

- Locations:** Croatian State Archives, Marulićev trg 21, Zagreb
 Technical Museum, Savska 18, Zagreb
 Small Stage Theatre, Medveščak 2, Zagreb
 Sisak City Hall, Rimska 26, Sisak
- Under the Auspices of** The Department of Mathematical, Physical and Chemical Sciences, and The Department of Fine Arts, The Croatian Academy of Sciences and Arts, Zagreb
- Organizers:** Matrix Croatica, Zagreb
 Museum of Contemporary Art and The Vjenceslav Richter and Nada Kareš Richter Collection, Zagreb
 Society of Culture and Art Ivan Filipović, Zagreb
 The Ruđer Bošković Institute, Zagreb
 Technical Museum, Zagreb
- Partner Institutions:** Academy of Applied Arts, The University of Rijeka, Rijeka
 Academy of Arts in Osijek, Josip Juraj Strossmayer University of Osijek, Osijek
 Academy of Fine Arts, Zagreb
 City Museum Sisak, Sisak
 Croatian Council of the International Society for Education through Art – InSEA, Zagreb
 Croatian Natural History Museum, Zagreb
 Croatian National Tourist Board, Zagreb
 Croatian State Archives, Zagreb
 EU-EBS Institute, Zagreb
 Harmonik-Akademie, Wiener Neustadt, Austria
 Heritage Museum “Stephen Gruber”, Županja
 Klovićevi Dvori Gallery, Zagreb
 Motovun Film Festival, Zagreb
 Museum of Arts and Crafts, Zagreb
 Showroom Izidor Kršnjavi, Zagreb
 Small Stage Theatre, Zagreb
 The City of Sisak, Sisak
 The City of Zagreb, Zagreb
 The Tourist Board of Sisak, Sisak
 Zagreb Tourist Board & Convention Bureau, Zagreb
- Organizing Committee:** **Sonja Nikolić**, Chair, The Ruđer Bošković Institute, Zagreb, Croatia
Vesna Meštrić, Co-chair, The Museum of Contemporary Art, Zagreb, Croatia
Igor Peteh, Co-chair, University of Zagreb, Croatia
Vesna Rastija, Co-chair, University of Osijek, Croatia
 Milijana Borojević, The Tourist Board of Sisak, Sisak, Croatia
 Vlatko Čakširan, City Museum Sisak, Sisak, Croatia
 Marina Draženović Pleša, Public Library Vlado Gotovac, Sisak, Croatia
 Ivona Fabris, Croatian State Archives, Zagreb, Croatia
 Anita Galić, Sisak Municipality, Sisak, Croatia
 Tin Klanjšček, The Ruđer Bošković Institute, Zagreb, Croatia
 Boris - Marko Kukovec, University of Zagreb, Croatia
 Jadranka Malina, Faculty of Metallurgy, University of Zagreb, Croatia
 Ljerka Marjanac, Institute for Quaternary Paleontology and Geology, Croatian Academy of Sciences and Arts, Zagreb, Croatia
 Domagoj Menđušić, Croatian State Archives, Zagreb, Croatia
 Nenad Muhin, The Ruđer Bošković Institute, Zagreb, Croatia
 Barbara Pažur, Public Library Vlado Gotovac, Sisak, Croatia
 Blaženka Perica, Art Academy, University of Split, Split, Croatia
 Sagita Mirjam Sunara, Art Academy, University of Split, Split, Croatia
- International Program Committee:**
 Oleg Bodnar, University of L'viv, L'viv, Ukraine
 Tončika Cukrov, Museum Documentation Center, Zagreb, Croatia
 Stjepan Damjanović, Matrix Croatica, Zagreb, Croatia
 Ferenc Darvas, ThalesNano Inc., Hungary; Florida International University, USA
 Patrick W. Fowler, Department of Chemistry, University of Sheffield, UK
 Markita Franulić, The Technical Museum, Zagreb, Croatia
 Dirk Huylebrouck, Department of Architecture, University of Brussels, Brussels, Belgium
 Dušanka Janežič, University of Primorska, Koper, Slovenia
 Lemont B. Kier, Virginia Commonwealth University, Richmond, VA, USA
 Tarzan Legović, The Ruđer Bošković Institute, Zagreb, Croatia
 Vlatka Lemić, Croatian State Archives, Zagreb, Croatia
 Sibe Mardešić, The Croatian Academy of Sciences and Arts, Zagreb, Croatia
 Tihomir Marjanac, University of Zagreb, Zagreb, Croatia
 Cherif Matta, Mount Saint Vincent University, Dalhousie University, Halifax, NS, Canada
 Vesna Meštrić, The Museum of Contemporary Art, Zagreb, Croatia
 Paul Mezey, University of Newfoundland, NL, Canada
 Sonja Nikolić, The Ruđer Bošković Institute, Zagreb, Croatia
 Davor Pavuna, Ecole Polytechnique Federale de Lausanne, Lausanne, Switzerland
 Igor Peteh, University of Zagreb, Croatia
 Snježana Pintarić, The Museum of Contemporary Art, Zagreb, Croatia
 Stanko Popović, Croatian Academy of Sciences and Arts, Zagreb, Croatia
 Michael Ramek, University in Graz, Graz, Austria
 Vesna Rastija, University of Osijek, Croatia
 Werner Schulze, University of Music and Performing Arts Vienna, Vienna, Austria
 Vitomir Šunjić, The Croatian Academy of Sciences and Arts, Zagreb, Croatia
 Nenad Trinajstić, Croatian Academy of Sciences and Arts, Zagreb, Croatia

