STEFAN BANACH MATHEMATICAL CENTER - XXXVIII SEMESTER

Algebraic Methods in Logic and their Computer Science Applications

Monday, Oct. 7

9.00 - 9.45	A. Lisitsa /USSR/ Resolution methods in the decision problems.
10.00 - 11.45	H. Blair /USA/ Logic programming with effectively representable higher order objects.
13.30 -15.15	W. Craig /USA/ Algebras of sets of finite sequences./Continuation/.
15.30 -16.15	S.D. Comer /USA/ Approximation of information /rough sets/ and variants of cylindric algebras.
16.30 -17.30	D. Vakarelov / Bulgaria/ Connections between arrow logic,relativized cylindric algebras and relativized dynamic logic.

Tuesday, Oct. 8

9.00 - 9.45	H. Ono /Japan/ Some results in substructural logics.
10.00 - 11.45	H.Blair /USA/ Parallel section III:computer science Logic programming with effectively representable higher order objects. /Continuation/.
10.00 - 10.45	J. Font /Spain/ Parallel section II: algebraic logic Algebraic study of some non-algebraizable logics. /Algebraic logic in Barcelona./ Part I.
16.00 - 16.45	V. Verdu /Spain/ ~~Parallel section~~ II:algebraic logic Algebraic study of some non-algebraizable logics. /Algebraic logic in Barcelona./ Part II.
13.30 - 14.30	H. Andreka, J.D. Monk, I. Nemeti /USA,Hungary/ Lectures on cylindric algebras and survey of algebraic logic. /continuation/.
14.45 - 15.45	R.D. Maddux /USA/ Introduction to relation algebras and their connections with cylindric algebras and logic.

Wednesday, Oct. 9

9.00 - 9.45	M.Zakharyaschev Modal logics with transitive frames: canonical formulas and their applications.
10.00 - 11.45	M. Truszczyński /USA/ Modal nonmonotonic logic,applications to default logic and logic programming.
13.30 - 14.45	F. Börner /Germany/ Operations on relations of various ranks.
15.00 - 16.45	W. Marek /USA/ Semantics for nonmonotonic reasonings.

Default Logic

P.T.O.

Thursday, Oct. 10

9.00 - 10.45	K. Ambos-Spies /Germany/ Polynomial time many-one reducibility.
10.00 -10.45	F. Börner /Germany/ Parallel section II: algebraic logic Operations on relations of various ranks. /Continuation/.
11.00 - 11.45	M. Zakharyaschev Modal logics with transitive frames : canonical formulas and their applications. /Continuation/.
13.30 - 14.30	H. Andreka, J.D. Monk, I.Nemeti /USA,Hungary/ Lectures on cylindric algebras and a survey of algebraic logic. /Conti-uation/.
14.45 - 15.45	R.D. Maddux /USA/ Introduction to relation algebras and their connections with cylindric algebras and logic./Continuation/.

→ 16.00 — 16.45 Verdu

Friday, Oct. 11

9.00 - 9.45	K. Keimel /Germany/ ~~title to be announced later~~ Appropriate classes of semantic domains.
10.00 - 12.00	W. Craig /USA/ Algebras of sets of finite sequences./Continuation/.
13.30 - 14.30	H. Andreka, J.D. Monk, I. Nemeti /USA,Hungary/ Lectures on cylindric algebras and a survey of algebraic logic./continuation/.
14.45 - 15.45	R.D. Maddux /USA/ Introduction to relation algebras and their connections with cylindric algebras and logic./Continuation/,

STEFAN BANACH MATHEMATICAL CENTER - XXXVIII SEMESTER

Algebraic Methods in Logic And Their Computer Science Applications

Monday, Oct. 14

9.00 - 9.45 I.Duentsch /Germany/
Connections between cylindric algebras and relational databases.

10.00 - 12.00 W. Craig /USA/
Algebras of sets of finite sequences. /Continuation/.

13.30 - 14.15 S. Givant /USA/
Decidability problems for varieties of relation algebras.

14.30 - 15.45 R. Maddux /USA/
Some finite axiomatizations for the true relational equations.

15.30 - 16.15 D.A. Bredikin /USSR/
On algebras of binary relations.

Tuesday, Oct. 15

10.00 - 10.45 Z. Tuza /Hungary/
Nonfinite axiomatization of representable polyadic algebras over representable cylindric algebras.

11.00 - 11.45 L.L. Maksimova /USSR/
Interpolation, amalgamation and definability in modal and superintuitionistic logic.

13.30 - 15.15 H. Andreka, J.D. Monk, I. Nemeti /USA, Hungary/
Introduction to algebraic logic and cylindric algebras.
/Connections with nonclassical logics by Y. Venema/

15.30 - 16.15 S. Givant /USA/
Decidability problems for varieties of relation algebras.
/Continuation/

Wednesday, Oct. 16

9.00 - 10.45 A. Stolboushkin /USSR/
Computability on abstract structures : universal and structural rules.

10.00 - 10.45 F. Börner /Germany/
Parallel section II: algebraic logic. Operations on binary relations.

11.00 - 11.45 W. Craig /USA/
Algebras of sets of finite sequences. /Continuation/

13.30 - 14.15 S. Givant /USA/
Decidability problems for varieties of relation algebras.
/Continuation/

14.30 - 15.15 R. Maddux /USA/
On the number of variables required in proofs.

15.30 - 16.15 C. Brink /South Africa/
Power structures.

16.30 - 17.00 P. Jipsen (USA) Discriminator varieties of r-algebras (a non-technical introductory talk).

