

28 MAY

SYRCOSE:

SPRING/SUMMER
YOUNG RESEARCHERS'
COLLOQUIUM ON SOFTWARE
ENGINEERING

EVENT LOCATION:

ethnographic park-museum ETNOMIR (Kaluga Region,
Borovsky District, Petrovo Village)
28 may 2026

8:40–9:20 **REGISTRATION**

9:20–9:30 **WELCOME SPEECH
ALEXANDER PETRENKO (ISP RAS)**

9:30–10:30 **INVITED TALK: IN MEMORY
OF A.N. TEREKHOV
DMITRY KOZNOV (SPBSU)**

10:30–11:00 **COFFEE BREAK**

13:15–14:15 **LUNCH**

16:00–16:30 **COFFEE BREAK**

17:30–18:30 **STAND-UP PARTY**

TRACK 1 (HALL “CHINA”)

SYSTEM PROGRAMMING AND TESTING

11:00–11:15 Zahar Antipov (HSE University),
Evgeny Baskov (ISP RAS)

**DESIGNING A FULL-SYSTEM VIRTUAL
MACHINE PROFILING TOOL FOR
INTERRUPT STORM ANALYSIS**

11:15–11:30 Alexander Bugaev, Georgy Sichkar,
Anna Vasenina (SPbSU)

**EXTENSION OF LZ4 COMPRESSION
ALGORITHM FOR HANDLING SCATTER-
GATHER BUFFERS IN THE LINUX
KERNEL BLOCK LAYER**

11:30–11:45 Erdem Tsyrenov (Huawei), Dmitry Koznov
(SPbSU), Eugeniy Semyonov (Huawei)

**INTENT-BASED NETWORKING FOR
INDUSTRIAL NETWORK DEVICES
MANAGEMENT**

11:45–12:00 Alexander Yanin, Vladimir Itsykson,
Valeriy Kechin, Vyacheslav Kovalevsky
(ITMO University)

**DIFFUZER: ONE MORE STEP TOWARD
SPECIFICATION-BASED FILE SYSTEM
QUALITY CHECKING**

12:00–12:15 Roman Beliaev, Evgeny Gerlits,
Alexander Sortov, Vitaly Cheptsov (ISP RAS)

**MC/DC MEASUREMENT WITH GCOV ON
AN EMBEDDED SYSTEM**

COMPILER TECHNOLOGIES

12:15–12:30 Linar Galimov (ISP RAS), Denis Zavedeev (ISP
RAS), Inna Batraeva (Saratov State University)

**IMPLICITNULLCHECKS: A CASE FOR AN
AARCH64 CONSTANT STORE IN LLVM**

12:30–12:45 Artyom Fartygin (MIPT, ISP RAS),
Vladimir Nemtsov (HSE University, ISP RAS),
Alexey Borodin (ISP RAS)

**SEARCH OF INFINITE LOOPS USING
STATIC ANALYSIS METHODS**

12:45–13:00 Anton Timonin (HSE University)

**ON THE APPLICABILITY OF SOFA/SODA
ANTIPATTERN DETECTION TO MULTI-
MODULE PROJECTS VIA A PLUGGABLE
PRE-BUILD LINTER**

13:00–13:15 Alexey Khamitsevich (ITMO University), Michael
Belyaev (Lomonosov Research Institute)

**ANALYSIS OF NORMALIZATION
STRATEGIES FOR A SYMBOLIC
COMPUTATION LIBRARY IN CANGJIE**

13:15–14:15 **LUNCH**

DIGITAL HARDWARE DESIGN

14:15–14:30 Mikhail Litvinov, Alexander Kamkin (ISP RAS)

**RAPHAEL: AN OPEN-SOURCE REGISTER-
TRANSFER LEVEL ARITHMETIC
OPTIMIZATION TOOL BASED ON E-GRAPHS**

14:30–14:45 Andrey Boev (ISP RAS)

**AN OPTIMAL IMPLEMENTATION
SYNTHESIS OF D MEMORY
ELEMENTS BASED OF FUNCTIONAL
TRANSFORMATIONS OF ITS
STRUCTURAL VARIANTS**

14:45–15:00 Aleksey Shevtsov, Yan Churkin, Ruben
Buchatskiy, Alexander Kamkin (ISP RAS)

