# AAA89
# Conference Programme

**A**rbeitstagung **A**llgemeine **A**lgebra — Workshop on General Algebra

February 26 - March 1, 2015, Dresden University of Technology

Since 1971 the AAA Workshop on General Algebra (merged with the *"Konferenz Algebra und Grenzgebiete"* in 1991 and with the *"Konferenz junger Algebraiker"* in 1995) has been held semi-annually in Germany, its neighbouring countries and later also in other European countries. This 89th workshop is organized by the Dresden Institute of Algebra.

Special thanks go to Rebekka Balzer, Robert Barham, Ulrike Baumann, Daniel Borchmann, Francois Bossiere, Kathleen Gburek, Johannes Greiner, Tom Hanika, Gudrun Heinisch, Sebastian Liebscher, Marcello Mamino, Antoine Mottet, Antje Noack, Trung Van Pham, Ulrike Püschmann, Sven Reichard, Artem Revenko, Tobias Schlemmer, Stefan Schmidt, Anna Thurm, Christian Zschalig and Jens Zumbrägel for their organizational help.

The organizing committee
*Manuel Bodirsky, Bernhard Ganter and Reinhard Pöschel*

With BERNHARD GANTER's retirement approaching in March, we have decided to organize a special session in honour of him on Saturday afternoon,
*Erhard Aichinger, Manuel Bodirsky and Reinhard Pöschel*

In the final programme all chair persons shall be included. If you are selected as a chair person for some session, we apologize for not asking you in advance and kindly ask you to accept it or to inform the conference office. Thank you very much for your cooperation.

| AAA89: Thursday, February 26 | |
|---|---|
| $17^{00} - 20^{30}$ | Get-together and Registration, conference building Willersbau C207 |

### AAA89: Friday, February 27 (final version, last update: (17:00) February 27, 2015)

The room C207 can be used for breaks and discussions, too

| | Lecture Hall B321 | Lecture Hall A317 | Lecture Hall C129 | Lecture Hall C133 |
|---|---|---|---|---|
| $8^{00}$–$8^{50}$ | Registration in room C207 | | | |
| $9^{00}$–$9^{10}$ | **opening** | | | |
| $9^{10}$–$10^{00}$ | chair: **Bodirsky, Manuel** <br><br> invited lecture <br><br> **Truss, John** <br> Definability properties of the monoid of endomorphisms of the rational numbers | | | |
| | coffee break (C207) | | | |
| $10^{45}$–$11^{00}$ | chair: **Pech, Maja** <br><br> **Vargas García, Edith** <br> On the automatic homeomorphicity of Pol(Q, $\leq$) | chair: **Kaarli, Kalle** <br><br> **Cirulis, Janis** <br> On relatively orthocomplemented normal bands | chair: **Tepavcevic, Andreja** <br><br> **Krapez, Aleksandar** <br> Isotopy invariant quasigroup identities | This room may be used for discussions |
| $11^{05}$–$11^{20}$ | **Masulovic, Dragan** <br> A note on extreme amenability of automorphism groups of omega-categorical structures | **Pervukhina, Tatiana** <br> On the pseudovariety generated by finite monoids satisfying R=H | **Graczyńska, Ewa** <br> Transitive dependence vs regularity | |
| $11^{25}$–$11^{40}$ | **Leiderman, Arkady** <br> Density Character of Subgroups of Topological Groups | **Šuličová, Miroslava** <br> On centralizers and Green's relations | **Pilitowska, Agata** <br> Reductive medial quandles | |
| $11^{45}$–$12^{00}$ | – | **Tinpun, Kittisak** <br> Rank and Relative Rank of the Finite Full Transformation Semigroup with Restricted Range | **Solovjovs, Sergejs** <br> Categorical foundations of variety-based bornology | |
| | lunch break    (registration: $13^{00}$–$13^{40}$ room C207) | | | |

