Thursday 12:00-13:00 - Gobo (Talks 3)

Collaboration in the Scratch Online Community
Ricarose Roque and Eric Schilling (MIT Media Lab US)
In the Scratch online community, Scratchers can create, share, and remix projects as well as give feedback and discuss ideas. We'll share stories of creative and inspiring ways that Scratch members collaborate in the community. These collaborative activities are emergent and driven by Scratchers and include activities like multi-animator projects, sprite contests, and remixing chains.

Learning with Scratch
Carlos luis (Instituto do Emprego e Formação Profissional (IEFP) PT)
Our challenge was to develop basic skills in reading, writing, calculating and use of information / communication technology with pedagogical innovations for adults who do not have basic education skills. Interdisciplinary and complementarity assumed a particular teaching experience, with a focus on the use of Scratch to simplifies the creation and manipulation of stories.

Thursday 12:00-13:00 - Pico (Talks 4)

Scratch Teachers in Estonia
Olga Mironova (Tallinn University of Technology EE)
Scratch Teachers in Estonia Examples of different school lessons using Scratch made by teachers, who finished the course 'Fundamentals of Application Development and Programming' at Tallinn University of Technology. Their experience in applications development and teaching pupils. Methodical and didactic problems and tasks.

A New Subject in a New Curriculum: Exemplifying Computing Science in Scottish Schools using Scratch
Jeremy Scott (Royal Society of Edinburgh/George Heriot's School GB)
To reinvent our subject, we must provide learners with an experience of Computing Science (CS) that's accessible and exciting. Over the last three years, Jeremy Scott has led a national project to exemplify the teaching of CS in Scottish schools using Scratch. His curricula draw upon the latest pedagogical research to deliver the subject in a way that's relevant to learners' own digital lives.

Scratch curriculum in Brazil
Antonio Paes (Yadaa Escola de Programação e Robótica - www.yadaa.com.br BR)
On this talk we'll present our program used in Brazil where we mix programming effectively with math, physics and other science topics in a solid and proven program/curriculum.

Thursday 12:00-13:00 - Nano (Workshop 3)

Snapi! - Play with APIs and OpenData with our Snap! extension
Bernat Romagosa (Citilab ES)
Snapi! is our home-brewed Snap! extension that targets APIs and OpenData. In this workshop we'll learn how to access and make use of REST APIs from a Snap!-like environment, all this while explaining our experiences with getting kids to understand and play with APIs.

Thursday 12:00-13:00 - Tera (Workshop 4)

New Dimensions to Scratch with littleBits and Leap Motion
Susan Ettenheim and Kreg Hanning (Eleanor Roosevelt High School US)
In this hands on workshop, you will use the extensions for littleBits and Leap Motion devices with Scratch 2.0 to remix projects that change what you see on the screen by interacting with the physical world. Using challenge activities participants will learn the concepts by remixing projects on the spot with live help. Reflection, documentation and community support will be discussed and shared. You can prepare for the workshop by visiting https://sites.google.com/a/erhsnyc.net/scratch2015ams/ and install some software.

Thursday 14:30-15:30 - Cat (Ignites 3)

Cat: A Computer Adaptive Test to Help Students Learn Programming
Jan Janiszewski (University of Amsterdam (currently University of California, Santa Barbara) NL)
With only limited external help from teachers, children often encounter difficulties in their learning process within the Scratch environment. Therefore, we created a computer adaptive test that assesses the programming ability of elementary school children and provides them with feedback on difficult programming concepts. We expect students to learn programming faster and become more motivated.

Doodling in Code: A simple framing of coding activity that invites creative exploration and playfulness
Adam Colestock (Francis W. Parker School US)
In my work teaching kids to program, I sometimes see kids overwhelmed by the scope of their favorite projects on the Scratch site and the ambitious games that they want to create. I propose that occasionally framing the work of coding as 'doodling' for developing programmers provides an entry point that is inviting and promotes exploration and play.

TeacherDojo: a social space for creating and learning
Agnese Addone (CoderDojo IT)
TeacherDojo is a free workshop for school teachers created to promote different educational paradigms and to innovate teaching methods through digital technologies. Inspired by the MIT Media Lab CCOW , it's designed by: the CoderDojos of Rome and Sigillo, the LTA Laboratory (Dep. of Education, UniRomaTre) and members of Learning Creative Learning community.

Computer Science at Primary Schools in the Portugal: and young teachers (mostly women)?
Joao Orvalho (Institute Politechnic of Coimbra PT)
Sooner or later, Portugal will introduce CS at primary school. In Portugal the overwhelming majority of students in undergraduate education for primary school teachers are women. And then ? In these last six years in Coimbra I have given training in computational thinking, using Scratch, to the future primary teachers in the 1st year of his undergraduation (teacher education) where 99% of the students is female.

Using Scratch with Education Sciences Students
Dimitris Nikolos & Vassilis Komis (University of Patras, Greece GR)
In the Department of Educational Sciences and Early Childhood Education, University of Patras, we teach Scratch to prospective early childhood teachers in an elective course. For three academic years we focused on different aspects of Scratch and used various approaches to teach them to our students. Our experiences and our future plans will be discussed in this talk.

What is the best way to move from Scratch towards other programming languages?
Lars Kobbe (DE)
This session addresses the question of how to help experienced Scratcher (yet otherwise beginners) move from Scratch to mainstream programming languages and reduce the typical frustration of beginners. We will review and discuss what makes Scratch (both as a language and as a platform) so engaging and fun and to what degree this experience can be re-created with other languages and platforms.

Thursday 14:30-15:30 - Gobo (Talks 5)

Poppy-Project
Pierre Rouanet (Flowers Team - Inria FR)
We will show how we connected Snap! to Poppy Creatures (http://www.poppy-project.org) which are fully open-srouce robots based on 3rd printing and dedicated to scientists, educators, developers and artists, that all share a vision: robots are powerful tools to learn and be creative. We will show how using Snap! we can control in real time a full humanoid robot.