**RESEARCH AND DEVELOPMENT OF
STATIC DETECTORS FOR AUTOMATIC
SYNTHESIZABILITY CHECKING OF
HARDWARE DESCRIPTIONS**

15:00–15:15 Ilya Chernyavskikh (ISP RAS)

**STRUCTURAL ANALYSIS OF CLOCK
DOMAIN CROSSINGS IN DIGITAL
HARDWARE DESIGNS**

APPLICATION-SPECIFIC COMPUTING SYSTEMS

15:15–15:30 Aleksandr Bratenkov, Nadezhda Stepina, Igor
Nikiforov, Olga Yusupova (SPbPU))

**QUANTIZING ISING MODEL MATRICES
FOR COMBINATORIAL OPTIMIZATION ON
RISC-V WITH LICHEE PI 4A**

15:30–15:45 Nikita Cherepanov, Alisa Marfina, Nadezhda
Stepina, Igor Nikiforov (SPbPU))

**MACHINE LEARNING OPERATOR
OPTIMIZATION USING THE TVM
FRAMEWORK ON RISC-V RVV WITH
BANANA PI BPI-F3**

15:45–16:00 Savva Balashov (Moscow Power Engineering
Institute)

**COMPARATIVE ANALYSIS OF
OPEN-SOURCE VIDEO ANALYTICS
SYSTEMS FOR TASK DISTRIBUTION
IN HETEROGENEOUS COMPUTING
ENVIRONMENTS**

16:00–16:15 **COFFEE BREAK**

FORMAL VERIFICATION

16:30–16:45 Yeremey Pervunetskikh (HSE University)

**USING TLA+ TO SPECIFY
TRANSACTIONAL MEMORY MODELS**

16:45–17:00 Valeria Shevchenko, Egor Golikov,
Sergey Staroletov (Polzunov Altai State
Technical University)

**DESIGNING A FORMAL MODEL
OF LINUX SMP INTERRUPT HANDLING
FOR X86_64**

17:00–17:15 Yuri Grankin, Sergey Staroletov
(Polzunov Altai State Technical University)

**FORMAL MODELING OF A GPGPU
PIPELINE FOR DIVERGENT KERNELS**

17:15–17:30 Maxim Vasilyev, Igor Struchkov (ITMO
University)

**ANONYMOUS TRANSACTION SYSTEM IN
PUBLIC BLOCKCHAIN WITH PROOF OF
FUNDS ORIGIN TRUSTWORTHINESS**

TRACK 2 (HALL “JAPAN”)

THEORETICAL COMPUTER SCIENCE

11:00–11:17 Denis Kochetkov (Bauman Moscow State
Technical University), Antonina Nepeivoda (PSI
RAS)

**PARTIAL-CONGRUENCE-BASED TRELIS
AUTOMATA OPTIMISATION**

11:17–11:34 Aisanat Geryugova, Vladislav Lutsenko (NCFU)

**ALGORITHM FOR REVERSE CONVERSION
FROM HYBRID POSITIONAL-RESIDUE
NUMBER SYSTEM**

11:34–11:51 Georgii Semenov (ITMO University)

**AN EPISTEMIC APPROACH TO
CONFLICT-FREE REPLICATED DATA
TYPES**

11:51–12:08 Roman Gromov, Roman Nesterov (HSE
University)

**ON THE EFFICIENCY OF BOUNDED
MULTI-SOURCE SHORTEST PATH
ALGORITHM**

PETRI NETS AND PROCESS MINING

12:08–12:25 Vladislav Kabakov, Alexey Mitsyuk (HSE
University)

**GOLDFISH: A COLLABORATIVE WEB-
BASED PETRI NET EDITOR WITH REAL-
TIME SYNCHRONIZATION**

12:25–12:42 [Jinyu Zhou, Sergey Shershakov](#) (HSE University)

OCSD: EXPLORATION OF SOA-BASED SYSTEMS USING OBJECT-CENTRIC SEQUENCE DIAGRAMS

12:42–12:59 [Kristina Voronova, Lyudmila Lyadova](#) (HSE University)

AUTOMATED STRUCTURING EVENT INFORMATION FROM UNSTRUCTURED TEXTUAL SOURCES FOR PROCESS ANALYSIS TASKS

12:59–13:16 [Artyom Joulityov, Irina Lomazova](#) (HSE University)