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| | **Lecture Hall B321** | **Lecture Hall A317** | **Lecture Hall C129** | **Lecture Hall C133** |
| $13^{45}$–$14^{35}$ | chair: **Martin, Barnaby**<br><br>invited lecture<br><br>**Barto, Libor**<br>Weighted clones | | | |
| | | | | |
| $14^{45}$–$15^{00}$ | chair: **Barto, Libor**<br><br>**Martin, Barnaby**<br>From Complexity to Algebra: New PGP-EGP gaps for digraph classes | chair: **Márki, László**<br><br>**Jende, Alexander**<br>Representation of semigroups using power identity inclusions | chair: **Radeleczki, Sándor**<br><br>**Raievska, Iryna**<br>On additive groups of finite local nearrings | This room may be used for discussions |
| $15^{05}$–$15^{20}$ | **Opršal, Jakub**<br>Is cube term a prime Mal'cev condition? | **Steindl, Markus**<br>Subpower Membership for Semigroups | **Raievska, Maryna**<br>On multiplicative groups of finite local nearrings | |
| | coffee break (C207) | | | |
| $16^{05}$–$16^{20}$ | chair: **Pech, Christian**<br><br>**Liskovets, Valery**<br>Multiplicative arithmetic functions in the enumeration of non-isomorphic maps and non-equivalent surface coverings | chair: **Seselja, Branimir**<br><br>**Pita Costa, Joao**<br>A topos of non-commutative lattices | chair: **Chajda, Ivan**<br><br>**Jakubíková-Studenovská, Danica**<br>Convexities of monounary algebras | This room may be used for discussions |
| $16^{25}$–$16^{40}$ | **Ziv-Av, Matan**<br>Enumeration of S-rings over small groups | **Paseka, Jan**<br>Tense operators on distributive lattices | **Halušková, Emília**<br>Monounary algebras with easy direct limits | |
| | | | | |
| $16^{50}$–$17^{05}$ | chair: **Mayr, Peter**<br><br>**Kepczyk, Marek**<br>On algebras which are sums of two PI subalgebras | chair: **Revenko, Artem**<br><br>**Shcherbacov, Victor**<br>On generalizations of Markovski cryptoalgorithm | chair: **Schlemmer, Tobias**<br><br>**Márki, László**<br>Matrix representations of finitely generated Grassmann algebras | This room may be used for discussions |
| $17^{10}$–$17^{25}$ | **Filipowicz-Chomko, Marzena**<br>The structure and properties of selected types of filial algebras. | **Shtrakov, Slavcho**<br>Separable sets and ODDs in finite functions | **Zumbrägel, Jens**<br>Notes on Simpleness of Path Algebras over Semirings | |
| $17^{30}$–$17^{45}$ | **Länger, Helmut**<br>States on basic algebras | **Aladova, Elena and Plotkin, Tanya**<br>On isomorphism of knowledge bases | **Lazić, Marijana**<br>On terms in 3-supernilpotent groups with an additional unary operation | |
| $17^{50}$–$18^{05}$ | **Rachunek, Jiri**<br>Operators on basic algebras | **Plotkin, Eugene**<br>Similarity of geometries over algebras | **Pavlik, Jan**<br>Metrics with Values in Ordered Monoids | |
| $19^{00}$–$22...$ | Conference dinner in the building "Alte Mensa" (Main entrance, Mommsenstrasse 13) | | | |

# AAA89: Saturday, February 28 (final version, last update: (17:00) February 27, 2015)

The room C207 can be used for breaks and discussions, too

| | Lecture Hall B321 | Lecture Hall A317 | Lecture Hall C129 | Lecture Hall C133 |
|---|---|---|---|---|
| $9^{10}$–$10^{00}$ | chair: **Behrisch, Mike** <br> invited lecture <br><br> **Salzer, Gernot** <br> Why Computer Science Can't Get Enough of Clones | | | |
| | coffee break (C207) | | | |
| | chair: **Aichinger, Erhard** | chair: **Ganter, Bernhard** | chair: **Barham, Robert** | chair: **Graczyńska, Ewa** |
| $10^{45}$–$11^{00}$ | **Kolařík, Miroslav** <br> Semilattices with section switching involutions | **Chajda, Ivan** <br> When does a semiring become a residuated lattice? | **Cremer, Insa** <br> On the order structure of left-star ordered Rickart *-rings | **Gyenizse, Gergő** <br> Compatible quasi-orderings of finite algebras |
| $11^{05}$–$11^{20}$ | **Zamojska-Dzienio, Anna** <br> On complexity of quasivariety lattices | **Radeleczki, Sándor** <br> Meet-subdirect representations of finite lattices | **Kozłowski, Kamil** <br> On rings whose nilpotent elements form a subring | **Lekkoksung, Nareupanat** <br> Non-Deterministic Linear Hypersubtitutions |
| $11^{25}$–$11^{40}$ | **Kaarli, Kalle** <br> On categorical equivalence of finite rings | **Veres, Laura** <br> Classification trees and box extents | **Nurakunov, Anvar** <br> Weak extension property for locally finite quasivarieties | **Manyuen, Chaowat** <br> Hyperidentities in Graph Variety Generated by $((xx)((yx)w))((zx)(zw))$ Graph |
| $11^{45}$–$12^{00}$ | **Ploscica, Miroslav** <br> Critical points for congruence lattices | **Sacarea, Christian** <br> Reachability in triadic concept sets | **Hanika, Tom** <br> Forbidden permutation patterns and constraint satisfaction problems | **Korbelář, Miroslav** <br> Notes on sets of lattice points associated to commutative semirings |
| $12^{05}$–$12^{20}$ | **Waldhauser, Tamás** <br> Graphs and partial clones | **Revenko, Artem** <br> Automatic Exploration of Parametrically Closed Classes of Functions | – | – |
| | lunch break | | | |