Scratch: a Tool for Gender Balance in IT
Linda Derksen & Lieke Boon (VHTO, Dutch Expert Organisation on Girls/Women and Science/Technology NL)
In VHTO's primary school project 'Talentenkijker', stereotypical thinking about science/tech and gender is challenged, and Scratch has been integrated into the project to teach pupils programming. VHTO will show how Scratch can weaken stereotypical thinking about IT & gender. We'll present teachers' experiences with Scratch, and discuss about measures to increase the participation of women in IT.

Thursday 14:30-15:30 - Pico (Workshop 5)

Sniff - writing Scratch in text and creating IoT devices
Ian Stephenson, Tom Stacey (Bournemouth University GB)
Join researchers from Bournemouth University in the UK who show you how to code in Sniff. This follow-on language from Scratch forgoes blocks and choosing, for text and writing. Unlike Python or C, you already know Sniff, because it is Scratch in text. You'll find you can write programs quickly, easily and elegantly because you already know it.

Thursday 14:30-15:30 - Nano (Workshop 6)

Serious Science with Silly Sensors
Margaret Low, Andrew Sula, Arteesha Bosamia, Marie Low, Martin Luk, Matthew Healey, Robert Sandford, Stephen Pithouse, Tom Preece (University of Warwick GB)
Young people are encouraged to carry out experiments in order to develop a better understanding of science. This workshop explores how we can sense events taking place around us, to gain an understanding of science. We will develop and calibrate some simple scientific instruments to carry out experiments. using picoboards and arduinos. Technology Volunteers www.warwick.ac.uk/techvolunteers

Thursday 14:30-15:30 - Tera (Workshop 7)

Fun with ScratchJr and other coding games
Mie Menmark (School SE)
Try scratchJr and practical exercises in problem solving and learning to encode with and for preschool children.

Thursday 16:00-17:00 - Cat (Talks 6)

Extending Scratch into the Real World with Hardware Extensions
Stephen Howell & TBD (Microsoft IE)
This discussion on 'Extending Scratch' will provide a brief overview of some of the extensions available and in development for Scratch, along with some demo's of these extensions. The panel members will discuss the challenges of creating extensions and the benefits of deploying extensions in the classroom.

European Erasmus+ Program Training on Scratch
Samir Saidani (FR)
Erasmus+ European Program is aimed to provide a way to organize collaborative meeting between european people, and beyond. We will present the Erasmus+ Program, some training we've already organized through this program and how to fund a Scratch Training based on Erasmus+ Program.

Thursday 16:00-17:00 - Gobo (Talks 7)

Peer Instruction for Scratch in Scratch
Peter Donaldson (Principal Teacher of Computing, Crieff High School & CAS Scotland committee member GB)
Peer Instruction is a teaching technique designed to encourage all learners to make predictions and share their current understanding with each other. It's been used successfully in universities across the world but could it work in a high school context? This session will explain the PI process and how I've used it while stretching your brains with a PI session about Scratch in Scratch.

Dr.Scratch
Mari Luz Aguado (ES)
The Dr. Scratch web application is an analytical tool that evaluates your Scratch projects in a variety of computational areas providing feedback. This analyzer is a helpful tool to evaluate your own projects, or those of your Scratch students. It is suited to students of all ages because results shown are based on the level of Computational Thinking acquired by the students.

Simplify Scratch for teachers
Iris Douma (NL)
Help to simplify scratch for a 'playful eduction toolkit' which does not scare teachers! Short design session 15-30 min.

Thursday 16:00-17:00 - Pico (Workshop 8)

BeetleBlocks: 3D design and fabrication in a Snap-like environment
Duks Koschitz, Eric Rosenbaum, Jens Mönig, Bernat Romagosa (Citilab ES)
BeetleBlocks is a visual, blocks-based programming environment for 3D design and fabrication. BeetleBlocks programs move a graphical ""beetle"" around a 3D world, where it can place 3D shapes, extrude its path as a tube, and generate geometry in other ways. The resulting 3D geometry can be exported as a 3D-printable file.

Thursday 16:00-17:00 - Nano (Workshop 9)

Build 3D Simulations with StarLogo Nova
Derek Breen (StarLogo Nova @ MIT US)
In this introductory workshop you will build an interactive, 3D simulation using StarLogo Nova. No prior programming experience is necessary. Please bring your own laptop.

Thursday 16:00-17:00 - Tera (Workshop 10)

Free Scratch from the evil Sulfator!
Pierre Morsa, Natacha Morsa, Mary Leviandier, Quentin Depuydt (Coding & Bricks FR)
The evil Sulfator hates progress. he has kidnapped Scratch, to prevent children from learning how to code! Will you manage to program Scratch and LEGO WeDo to rescue Scratch and save the children from Sulfator? Make the story progress by solving increasingly difficult puzzles, discover how Scratch and LEGO WeDo interact, and learn how to control the motor, tilt and motion sensors.

Thursday 16:00-17:00 - Parrot (Talks 8)

EU Code Week
One of the EU Code Week Ambassadors (to be confirmed) (FR)
1 week, 38 countries, 3000 activities, 100 000 + participants : EU Code Week 2014 was the biggest celebration of coding across Europe ! EU Code Week is returning this year from 10-18 October 2015, offering even more events for all kinds of groups: from beginners to advanced coders, for everyone from job-seekers looking to learn a new skill to robot fans and girl geeks.

Africa Code Week
Claire Betis (africacodeweek.org FR)
Africa Code Week is a continent-wide initiative to simplify the face of coding for the young generation. From Oct 1 to Oct 10, hundreds of coding activities will be organized for 20,000 kids and youth from 3 different age groups (8-11, 12-17 and 18-24) across 17 African countries.

Thursday and/or Friday (TBA) at the Scratcher-space:

Family Creative Learning Workshop
Derek Breen (US)
Family Creative Learning is a workshop series developed by members of the Lifelong Kindergarden research group to engages children and their parents to learn together — as designers and inventors — through the use of creative technologies. This workshop would run in-tandem with the conference, making a space for children.