SYNTHESIS OF ACYCLIC MODELS FOR PROCESSES WITHOUT REPEATING EVENTS

13:16–14:15 **LUNCH**

MACHINE LEARNING AND ARTIFICIAL INTELLIGENCE

14:15–14:30 [Dmitry Alexandrov, Vladimir Vasilevskiy, Anastasia Manushkina, Lyudmila Rezunik, Leon Kuligin, Nikita Dumkin, Michael Prozorskiy](#) (HSE University), [Kirill Pinigin](#) (Innopolis University)

JAVACAPSULE: MEMORY-AUGMENTED ITERATIVE DEBUGGING FOR HIGH-QUALITY JAVA CODE GENERATION

14:30–14:45 [Maksim Parshin](#) (SPbSU), [Daniil Stepanov](#) (ITMO University), [Dmitry Koznov](#) (SPbSU)

DETECTING MACHINE-GENERATED TEXT: A THRESHOLD-BASED ENSEMBLE OF SEMANTIC, STYLISTIC AND PERPLEXITY FEATURES

14:45–15:00 [Alexey Staroverov, Nikita Petrov](#) (HSE University)

AN EPISTEMIC APPROACH TO CONFLICT-FREE REPLICATED DATA TYPES

15:00–15:15 [Bogdan Polygalov, Viacheslav Lanin](#) (HSE University)

DEVELOPMENT OF A CASE PLATFORM WITH GENERATIVE ARTIFICIAL INTELLIGENCE AND AN MCP AGENT LAYER

15:15–15:30 [Mikhail Prozorskiy, Dmitry Alexandrov, Nikita Dumkin](#) (HSE University)

A HYBRID ALGORITHM FOR CONVERTING SWIFTUI CODE TO A WEB REPRESENTATION USING LARGE LANGUAGE MODELS

15:30–15:45 [Nikita Dumkin, Dmitry Alexandrov, Mikhail Prozorskiy](#) (HSE University)

A HYBRID METHOD FOR SEMANTIC SEARCH WITH ADAPTIVE BINARY HASHING ON TRANSFORMER MODELS

15:45–16:00 [Hank-Debain Djambong Tenkeu, Dmitry Alexandrov](#) (HSE University)

THE EG-TD3 MACHINE LEARNING ARCHITECTURE: EVOLUTIONARY-GUIDED TWIN DELAYED DEEP DETERMINISTIC POLICY GRADIENT

16:00–16:30 **COFFEE BREAK**

APPLICATION-SPECIFIC METHODS AND TOOLS

16:30–16:45 [Evgenii Zorin, Vitaly Semenov, Semen Arishin, Sergei Morozov](#) (ISP RAS)

COMPUTER-INTERPRETABLE FORMAT IDS++ FOR SPECIFICATION AND VERIFICATION OF REQUIREMENTS IN CONSTRUCTION: IDEA, CONCEPT, IMPLEMENTATION

16:45–17:00 [Konstantin Patrushev, Sergey Avdoshin](#) (HSE University)

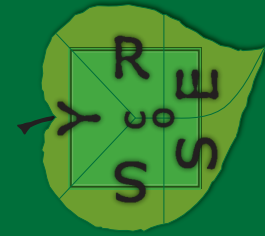
DISCRETE MARKOWITZ PORTFOLIO OPTIMISATION WITH OPENSOURCE CLASSICAL AND QUANTUM-INSPIRED SOLVERS: A CROSSMARKET WALK-FORWARD STUDY

17:00–17:15 [Viktoria Akkuzina, Olga Vikentyeva](#) (HSE University)

A METHOD FOR AUTOMATIC VERIFICATION AND CORRECTION OF DOCUMENT FORMATTING IN EDUCATIONAL CONTEXTS

17:15–17:30 [Elizaveta Egorova](#) (HSE University)

AIGAME: ARCHITECTURE OF THE PLATFORM FOR STUDYING AI-AGENT INTERACTION AND IMMERSION



ETHNOGRAPHIC PARK-MUSEUM ETNOMIR

28 MAY 2026 **SYRCOSE**

SPRING/SUMMER YOUNG RESEARCHERS'

COLLOQUIUM ON SOFTWARE ENGINEERING