**Croatian State Archives**

Marulićev trg 21, Zagreb

15:00

Registration16:00 **Opening of the Symposium**Chair: **Sonja Nikolić**, Chair of the Organizing Committee *CroArtScia2015*Dr. sc. **Tome Antičić**

Director of The Ruđer Bošković Institute, Zagreb

Zvonko Kusić, F.C.A.

President of The Croatian Academy of Sciences and Arts, Zagreb

Andrej Dujella, F.C.A.The Secretary of The Department of Mathematical, Physical, and Chemical Sciences,
The Croatian Academy of Sciences and Arts, Zagreb**Vladimir Marković**, F.C.A.The Secretary of The Department of Fine Arts, The Croatian Academy of Sciences and
Arts, ZagrebProf. **Stjepan Damjanović**

President of the Matrix Croatica, Zagreb

Mr. sc. **Snježana Pintarić**

Director of The Museum of Contemporary Art, Zagreb, Croatia

M.A. **Markita Franulić**

Director of The Technical Museum, Zagreb

Dr. sc. **Vlatka Lemić**

Director of The Croatian State Archives, Zagreb

16:30 - 16:45

Sonja Nikolić, The Ruđer Bošković Institute, Zagreb, Croatia
SCIENCE & ART & TECHNOLOGY

16:45 - 17:15

Paul Mezey, Canada Research Chair, Department of Chemistry,
Memorial University of Newfoundland, NL, Canada
*HOW THE BEAUTY OF CONCEPTS BECOMES THE BEAUTY OF SHAPES IN
MOLECULAR MODELLING*

17:15 - 17:45

Michael Ramek, Graz University of Technology, Graz, Austria
HOMO LUDENS – LEARNING BY PLAYING

17:45 – 18:15

Hrvoj Vančik, Faculty of Science, University of Zagreb, Zagreb, Croatia
*UNIVERSE AS A COUNTERFEIT (IN ART AND SCIENCE)*18:25 **CONCERT**
OTIUM Early Music Ensemble

20:15 - 21:45

RECEPTION by the Mayor of the City of Zagreb,
The Palace Dverce, Katarinin trg 6

The Technical Museum

Savska cesta 18, Zagreb



MORNING SESSION

8:00 - 9:00 **Registration**

Chair: **Natalja Fjodorova**, National Institute of Chemistry; Ljubljana, Slovenia

9:00 - 9:15

Markita Franulić, Technical Museum, Zagreb, Croatia
ART & SCIENCE / TECHNOLOGY AT TECHNICAL MUSEUM IN ZAGREB - EXHIBITIONS 2012-2015

9:15 - 9:45

Ljiljana Pejić and **Vladimir Trkovnik**, EU-EBS INSTITUTE, Zagreb, Croatia
"DOUBLE JEOPARDY" - EVIDENCE BASED SOLUTIONS & CLOSING THE GAP BETWEEN RESEARCH AND PRACTICE

9:45 - 10:05

Jirek Kočica, Secondary Commercial School, Ljubljana, Slovenia,
Marjan Bele, National Institute for Chemistry, Ljubljana, Slovenia, and
Vilma Ducman, Institute for Civil Engineering, Ljubljana, Slovenia
SIGNS OF SCIENCE

Chair: **Tihomir Marjanac**, University of Zagreb, Zagreb, Croatia

10:05 - 10:20

Gjino Šutić, UR Institute, Zagreb
NOVEL APPROACH TO RESEARCH AND DEVELOPMENT: CITIZEN SCIENCE, INTERDISCIPLINARITY AND INNOVATIONS