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| | **Lecture Hall B321** | **Lecture Hall A317** | **Lecture Hall C129** | **Lecture Hall C133** |
| | **Special session dedicated to *Bernhard Ganter* (on occasion of his retirement)** | | | |
| | chair: **Pöschel, Reinhard** | | | |
| $13^{45}$–$14^{00}$ | **Kwuida, Leonard** <br> Valuations on finite lattices | | | |
| $14^{05}$–$14^{20}$ | **Rudolph, Sebastian** <br> Complexity of Inclusion/Exclusion Constraints in Formal Concept Analysis | | | |
| $14^{25}$–$14^{35}$ | **Pöschel, Reinhard** <br> GANTER MATHEMATICUS | | | |
| $14^{45}$– $18^{00}$ | **Excursion to Erlebnisland Mathematik (Mathematics Adventureland)\* guided by Bernhard Ganter** | | | |
| $15^{15}$ | meeting for excursion at entrance of Erlebnisland Mathematik (see below) | | | |

\* There will be a special bus to Mathematics Adventureland (Erlebnisland Mathematik), please mention at registration if you want to participate.

You can reach Erlebnisland Mathematik also by public transport, Bus No. 61 (direction *Weißig* or *Fernsehturm*), from bus stop *TU (Fritz-Förster-Platz)* until bus stop *Pohlandplatz* (approximately 20 min), then 3 min walking, see the LINK here, (trams No. 10 and 4 also stop at *Pohlandplatz*).

Meeting for excursion at the entrance of the building **Technische Sammlungen Dresden** (where Mathematics Adventureland is located): **15:15 h**

address: Erlebnisland Mathematik — Technische Sammlungen Dresden — Junghansstraße 1-3 — 01277 Dresden

some special advices for the evening:

Theater:
SCHAUSPIELHAUS: *Schöne neue Welt* **19:30**
KLEINES HAUS 1: *Supergute Tage* **19:30**
link see AAA89 website

Opera (SEMPEROPER):
*Giulio Cesare in Egitto / Julius Cäsar in Ägypten* **19:00**
link see AAA89 website

Church FRAUENKIRCHE:
BACHzyklus, XII: *Ich ruf zu dir, Herr Jesu Christ* **20:00**
link see AAA89 website

## AAA89: Sunday, March 1 (final version, last update: (17:00) February 27, 2015)

The room C207 can be used for breaks and discussions, too

| | Lecture Hall B321 | Lecture Hall A317 | Lecture Hall C129 | Room C207 |
|---|---|---|---|---|
| | chair: **Masulovic, Dragan** | chair: **Cirulis, Janis** | chair: **???, ???** | Poster session (C207): |
| $9^{10}$–$9^{25}$ | **Mayr, Peter** <br> Making congruences into algebras | **Skokov, Dmitry** <br> Lower-modular elements of lattices of epi-group varieties | - | |
| $9^{30}$–$9^{45}$ | **Zhuk, Dmitriy** <br> On key relations with full pattern | **Schlemmer, Tobias** <br> Representing group extensions as binary relation orbifolds | - | **A. Sultanov, E. Aladova, O. Monakhova** <br> Linear algebras with special group of automorphisms |
| $9^{50}$–$10^{05}$ | **Aichinger, Erhard** <br> Finitely generated clones of congruence preserving functions | **Tepavcevic, Andreja** <br> *Join-between* planar lattices and slim lattices | - | |
| $10^{10}$–$10^{25}$ | **Behrisch, Mike** <br> On the cardinality of the lattice of C-clones | **Seselja, Branimir** <br> Omega-lattice | - | |
| | coffee break (C207) | | | |
| | chair: **Truss, John** <br> invited lecture | | | |
| $11^{05}$–$11^{55}$ | **Pech, Maja** <br> Universal homogeneous morphisms and their applications | | | |
| $11^{55}$–$12^{00}$ | **closing** | | | |