Thursday, Oct. 17

9.00 - 10.45 A. Stolboushkin /USSR/
Computability on abstract structures: universal and structural rules. /Continuation/

11.00 - 11.45 ~~K. Segerberg /Sweden/~~ L.L. Maksimova (continuation)
~~To be announced later~~. E. Best. parallel section

13.30 - 15.00 Y. Venema /~~Holland~~/The Netherlands/
A modal perspective on algebraic logic.
Stahlquist theorem for Boolean algebras with operators.

15.15 - 16.00 S. Givant /USA/
Decidability problems for varieties of relation algebras.
/Continuation/

16.15 - 17.00 C. Brink /South Africa/
Applications of Power Structures.

Friday, Oct. 18

9.00 - ~~1~~9.45 J. Zelger /Austria/
~~10.00 - 10.45~~ Self- organized learning through creative cooperation.

10.00 - 11.45 W. Blok /USA/ On hoops: an intuitionistic version of many-valued
~~To be announced~~. logic.

13.30 - 14.30 (H. Andreka, J.D. Monk, I. Nemeti /USA, Hungary/) Sz. Mikulás:
(Introduction to algebraic logic and cylindric algebras)
Answer to van Benthem's question: Lambek's calculus is complete.

14.45 - 16.45 Y. Venema /~~Holland~~/ The Netherland/
A modal perspective on algebraic logic: cylindric modal logic.

~~17.00 - 17.45~~ ~~R. Maddux /USA/~~
~~Introduction to relation algebras and their connections with cylindric algebras and logic. /Continuation/~~
→ Next week

17.00 - 17.45 S. Murdaev (USSR)
Locally tabular superintuitionistic logic.

~~E. BEST /Germany/~~
~~Title to be announced.~~

STEFAN BANACH MATHEMATICAL CENTER _ XXXVIII SEMESTER

Algebraic Methods in Logic and Their Computer Science Applications

Program

Monday, Oct. 21

9.00 - 9.45	L.L.Maksimova /USSR/ Interpolation, amalgamation and definability in modal and superintuitionistic logic.
10.00 - 12.00	W. Craig /USA/ Algebras of sets of finite sequences. /Continuation/
13.30 - 14.30	I. Sain /Andreka et. al. / /Hungary/ Generalization of ultraproducts for polyadic-, cylindric-, and others algebras of logic. Connetions between model theory and cylindric algebras /via ultraproducts/.
14.45 - 15.30	R. Maddux /USA/ Introduction to relation algebras and their connections with cylindric algebras and logic. /Continuation./
15.45 - 16.30	C. Brink /South Africa/ Applications of Power Structures. /Continuation./

Tuesday, Oct. 22

9.00 - 10.45	I. Musikaev /USSR/ Complexity of datalog queries for for finite algebraic systems.
11.00 - 12.45	J. Zelger /Austria/ Self-organized learning through creative cooperation.
13.30 - 14.30	I. Sain or Andreka, H. Monk, J.D. Nemeti, I. /Hungary, USA/ Ultraproduct representations for polyadic- and cylindric algebras. Connections between cylindric algebras and model theory. Summary of Introductory Alg.Logic course begins here.
14.45 - 15.30	C. Brink /South Africa/ Applications of Power Structures./Continuation./
15.45 - 17.00	Y. Venema /The Netherlands/ A modal perspective on algebraic logic.

Wednesday, Oct. 23

9.00 - 10.45	I. Musikaev /USSR/ Complexity of datalog queries for finite algebraic systems.
10.00 - 10.45	A. Szendrei /Hungary/ ~~to be announced~~ Deductive systems and minimal varieties
11.00 - 11.45	D. Pigozzi /USA/ ~~to be announced~~ Universal Horn logic without equality.
13.30 - 14.30	H. Andreka, J.D. Monk, I. Nemeti /USA, Hungary/ Summary of Introductory Algebraic Logic course; pronising open problems to work on in the future.
14.45 - 15.30	R. Maddux /USA/ Introduction to relation algebras and their connections with cylindric algebras and logic. /Continuation./

15.45 - 16.30 P. Jipsen /USA/
Relation algebras are strong Euclidean r-algebras: an independent introductory continuation.

Thursday, Oct. 24
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9.00 - 9.45 D. Pal'chunov /USSR/
Atiomatic complexity of theories.

10.00 -12.00 W. Craig /USA/
Algebras of sets of finite sequences./Continuation./

13.30 - 14.30 Andreka,H. Monk,J.D. I.Nemeti /USA,Hungary/
Recitation,questions from audience,examples,informal open discussion. Conclusion of Introd. Algebraic Logic course.

14.45 - 15.30 R. Maddux /USA/
Introduction to relation algebras and their connections with cylindric algebras and logic. /Continuation./

15.45 - Open problem session.
Participants are invited to raise open problems if these are relevant to Algebraic Logic.

Friday, Oct. 25
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10.00 - 10.45 G.Scollo /The Netherlands/
Pre-institution categories. /By A. Salibra and G. Scollo/

11.00 - 13.00 H. Rasiowa /Poland/ Algebraic approach to approximation reasoning.
~~to be announced~~

14.30 - 15.15 T. Ströhlein /Germany/
Topics from the book: Relations and Graphs /by G. Schmidt and T. Ströhlein/.

15.30 -16.15 J.A. Pomykała /Poland/
Similarity based approximation of information.

Günther Schmidt: Relational semantics for programs.

N.D. Volkov (USSR)
Halmos (polyadic) algebras and relational algebras.