10:20 - 10:35

Mahnaz Shah, Cardiff Metropolitan University, UK
TIDAL ENERGY: AN ECOLOGICAL DESIGN DISCOURSE

10:35 - 11:10

Holger Bech Nielsen, Niels Bohr Institute, Copenhagen University, Denmark, and
Colin D. Froggatt, Glasgow University, Scotland, UK
MODEL FOR THE DARK MATTER AS VERY HEAVY PEARLS ABLE TO PRODUCE ENERGY FROM NEUTRONS

11:10

Coffee Break

Chair: **Katarina Ivanišin Kardum**, Technical Museum, Zagreb, Croatia

11:30 - 12:00

Diana Grgurić, and **Siniša Fajt**, University of Rijeka, Rijeka, Croatia
SOUNDSCAPE EXPERIENCE AND ACOUSTIC DESIGN

12:00 - 12:30

Karolj Skala and **Zorislav Šojat**, Ruđer Bošković Institute, Zagreb, Croatia
REINCARNATION OF THE CRAY-1 SUPERCOMPUTER ON E2LP PLATFORM

12:30 - 13:00

Miro A. Cimerman and **Dunja Donassy-Bonačić**, *bcd CyberneticArt team*,
Königswinter | Berlin, Germany - Zagreb, Croatia
"SYNERGY OF ART & SCIENCE IN THE CYBERNETIC ART OF VLADIMIR BONAČIĆ & BCD CYBERNETICART TEAM" @ HUMBOLDT UNIVERSITY OF BERLIN
Accompanied by the Exhibition: "ART & SCIENCE" IN 1968/9 @ LABORATORY FOR CYBERNETICS, THE RUĐER BOŠKOVIĆ INSTITUTE, ZAGREB

13:00 - 13:25

Guided tour for the participants – Exhibition in the Technical Museum
Heinrich Heidersberger, Institute Heidersberger, Germany
RHYTHMOGRAMS

Chairs: **Vesna Rohaček**, **Dalija Finek** and **Iva Ćurić**, Zagreb, Croatia

13:25 - 14:35

Group Exhibition by the Participants

14:00

Lunch break



Small Stage Theatre
Medveščak 2, Zagreb

AFTERNOON SESSION

Chair: **Sonja Nikolić**, The Ruđer Bošković Institute, Zagreb, Croatia

16:00 - 16:30

Davor Pavuna, Ecole Polytechnique Federale de Lausanne, Lausanne, Switzerland
LOVING ARTO-SCIENTISTS LIFE (AN INTRODUCTION INTO)

16:30 – 17:00

Gábor Náray-Szabó, Eötvös Loránd University, Chemistry Institute, Budapest, Hungary
MOLECULAR HARMONY

17:00 – 17:30

Chérif F. Matta, Mount Saint Vincent University, Halifax, Canada
THE MOLECULAR ELECTRON DENSITY: FROM TOPOGRAPHY AND TOPOLOGY TO ABSTRACT ART

17:30 – 17:50

Coffee Break

EVENING SESSION

Chair: **Tončika Cukrov**, Museum Documentation Centre, Zagreb, Croatia

17:50 - 18:20

Natalja Fjodorova, National Institute of Chemistry; Ljubljana, Slovenia
NANO WORLD IN SCIENCE AND ART

18:20 - 18:50

Celestino Soddu and **Enrica Colabella**, Politecnico di Milano University, Milano, Italy
GENERATIVE ART AND DESIGN

18:50 - 19:05

Nada Bezić, Croatian Music Institute, Zagreb, Croatia
ART DÉCO IN THE LIBRARY OF THE CROATIAN MUSIC INSTITUTE

Chair: **Nada Bezić**, Croatian Music Institute, Zagreb

19:05 - 19:20

Roberto Vdović and **Morana Pap**, Faculty of Architecture, University of Zagreb, Zagreb
ICT IN ARCHITECTURE @ CADLAB AF, EDUCATION, RESEARCH & DEVELOPMENT ACTIVITIES AT FACULTY OF ARCHITECTURE, UNIVERSITY OF ZAGREB

19:20 - 19:40

Karolina Wiktor, and **Marta Miś**, Zachęta — National Gallery of Art, Warsaw, Poland
CULTURE AND NEUROSCIENCE — ON THE SOCIAL INVOLVEMENT OF BOTH ARTIST AND PUBLIC INSTITUTION



19:40 Performance

Group of students from the Academy of Arts in Osijek, Osijek, Croatia
“UNZIP” - THE NEUTRAL THEATER COSTUME