1982-2015 R.I.P. Bianca Ní Ghrógáin

"It is with unspeakable shock and profound sadness that I write to let our CESI community know of the sudden and most premature death of Bianca Ní Ghrógáin, our executive member and so, so much more. Our heartfelt sympathies go to her devastated family at this extremely difficult time. Ar dheis Dé go raibh a hanam." So wrote Adrienne Webb, Chair of CESI, on June 6th 2015.

A Froebel trained primary school teacher turned STEM researcher, Bianca had taken study leave from her Educate Together school to pursue PhD research at DCU, funded via an SFI scholarship. Her hallmarks as a teacher and presenter were divergent thinking, flipping the teaching process, social justice, ethical and development education - and Maker Ed! She integrated tech in most ingenious ways. She had an innate and unique empathy with learners of all ages, and provided classroom activities that generated as many questions as they did answers.

It was Bianca's interest in Maker Ed that began her connection with the World Scratch Conference. She had attended in Barcelona with a group from CESI, her teacher professional network in Ireland. She immediately realised the creativity that could be unleashed with Makey Makey and Scratch, and as soon as she returned she arranged for CESI to invest in a suite of Makey Makey kits. Whenever she delivered a course or visited a classroom or Coderdojo, there was enthusiasm, imaginative collaboration - and lots of craic.

Bianca made connections with the wider computer science community at that BCN conference, and was soon afterwards she invited to present at CAS in Scotland and NAACE in the UK. One professional Ed Tech partnership dear to her heart was the one she formed with Drew Buddie, Chair of NAACE. Bianca and Drew have since led Maker Ed workshops together at CESICON and at NAACE, and she had been really looking forward to working with Drew here at this Amsterdam conference.

To meet Bianca was to meet a banlaoch - a true warrior. Her far too sudden departure has left the Ed Tech community in Ireland, and further afield, bereft. Ní bheidh a leithéad arís ann. Please think of Bianca's family and friends while enjoying your time at this year's Scratch conference.

To find out more, visit Bianca's Twitter Timeline @bnighrogain, her blog Rang Bianca, and our CESI website tribute page.

Mags Amond, National Executive, Computers in Education Society of Ireland.

Programme FRIDAY AUG 14

Friday 9:00-10:00 - Cat (Plenary 2)

Keynote session
Linda Liukas (Hello Ruby, Rails Girls FI)
Michelle Thorne (Webmaker, Mozfest, UK)

Friday 10:30-11:30 - Cat (Ignites 4)

After Scratch: Logo(Writer)
Mike Doyle (The British School of Sofia BG)
The interventions of MIT Media Lab in education, turtle geometry and Scratch, are critically examined historically. It is noted that: Logo was never used in schools; 'Logo' was a philosophy inimical to curricula; Scratch was not designed for school use. LogoWriter, criticised in the 1980s, is extant and free. It offers computing environment that complements yet challenges the core curriculum.

Scratch on SqueakJS: No plugin required
Bert Freudenberg (CDG Labs DE)
Scratch was originally implemented in Squeak Smalltalk. These 1.x versions can now be run in a web browser thanks to SqueakJS: http://bertfreudenberg.github.io/SqueakJS/scratch/ This is a full implementation of Squeak, so it is possible to look behind the scenes using the old shift-click-on-R trick.

GP: A Scratch-like Language for Applications
John Maloney, Jens Mönig, Yoshiki Oshima (CDG Labs (and also MIT Media Lab) US)
Have you ever wanted to use a Scratch-like programing system to build applications for your laptop or mobile device? Have you ever wanted to extend Scratch with new capabilities? This talk will provide a ""sneak peek"" at GP, a powerful new blocks language currently under development.

Creating a mobile App in 90 seconds
Dan Garcia (UC Berkeley US)
Watch a live demo of the creation of a mobile app (whack Alonzo) in 90 seconds, start to finish!

Scratch projects on smartphone
Wolfgang Slany (Graz University of Technology AT)
I present a free service that allows to transform Scratch projects into Pocket Code programs that can be executed and, what's more, also directly edited on any smartphone or tablet. In fact the editing may be necessary to replace keyboard input by sensors or multi touch features built into the smartphones.

Takeoff, Fly, Flip, and Land - Visual Programming for Drones/Quadcopters
Mike Chen (US)
Drones/quadcopters are becoming popluar for entertainment and photography. We designed a visual programming language, called Tickle, to program drones - turning them into opportunities for learning programming.

Friday 10:30-11:30 - Gobo (Papers 1)

Sniff - A text based programming language for Scratchers
Tom Stacey, Ian Stephenson (Researcher - Bournemouth University GB)
Sniff is what Scratch would be if you wrote it down. It's a regular programming language that tries to be as much like Scratch as possible, but being text based its much closer to being a traditional programming language. It lets experienced Scratchers use all their Scratch knowledge to write text based programs. In this paper we explore the challenges and present our current findings.

The SQLsnap! supermarket
Eckart Modrow (University of Goettingen DE)
Following the ideas of the "Beauty and Joy of Computing" within the context of German CS-curricula, I show how the use of computer systems in common social situations can be modelled algorithmically using Snap!. The necessary additional tools — easily derived from an example environment — are described and implemented.

HelloScratchJr.org: Curricular Design and Assessment Tools to Foster the Integration of ScratchJr and Computational Thinking into K-2 Classrooms
J.C. Olabe et al. (Christian Brothers University US)
This paper presents an open website, HelloScratchJr.org, where K-2 teachers and students access curricular material and assessment tools. The site is intended to facilitate the integration of Computational Thinking, using ScratchJr, during the first years of primary school. These resources address the key factors for the success of school initiatives entering the field of computational thinking.

Analyze your Scratch projects with Dr. Scratch and assess your Computational Thinking skills
Jesús Moreno-León, Gregorio Robles (Programamos.es ES)
In this paper we present the procedure used by the Dr. Scratch tool to automatically assess the development of Computational Thinking (CT) demostrated by the developer of a Scratch project. The paper reviews similar initiatives, like Hairball, and investigates the literature with proposals for assessment of Scratch projects that we have studied and remixed in order to develop the CT analysis.

Web platform to support teaching programming with Snap! and manage pupils' learning
Sébastien Combéfis and Chantal Poncin (Computer Science and IT in Education BE)
This work is about the development of a web plaform dedicated to pupils between 10 and 14 years old that support them in their learning of programming. The developed platform uses Snap! and adds a lightweight LMS. The goals of the LMS is to help teachers to manage activities and lessons to build courses to be followed by their pupils.

Measuring the centralized mindset in Scratch
Dimitris Nikolos, Vassilis Komis (Department of Educational Sciences and Early Childhood Education GR)
This paper describes an effort to measure the centralized control of Scratch projects using social networks analysis software. We developed software to transform the structure of Scratch projects into networks. The theory of centrality and centralization of social networks can then be applied to the structure of a Scratch project providing measurements for the centralized mindset of the creator.

Explaining Chemistry with Scratch
Michael Weigend (Holzkamp-Gesamtschule DE)
Creating and discussing Scratch animations can make chemistry education more interesting and profitable. This contribution presents examples explaining the mechanisms of chemical reactions, properties of organic compounds and general chemical principles. Students get the opportunity to develop creativity while explicating mental models about theoretical concepts.

Friday 10:30-11:30 - Pico (Talks 9)

Snap4Arduino
Bernat Romagosa (Citilab ES)
After explaining how we developed Snap4Arduino and its relation to our previous S4A project, we will offer a live demo in which we will build, program and (try to) play a Theremin musical instrument.

Extending Snap! for OOP
Jens Mönig (CDG Labs), Brian Harvey (UC Berkeley) (CDG Labs, SAP Research DE)
The next version of Snap! will provide prototypal inheritance, letting students model cascading dynamic bindings for field-variables, custom blocks, sprite attributes and media. With this mechanism students can classify concrete behavioral strains into more abstract prototypes and turn these into powerful classes. Thus, Snap! will be able to support a rigorous introductory OOP curriculum.

The new 'Kinect 2 Scratch', a toolkit for developing Natural User Interface games in Scratch 2.0 using the new Kinect v2.
Stephen Howell, Scott Blackwell (Microsoft IE)
We present the new Kinect 2 Scratch which connects Scratch 1.4/2.0 & Kinect v1/v2 (for Xbox One). The original software was released in January 2011, and has been downloaded thousands of times and used worldwide. This free software allows anyone code for the body tracking Kinect sensor using Scratch. We will focus on the updated features, supporting educational material and the 2015 schools pilot

Friday 10:30-11:30 - Nano (Workshop 11)

Scratch in Science: Creating Experiments and Making Sense of the Data
Steve Holmes (Educator IE)
We will explore the learning opportunities available through connecting sensors to Scratch. The Make!Sense analog sensor board and Wii Remote/Balance board will be used to give lessons about real time data streaming and data collection/analysis. Scratch's easy programming environment allows primary and secondary students with no programming experience to write code to collect and analyse data.

Friday 10:30-11:30 - Tera (Workshop 12)

Unleash your Arduino !
Romain Liblau, Alexandre Lamandé, Belaid Abdellah, François Sylvestre, Loïc Tangre (Magic Makers FR)
Have you been showing kids how to tinker with Arduino on Scratch? Did they ever wish they could get rid of the usb cable in order to create stand-alone objects? Well now they can !! Working with engineering students form Sup Galilée (Paris), Magic Makers released a tool allowing you to load your Scratch projects on an Arduino and pull the plug!

Friday 10:30-11:30 - Parrot (Workshop 13)

From traffic lights to parent detectors: physical computing with Scratch and the Raspberry Pi
Clive Beale (Raspberry Pi Foundation GB)
Break out of the screen and control the outside world with Scratch and the Raspberry Pi! This is a hands on session where you will learn how to connect LEDs, buttons, motors and sensors to the Pi and control them using Scratch. With these few basic skills you will be able to build your own robot or even a parent detector for your bedroom.

Friday 12:00-13:00 - Cat (Ignites 5)

Coding with ScratchJr, students 6-9 years old
Mie Menmark (School SE)
Nothing is impossible. We are learning a new language, programming language. We use scratchJr along with other programming apps and practical exercises in preschool to year3 in school subjects and at leisure. The digital tools are a natural and vital part of learning. Everyone can! Everything becomes possible.

Writing a Scratch Book for Girls (and Boys)
Derek Breen (writer, Scratch For Kids For Dummies US)
When commissioned to write a book about Scratch targeting children from eight- to twelve-years-old I had two main priorities: emphasize design over coding and strike a balance between projects which would appeal to girls vs. boys. Fortunately I had two target readers in my family, my nine-year-old niece and eleven-year-old nephew. Each would challenge me to make the book ""more for them.""

Block languages for the visually impaired
Brian Harvey (University of California US)
Block languages (Scratch, Snap!, Blockly, App Inventor, StarLogo TNG) have had a surge of popularity in introductory computer science curricula because of their strong appeal to traditionally underrepresented groups, especially girls. But they threaten to exclude one group: the visually impaired. How can we extend software and curricula to solve this problem?

Robot-Puppet Show with Scratch and Aisoy1
Frank Sabaté (Escola Projecte ES)
Ten year-old students, in pairs, direct a puppet show. They've got two actors: two Aisoy1 robots. During a whole term, they write the script, create the scenarios, make the costumes (with the help of a group of grandmothers) and they program the show using Scratch 2 and the Aisoy extension. Finally, the shows are represented to their partners and recorded.

Using Scratch Jr as a learning support tool in Kindergarten
Angela Sofia Lombardo (CoderDojo Bologna, Institute of Constructivist Psychology Padova, Italy IT)
I will share my experience as a learning support teacher, introducing Scratch Jr to a 5 years old kindergartener as a cognitive stimulation tool. This rapidly became an experience of empowering socialization between peers and expressing emotion through creativity.