20:00 - 21:30

Workshop - Roberto Vdović and **Morana Pap**, University of Zagreb, Zagreb

Networking Slow Food and Slow Discussion

- 8:00 **Registration - The Hotel Laguna**, Kranjčevićeva 29, Zagreb
 8:30 **Bus departure to Sisak in front of the Hotel Laguna**, Kranjčevićeva 29, Zagreb



City Hall, Sisak
Rimska ulica 26

MORNING SESSION

Chair: **Claudia Loher**, Graz University of Technology, Graz, Austria

10:00 - 10:30

Michael Ramek, Graz University of Technology, Graz, Austria
COLOUR, COLOUR VISION, AND COMPUTER-BASED PRESENTATIONS

10:30 - 11:00

Ivana Plazonić, Irena Bates, and Željka Barbarić-Mikočević, Faculty of Graphic Arts,
University of Zagreb, Zagreb, Croatia
SMART UTILIZATION OF TRITICALE STRAW IN THE PRINTING INDUSTRY

11:00 – 11:25

Ines Krajcar Bronić, Nada Horvatinčić, Jadranka Barešić, and Andreja Sironić,
Ruđer Bošković Institute, Zagreb, Croatia
RADIOCARBON DATING OF OBJECTS OF ART

11:25 - 11:45

Duška Janežič, University of Primorska, Koper, Slovenia
*GRAPH THEORETICAL APPROACH FOR PROTEIN BINDING SITE DETECTION AND
FUNCTION PREDICTION*

Chair: **Marina Draženović Pleša** and **Barbara Pažur**, Public Library Vlado Gotovac, Sisak, Croatia

11:45 – 12:10

Mirjana Tomašević Dančević, Croatian Council of the International Society for
Education through Art – InSEA (HRV-InSEA), and School of Applied Art and Design,
Zagreb, Croatia
NEW TECHNOLOGIES IN ART EDUCATION: SEND A VISUAL MESS @GE!

12:10 - 12:40

Tihomir Marjanac, Faculty of Science, University of Zagreb, Zagreb, Croatia
*TECHNOLOGY AND INNOVATION IN DRAWINGS OF PRIMARY SCHOOL CHILDREN
IN CROATIA*
and
Art works competition and announcement of winners of the **Exhibition of children's
paintings works** in the Library of Sisak with the title "**I, A RESEARCHER**"

12:40

Coffee break

Chair: **Jadranka Malina**, Faculty of Metallurgy, University of Zagreb, Sisak, Croatia

13:00 - 13:30

Nikol Radović, Faculty of Geodesy, University of Zagreb, Zagreb, Croatia
Petar Mladinić, 5th Gymnasium, Zagreb, Croatia
*FROM ALBERTI AND THE RENAISSANCE TO MODERN TIMES ON THE WINGS OF
DYNAMIC GEOMETRY PROGRAM SKETCHPAD*

13:30 - 14:00

Mario Kus, Technical School, Sisak, Croatia
REPLICA OF AN EARLY ROMAN LAMP AND ITS PRODUCTION BY CNC MACHINES

14:00 - 14:30

Blaženka Slovenec and students: **Borna Andres, Tin Meštrović, Lovro Sinjeri, Katarina Smernić**, Gymnasium, Sisak, Croatia
PLAYING WITH SOUND

14:30 - 14:50

Marijan Crtalić, Sisak, Croatia
"INDUSTRIAL PARADISE" - movie



Public Library Vlado Gotovac Sisak
Rimska bb, Sisak

15:00 **Guided tour for the participants - the Exhibition of children's paintings works** in the Library of Sisak with the title **"I, A RESEARCHER"**

15:30 - 16:30

RECEPTION by the Mayor of the City of Sisak, The Tourist Board of Sisak, Rimska bb, Sisak

16:30

Bus transport to the Sisak Ironworks Park

AFTERNOON SESSION

Sisak Ironworks Park
Božidara Adžije 19, Sisak



16:50 - 17:40

Neven Peko, City Museum Sisak, Sisak
Guided tour for the participants through the Sisak Sculpture Park in Caprag with sculptures created as a part of **the Colony of Artists, "Sisak Ironworks"** within the **"Factory Heritage Sisak Ironworks"**. The conservation treatment on Josip Diminić's Object