Scratch to school - helping with learning difficulties
Daniela Guengant & Claude Terosier (Magic Makers FR)
Sharing insights on the impact of creative computing workshops on high school kids with learning difficulties. Based on a serie of workshops led in a Parisian High School with kids 12 to 14.

Scratch in the classroom: a teacher training experience in Brazil
Adelmo Eloy, Eduardo Aranibar Silva (BR)
Scratch is an innovative tool for teaching computational thinking, capable of creating positive impact on how one learns and thinks. However, in order to achieve massive scale in Brazil, it will be necessary to integrate the tool and the concepts with traditional elements of the school, from curriculum to teachers.

Friday 12:00-13:00 - Gobo (Talks 10)

When the Chicken met the Robot
Mags Amond & Gillian Connolly (CESI and Coderdojo IE)
Developing the intersection between pedagogy and ""techagogy"" - how teachers need to bring more computational thinking into their practice, and techies need to bring more pedagogy into their explanations. Mags the Teacher and Gillian the Techie met by chance, having each taken steps into each others' world via Coderdojo. In this presentation we'll tell the story so far...

Don't think like a computer, think like a computer scientist!
Michael Lodi (CoderDojo Bologna, Università di Bologna - Italy IT)
The importance of computational thinking in computer science education is clear. But it can also teach some very relevant life skills for all, like systematic thinking, decomposition, acceptance of uncertainty of the result, being less ambiguous in giving instruction, paying attention to efficiency, iterate and collaborate. Science shows these skills can boost nothing less than our happiness :-)

'What I hear I forget, what I see I remember, what I do I understand.' Lessons learned: 2 years Fabschool kids
Henk Buursen, Karien Vermeulen (Waag Society / Fabschool NL)
Making is a trend. And is fun. But more than fun for many people, making is a fundamental intrinsic need. In creating the world we encounter, we get new experiences and learn about what works and what does not. Making leads to new insights and opportunities. And ""Learning by making"" provides a wealth of opportunities for education.

Friday 12:00-13:00 - Pico (Talks 11)

Project Spark: How building 3D fantasy worlds can be the perfect introduction to block based coding
Stephen Howell, Scott Blackwell (Microsoft IE)
Project Spark is like Scratch; a powerful, yet simple way to build and play your own worlds, stories and games. Project Spark is developed by Microsoft, and is an evolution of Kodu. This presentation will show how reprogramming an angry goblin to be your best friend can teach boolean logic while also being incredibly awesome. We will also showcase the free video course we made for Spark.

Tickle: Visual Programming meets Arduino, Connected Toys, and Smart Homes
Mike Chen (TW)
Tickle is a visual programming language for the iPad, inspired by Scratch and Blockly. It's designed to enable anyone to easily program smart devices - without wires and installing extensions. Attendess will get a chance to program a variety of Bluetooth and Wi-Fi devices using Tickle, and learn which ones are best for their educational programs. *Please bring an iPad if you have one.

Pixie: learn how to program step by step
Luis Carbajosa (Pixie Code SL ES)
PIXIE is a support system to teach programming created from a standard system based on visual blocks of code inspired by Scratch and based on Blockly. PIXIE develops a whole ecosystem of academic management, courses, classes and teaching materials, all organized around a completely integrated programming environment.

Friday 12:00-13:00 - Nano (Workshop 14)

Hip-Hop Dance and Scratch
Ricarose Roque and Eric Schilling (MIT Media Lab US)
Join the MIT Scratch Team in a hip-hop dance workshop using Scratch. In this workshop, we'll program hip-hop dance moves, such as popping and toprocking. Afterwards, we'll share our projects and discuss other interest-based pathways into Scratch. This project is part of an initiative with the DML Research Hub and the Harvard Berkman Center for Internet & Society. No prior dance skills required.

Friday 12:00-13:00 - Tera (Workshop 15)

Bots and Bees
Susan Nic Réamoinn (Griffeen Valley Educate Together N.S. IE)
Beebots, Ohbot and Pi2Go: we're all about the robotics! Come along and join in the fun of language sharing and robotic coding. We use robots for oral language development and coding in the early years. See our little bees in motion and share your language with us.

Friday 14:30-15:30 - Cat (Talks 12)

The Beauty and Joy of Computing – Intro CS for the world
Brian Harvey, Daniel D. Garcia (University of California US)
The Beauty and Joy of Computing (BJC) is a Snap!-based intro computer science curriculum aimed at bringing serious CS ideas such as recursion and higher order functions to a broad audience, with special emphasis on traditionally excluded groups including women and minorities. We'll describe our current work bringing BJC to New York City, and invite translations for non-US audiences.

Bringing the Beauty and Joy of Computing to the World via edX
Dan Garcia, Brian Harvey, Jens Moenig, Michael Ball (UC Berkeley US)
After five years of offering professional development to over 200 high school teachers, the Beauty and Joy of Computing (BJC) team decided to embark on a project with global reach: building a massive open online course (MOOC) for their BJC course, complete with autograding, peer grading, inspiring videos, quizzes, and a learning community. This talk will offer a sneak peek;it launches Fall 2015.

Friday 14:30-15:30 - Gobo (Talks 13)

Moving from Paper to Scratch to Python
David Ames (Edge Hill University/Computing At School GB)
A whistle stop, hands on, tour of how I've used both Scratch and Python in an introductory programming course with 11-14 year olds. With a focus on drawing out the links between how students plan out what they're going to do, how they would do it using Scratch and then how they might implement the same structures using Python.

Bridging the Gap between Blocks and Text via Game Development
Ursula Wolz (RiverSound Solutions US)
There is anecdotal evidence that Scratchers may struggle with text-based programming. This workshop presents a series of exercises developed in response to middle school students' request to move to Java. Eight small Scratch programs are introduced that cover the essentials of coding and game design. Ten Processing examples follow covering the same concepts. All were tested by 4th - 9th graders.

Friday 14:30-15:30 - Pico (Talks 14)

Teaching debugging in Scratch
Miles Berry (University of Roehampton GB)
After an introduction to the importance of debugging for the development of computational thinking and developing resilience, drawing on the work of Papert, Dweck and others, Miles explores common types of bug in Scratch code, strategies for debugging and approaches to teaching this vital skill in school or clubs. There'll be ample time for participants to discuss how they tackle debugging.

Friday 14:30-15:30 - Nano (Workshop 16)

Round the Circuit - using unconventional methods to control Scratch
Drew Buddie & Sinead Moxham (Royal Masonic School/Naace GB)
There is a technological and creative revolution underway, as educators we need to plan beyond the horizon. This workshop is designed to help you gain inspiration and hands-on practical guidance around the use and integration of technology across the entire school system by designing alternative controllers for your Scratch programs.

Friday 14:30-15:30 - Tera (Workshop 17)

Hello Ruby, unplugged activities for young learners
Linda Liukas (helloruby.com FI)
Hello Ruby is a celebration of computing: from its immense philosophies to the tiniest booleans - and everything in between. Ruby is a small girl with a big imagination: her animal friends help her navigate through sometimes seemingly irrational world. In some ways she's like Calvin from Calvin & Hobbes, in others she's like Pippi Longstockings. Ruby's world has rules and reason, repetition and rh

Friday 16:00-17:00 - Donut (Posters)

Pedagogy for Tomorrow
Lilli Meloche (Calgary Board of Education CA)
Pedagogy for Tomorrow: How Scratch makes learning come to life for primary school students. The excitement in learning that coding in Scratch brings to my grade 4 students is awe-inspiring. Coding with Scratch facilitates deeper engagement and personalized learning in every subject. Students are creators not consumers. 'Flat Scratchy',tour guide, builds relationships across borders.

Tablet Scratch
Shane M. Clements and Chris Willis-Ford (MIT Media Lab (Scratch Team) US)
Scratch is now on tablets! Come play with this new version of Scratch and take this opportunity to speak with MIT Scratch Team members about the new design. Though it's still under development, you can try out projects from the Scratch website or create a new one. We'd love to hear what you think!

Ten Different Ways to Teach Algorithms
Drew Buddie (Royal Masonic School & Naace GB)
This presentation of a hands-on workshop will look at how Scratch can be combined with a range of alternative tools to teach the concept of algorithms. Attendees will leave with tried and tested practical examples to use in the classroom.

Tangible Programming
Tomohito Yashiro, Kazushi Mukaiyama, Yasushi Harada (Future University Hakodate JP)
Tangible Programming, previously named as Material Programming, is a programming learning environment using physical blocks. We show a latest demonstration of Tangible Programming. Also, we report how people used Tangible Programming. Through this demonstration, we would like to discuss the possibility of Tangible Programming system with all attendees.

Scratch@Citilab
Bernat Romagosa (Citilab ES)
Come visit us to live-try and discuss with us the different projects we've developed or participated in during these 8 years of Scratch-related activity at the Citilab.

Scratch, away from the computer screen
Stephen Pithouse (Technology Volunteers GB)
Using the Raspberry Pi GPIO to interact with Scratch, with flashing lights, displays and buttons.

Imagine Scratch in 3D
Derek Breen (StarLogo Nova @ MIT US)
StarLogo Nova brings blocks-based programming into the third dimension. While StarLogo TNG added blocks and a 3D workspace, Nova is a more streamlined simulation and game development tool, running in the browser and taking full advantage of cloud-based services. Best of all it is free to use and available right now at www.slnova.org!

GP: A Scratch-like Language for Applications
John Maloney, Jens Mönig, Yoshiki Ohshima (CDG Labs (and also MIT Media Lab) US)
This poster session will present GP, a new, Scratch-like blocks language that can deploy finished applications. GP (currently under development) can be extended by writing code as either text or blocks.

Interactive Computer Science Learning Tools for Adults
Arteesha Bosamia (GB)
Interactive mobile tool for adults to learn Computer Science concepts.

Friday 16:00-17:00 - Donut (Posters continued)

No One Left Behind - Unlocking inclusive gaming creation and experiences in formal learning situations
Anja Petri (Graz University of Technology AT)
In the European project No One Left Behind we aim to include digital game-based learning into the school curriculum. It will unlock inclusive gaming creation in formal learning situations. By using Pocket Code teens can create games on their mobile devices, with the aim of enhancing their abilities across all academic subjects, as well as their computational thinking, creativity and social skills.

When sharing computer science with everyone also helps avoiding digital prejudices: a practice report
Marie Duflot, Martin Quinson, Florent Masseglia, Didier Roy, Julien Vaubourg (Inria FR)
We, computer scientists, have to increase human knowledge, e.g. help to better understand what is mechanical intelligence. But we also have the duty to share this knowledge with everyone. To be sure that no one endure, whereas each one benefits from the derived technology. To this end, creative computing with Scratch, unplug activities, and playful robotics are our best friends. Let us witness.

Scratch on paper
Cobie van de Ven (Digitaal Laboratorium NL)
Can we design paper games for a nice introduction or a better understanding of concepts of computational thinking. We show some examples and may be this is an inspiration to come with more ideas.

Robot-Puppet Show with Scratch and Aisoy1
Frank Sabaté (Escola Projecte ES)
Ten year-old students, in pairs, direct a puppet show. They've got two actors: two Aisoy1 robots. During a whole term, they write the script, create the scenarios, make the costumes (with the help of a group of grandmothers) and they program the show using Scratch 2 and the Aisoy extension. Finally, the shows are represented to their partners and recorded.

Unleash your Arduino !
Romain Liblau, Alexandre Lamandé, Belaid ABbdellah, François Sylvestre, Loïc Tangre (Magic Makers FR)
Have you been showing kids how to tinker with Arduino on Scratch? Did they ever wish they could get rid of the usb cable in order to create stand-alone objects? Well now they can !! Working with engineering students form Sup Galilée (Paris), Magic Makers released a tool allowing you to load your Scratch projects on an Arduino and pull the plug ! Come check this out at our tour booth.