17:40

Bus transport to the Sisak Old Town

EVENING SESSION

Sisak Old Town
Rimska 26, Sisak



18:00

Sisak Old Town - Guided tour by a curator of The City Museum Sisak



19:30

RECEPTION by the Tourist Office of Sisak
Rimska bb, Sisak

21:00

Bus transport to Zagreb



Croatian State Archives

Marulićev trg 21, Zagreb

MORNING SESSION

8:30 Registration

Chair: **Blaženka Perica**, Art Academy, University of Split, Split, Croatia

09:00 - 09:30

Edward J. Damich, U.S. Court of Federal Claims, Washington, DC
THE LAW OF THE PAST AND THE TECHNOLOGY OF THE FUTURE

09:30 - 10:10

Vladimir Frelih and **Ana Petrović**, Art Academy Osijek, University of Osijek, Osijek, Croatia
HOW TO TRAIN TECHNOLOGY

10:10 - 10:40

Davor Horvatić, Department of Physics, University of Zagreb, Zagreb and
Mirjana Vodopija, Academy of Fine Arts, University of Zagreb, Zagreb, Croatia
ART AND FUNDAMENTAL PHYSICS

Chair: **Igor Kozjak**, Croatian State Archives, Zagreb, Croatia

10:40 - 11:10

Giovanni Rubino, Udine, Italy
WHAT YOU SEE IS WHAT YOU GET: THE CASE OF IVAN DAL CIN'S VECTORIAL PAINTINGS

11:10 - 11:30

Vitomira Lončar, College of multimedia and communication technologies, Split, Croatia
HOW CAN WE IMPROVE THE COMMUNICATION BETWEEN SCIENCE/TECHNOLOGY AND THEATRE IN CROATIA?

Chairs: **Martina Bagatin** and **Hrvoje Gržina**, Croatian State Archives, Zagreb, Croatia

11:30

POSTER Session

Mladen Burić, **Amir Obhodaš** and **Željko Milat**, Croatian State Archives, Zagreb
EXHIBITION: COLLECTIONS OF PHOTO AND CINEMATIC TECHNOLOGY IN THE CROATIAN STATE ARCHIVES

Lucija Zore and **Željko Milat**, Croatian State Archives, Zagreb
SCREENING 8 MM FILMS BY FILM PROFESSIONALS AND FILM ENTHUSIASTS

Coffee break

Chair: **Ines Krajcar Bronić**, Ruđer Bošković Institute, Zagreb

12:30 - 12:45

Tea Zubin Ferri, Material Research Centre METRIS, Pula, Croatia
CHEMICAL ANALYSIS OF CULTURAL HERITAGE MATERIALS: LIMITATIONS, CHALLENGES AND FASCINATION

12:45 - 13:15

Irina Pucić, **Branka Katušin Ražem**, and **Branka Mihaljević**, Ruđer Bošković Institute, Zagreb
IONIZING RADIATION USED IN THE PROTECTION OF ARTWORKS AND CULTURAL HERITAGE

Chair: **Irina Pucić**, Ruđer Bošković Institute, Zagreb

13:15 - 13:30

Martina Bagatin, Croatian State Archives, Zagreb
FRANZ THIARD DE LAFOREST AND HIS "ALBUM OF DALMATIA": CONSERVATION TREATMENT

13:30 - 14:00

Igor Kozjak, Croatian State Archives, Zagreb, and
Mirela Leskovic, Faculty of Chemical Engineering and Technology, Zagreb
CONSERVATION METHODS APPLIED TO THE REGISTRY OF BIRTHS FROM THE PARISH OF VELJACI, BOSNIA AND HERZEGOVINA: PROBLEMS WITH THE REMOVAL OF UNPROFESSIONAL REPAIRS

14:00 - 14:15

Mario Novak, Faculty of Engineering, and Onetius, Rijeka, Croatia
Sonja Durajlija Žinić, Zagreb, Croatia
CHANGING THE WAY PEOPLE LEARN AND TEACH OTHERS

CLOSING OF THE SYMPOSIUM

14:15 - 14:40

Sonja Nikolić, Ruđer Bošković Institute, Zagreb, Croatia, and
Paul Mezey, University of Newfoundland, NL, Canada, and
Michael Ramek, Graz University, Graz, Austria
CLOSING WORDS

The Organizers reserve the right to modify the program.

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Acknowledgments: Mayor of the City of Zagreb, Mayor of the City of Sisak, Croatian National Tourist Board, Zagreb Tourist Board, Sisak Tourist Board, Five Stars Ltd., Hotel Laguna, Croatian Brain Research Institute Dormitory, Zagreb, Quo Vadis d.o.o., Art-Jus studio, MBM d.o.o. A Molson Coors Company, NN - The Official Gazette