Interact with Scratch using your mind
Carmelo Presicce (CoderDojo IT)
Have you ever dreamed about moving objects using your mind? You can do it with Scratch! MindWave Scratch extension works with a low-cost EEG headset, Neurosky Mindwave, that can detect your concentration and meditation levels, processing your brainwaves. Data can be used in Scratch projects in real time to create mind controlled games and thought driven animations.

Kinect 2 Scratch: A Skeletal Tracking Extension for Scratch to Enable Natural User Interface Development with K-12 Students
Stephen Howell (Microsoft IE)
The new Kinect 2 Scratch connects Scratch 1.4/2.0 with Kinect v1/v2 (for Xbox One). This free software allows anyone code for the body tracking Kinect sensor using Scratch. This poster describes the updated features, educational material and results of the 2015 schools pilot

A smart girl writes code
Sandra Bosch and Ines Duits (Slimme meisjes programmeren (ebook) NL)
Ines Duits created a book for girls. The main concept is that programming doesn't make you a technical person, but a creative one. Now more then even, girls are producing media. They upload to their youtube accounts, they write blogs and create fan art. It would be a real shame if these girls would not be able to code, because it will limit them and make them dependend on those who can.

The Beauty and Joy of Computing and the Snap! programming language
Dan Garcia, Brian Harvey, Jens Moenig, Michael Ball (UC Berkeley US)
The Beauty and Joy of Computing (BJC) is a Snap!-based non-majors computer science curriculum aimed at bringing serious CS ideas such as recursion and higher order functions to a broad audience, with special emphasis on traditionally excluded groups including women and minorities.

Scratch in Teacher Education in Iceland
Salvor Gissurardottir (School of Education, University of Iceland IS)
This paper discusses ways how Scratch could be introduced into teacher education. From 2012 to 2014 Scratch has been used to introduce first year teacher education class in Iceland to coding and programming but also as an environment to collaborate with others and remix and tinker and prepare for IoT environment of tomorrow. The aim is to prepare future teacher who can be agents of change.

Fabschool / Cryptokids
Henk Buursen, Karien Vermeulen, Robin van Westen (Waag Society/fabschool/cryptokids NL)
We will present fabschool & cryptokids: Fabschool: age 8-12 learn how to make, to explore technology and work with machines. Cryptokids: Hacking, networks and privacy are keywords for this cryptoparty for kids.

Teaching abstraction in computer science through the use of Scratch
Dr. Michal Armoni (IL)
Abstraction is one of the most fundamental ideas in computer science (CS). However, teaching this soft concept to novices is a very complicated task. In our research we examine a simple pedagogical strategy for teaching abstraction as part of an introductory CS unit to 7th graders. This unit covers basic ideas of CS through the use of Scratch.

Byte sized videos to jump start coding in Scratch, Snap and Processing
Ursula Wolz, Chris Dunne (RiverSound Solutions US)
Video tutorials are all the rage for providing blended instruction. This presentation demonstrates key elements to a good video production that has been field tested with Scratchers aged 9 - 14. Developed with Chris Dunne, aka Wodunne in the Scratch community our technique provides immediate, efficient information for novice and intermediate programmers.

Tickle: Visual Programming for Internet of Things (IoT)
Mike Chen (TW)
Our world is rapidly becoming wirelessly connected. Tickle is a visual programming language explicitly designed for Internet of Things. Come try a variety of Bluetooth/Wi-Fi devices that you can program right from your iPad, including drones, robots, Arduino, and smart home devices.

Using Scratch to reduce conflicts and increase self-esteem
Helena Romano, João Torres, Miguel Figueiredo (EduScratch - ICT Competence Centre of School of Education - Polytechnic Institute of Setúbal PT)
EduScratch and CPCJ Setúbal, Portugal, implemented a club with the class teacher. Several activities were developed so that 16 students, who have failed once at least, were trained in Scratch. Some pupils became monitors and began to set up the Scratch Programming Club, taking full responsibility for the preparation of the materials and training their peers.The project achieved its objectives.

Build your international Scratch-Wikis in your native language: World Wide Wikis
Martin Wollenweber, Linda Fernsel (http://scratch-dach.info/ DE)
Founders and members of the German language Scratch Wiki want to help international Scratch communities establish Scratch-Wikis in their own language. After we launched the German Wiki in 2012, last year followed an Indonesian and a Russian Wiki that we are actively supporting and all of us are connected through interwiki. What about your language?

Scraspberry, control your Raspberry Pins with Scratch !
Hazar Abboud, Michèle Aziz Srour, Nathalie Nassar (Magic Makers, Telecom ParisTech FR)
Scraspberry is a fun and easy way to connect Scratch to the physical world using Raspberry Pi. It allows for two-way communication between a Scratch project and the Raspberry Pi GPIO pins. With this easy to install and use system, you will be able to use your Raspberry Pi to build fun and creative projects like do-it-yourself joysticks and Christmas lights!

Pixie: learn how to program step by step
Luis Carbajosa (ES)
PIXIE is a support system to teach programming created from a standard system based on visual blocks of code inspired by Scratch and based on Blockly. On the one hand, PIXIE develops a whole ecosystem of academic management, courses, classes and teaching materials, all organized around a completely integrated programming environment.

Scratch in Science: Creating Experiments and Making Sense of the Data
Steve Holmes (Creative Computer Lab IE)
Scratch's easy programming environment allows primary and secondary students with no programming experience to write code to collect and analyse data from external sensors. This poster session will allow people to interact with the Make!Sense data collection board to control games in Scratch by using various analog sensing devices such as potentiometers and Infra red distance rangers.

Programme SATURDAY AUG 15

Saturday 9:00-10:00 - Cat (Plenary 3)

Keynote session
Audrey Watters (Hack Education, Modern Learners US)
Eric Rosenbaum (MakeyMakey, MelodyMorph, BeetleBlocks US)

Saturday 10:30-11:30 - Cat (Talks 15)

Connecting Scratch 2.0 with... everything!
Massimo Avvisati (IT)
Scratch 2.0 offline editor offers the opportunity to all developers to create interesting extensions. In this short presentation we'll see how to connect Scratch to a Processing ""helper"" enabling us to write customized blocks capable to communicate to any kind of software or hardware! Internet of Things, online services or 3D video-games are just some examples of how this strategy can help educational projects to go beyond Scratch limits!

Programming minecraft on the raspberry pi
Sarah Zaman (GB)
Have fun changing the minecraft world using python on the raspberry pi.

A bear called Babbage: the story of the Raspberry Pi community
Clive Beale (Raspberry Pi Foundation GB)
In three years Raspberry Pi has sold over 5 million computers. But behind the hardware lies one of the strongest, proactive and most respected communities in computing education and the creative maker movement. This is the story of how we built the Pi community and, more importantly, how the community built us.

Saturday 10:30-11:30 - Gobo (Workshop 18)

The power of cloud: Teach physical computing to kids by running SNAP on an Arduino Yùn
Valentina Chinnici (Makerini & Arduino GB)
The aim of the workshop is to create an affordable and easy-to-use tool to get started with physical computing, even in contexts where there's no access to Internet. This workshop is addressed to educators and teachers interested in using Arduino within their classroom, using an intuitive and visual programming language, called SNAP, to get started with Arduino.

Saturday 10:30-11:30 - Pico (Workshop 19)

The mobile way of game creation - Pocket Code
Christian Schindler (Graz University of Technology AT)
This workshop provides a quick introduction to Pocket Code. When you know Scratch you can work with Pocket Code within minutes. We will finish a small tutorial game which enables you to implement your own ideas on your mobile device and face the any upcoming ""Pocket Game Jam"" - challenge.

Saturday 10:30-13:00 (!) - Tera (Workshop 20)

Create Real Apps With Blocks
John Maloney, Jens Mönig, and Yoshiki Ohshima (CDG Labs US)
Join us for a hands-on "sneak preview" of a new programming system that lets you turn your blocks projects into native apps that you can share and distribute. In this workshop, you'll try out a pre-alpha prototype of GP, a new blocks-all-the-way-down language that looks and feels similar to Scratch, but adds capabilities to create and deploy bigger and more complex projects. Limit: 30.

Saturday 12:00-13:00 - Cat (Talks 16)

How (the Heck) To Write a Scratch Book
Derek Breen (writer, Scratch For Kids For Dummies US)
Okay, we know books are not ""dead,"" contrary to the perennial media hype around new technology. But how do you engage young, twenty-first century readers in reading about an inherently visual/interactive platform such as Scratch? And is it worth even trying to
compete with YouTube, Vimeo and Scratch itself (where users are already teaching each other via rich-media tutorial projects)?

Saturday 12:00-13:00 - Gobo (Workshop 21)

SQLsnap! - Snap! with some extensions
Eckart Modrow (University of Goettingen DE)
SQLsnap! - Snap! with some extensions A workshop to explore the capabilities of SQLsnap!

Saturday 12:00-13:00 - Pico (Workshop22)

How to Setup a Kinect Enabled Classroom and Teach Natural User Interface Development to a K-12 Audience (uses Kinect 2 Scratch)
Stephen Howell, Scott Blackwell (Microsoft IE)
The Kinect is a motion sensitive, skeletal tracking camera developed by Microsoft for Xbox. We developed a hardware extension for Scratch to use the Kinect. This workshop will focus on: 1. Design considerations for Kinect in the classroom 2. How to setup a Kinect with your PC (Software and Hardware) 3. Educational materials to help teach the class 4. Writing Kinect enabled Scratch programs

Saturday 12:00-13:00 - Nano (Workshop 23)

Scratching through the ceiling
Richard Millwood, Nina Bresnihan, Jake Byrne, Glenn Strong (Trinity College, Dublin IE)
One kid says: "why can't I have a high ceiling in Scratch?". Another says "low ceiling is fine, get a life and learn Python!" Who is right? Why can't we tackle as complex problems as we like with Scratch? Why not have a wider range of real-world micro-worlds, full-on debug tools, computer science feature set, Github style collaboration, code rewind? There's only one way to settle this - fight!

Saturday 13:30-14:30 - Cat (Plenary 4)

Scratch Community
Ricarose Roque and Eric Schilling (MIT Media Lab US)

Saturday 14:30-15:00 – Cat

Closing session
Thank you! Good bye! See you at ScratchMIT2016!

Coding 4 AMSTERDAM

Amsterdam schools start August 17th, so our conference coincides with the last days of summer holiday. In cooperation with Squla, Codeuur Foundation and some of our attendees there are three events we offer the children of Amsterdam.

Tuesday August 11th Squla will make a Squla-Scratch-Roadtrip along Dutch media to show them how children learn with Scratch.

Friday August 14th the Codeuur Foundation will deliver Scratch workshops in at least 10 branch offices of the Amsterdam Public Library.

Wednesday August 12th we'll organize a coding and tinkering fest. Just before conference opening between 3 and 5 PM the youth department of central library will host at least 10 workshops:

Squla (NL) and Codeuur (NL) will deliver the workshops mentioned above.

Linda Liukas (Finland) will read fromher just published Hello Ruby and deliver a workshop with the playful material of helloruby.com

Mindmingle (NL) let kids draw mazes. Robot Paapie has tob e programmed to run thru it.

Stephen Howell (Ireland) knows how to connect kinect with Scratch. As a result kid scan program games where their own movements are controlling the game.

Genevieve Smith-Nunes (UK) has a workshop with Crumbles, making it easy to use sensors as input and lights as output.

From Japan the **World Scratch Orchestra** will join. Come code and sing along.
The public library started a **RaspberryPi** code club this spring. Today everyone can enjoy it's possibilities.

Mike Chen (Taiwan) has developed Tickleapp. Drones, Spheros, Dash and other robotics can now be programmed in a Scratch like environment.

What's next?

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