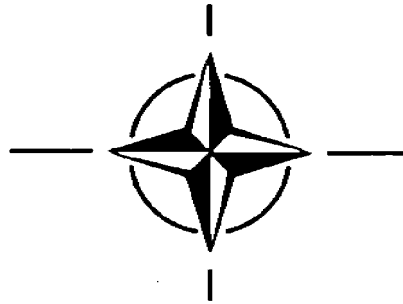


**AN ADVANCED RESEARCH WORKSHOP OF THE
NORTH ATLANTIC TREATY ORGANIZATION**



**NONCOMMUTATIVE STRUCTURES IN
MATHEMATICS AND PHYSICS**

Kiev, Ukraine

24 – 27 September, 2000

PROGRAM & List of participants

September 23, 2000

Arrival

Saturday

9⁰⁰-23⁰⁰ Registration of Participants

***River ship
"Marshal Rybalko" at the River Port of Kiev***

September 24, 2000

QUANTUM GROUPS, PART 1

Sunday

8³⁰-9⁰⁰

Breakfast

Chairman A. U. Klimyk

9³⁰-9⁴⁰

Welcome by Vice-President of the
National Academy of Sciences of
Ukraine, *Prof. A. P. Shpak*

12⁰⁰-12²⁰

**HIDDEN SYMMETRY OF SOME ALGEBRAS OF
Q-DIFFERENTIAL OPERATORS**
*A. Shklyarov, S. Sinel'shchikov,
L. Vaksman*

9⁴⁰-10⁰⁰

Introduction: ARW Co-Directors
J. Wess and S. Duplij

12²⁰-12⁴⁰

**HOPF CATEGORIES VIA DERIVED
CATEGORIES**
V. Lyubashenko

Chairman John Madore

10⁰⁰-10⁴⁵

**NON-ABELIAN GAUGE THEORIES ON NON-
COMMUTATIVE SPACES**
Julius Wess

12⁴⁰-13⁰⁰

**ON FUSION RINGS, CATEGORIES AND
SYMMETRIES IN 2D PHYSICS**
Alexander Ganchev

10⁴⁵-11⁰⁵

Coffee Break

13⁰⁰-14³⁰

Lunch

Chairman J. Wess

11⁰⁵-11⁵⁰

**NONSTANDARD (TWISTED) q-DEFORMED
ALGEBRA $U_q(\mathfrak{so}(n))$ AND ITS APPLICATIONS**
A. U. Klimyk

11⁵⁰-12⁰⁰

Break

Chairman L. Vaksman

14³⁰-14⁵⁰

**C*-ALGEBRAIC DESCRIPTION OF A
QUANTUM PARTICLE IN SPACETIME**
Jan Naudts and Maciej Kuna

14⁵⁰-15¹⁰

**QUASIPARTICLES IN HOT NON-
COMMUTATIVE FIELD- AND STRING
THEORY**
Karl Landsteiner

15¹⁰-15³⁰

**ON STRUCTURE OF NONCOMMUTATIVE
ALGEBRAS OF TIME-DEPENDENT
SYMMETRIES FOR INTEGRABLE EVOLUTION
EQUATIONS**
Artur Sergyeyev

15³⁰-16⁰⁰

Coffee break

Chairman Karl Landsteiner

16⁰⁰-16²⁰

**POSSIBLE CONSTRAINTS ON STRING
THEORY IN CLOSED SPACE WITH
SYMMETRIES**
Atsushi Higuchi

16²⁰-16⁴⁰

p-ADIC STRINGS AND NONCOMMUTATIVITY
B. Dragovich and I. V. Volovich

16⁴⁰-17⁰⁰

**ADELIC QUANTUM MECHANICS:
NONARCHIMEDEAN AND
NONCOMMUTATIVE ASPECTS**
G. Djordjevic, B. Dragovich and Lj. Netic

17⁰⁰-17²⁰

Break

17²⁰-18³⁰

**Poster session and
Session of Discussion group 1**

19³⁰-21⁰⁰

Welcome dinner

September 25, 2000

SUPERSYMMETRY, PART 1

Monday

8³⁰-9⁰⁰

Breakfast

Chairman K. S. Stelle

9⁰⁰-9⁴⁵

SUPERSYMMETRY IN SINGULAR SPACES
Antoine Van Proeyen

9⁴⁵-10³⁰

**HUMBOLDT FOUNDATION - SPONSORSHIP
OPPORTUNITIES FOR YOUNG RESEARCHERS**
*Manfred Osten, Secretary General, Alexander von
Humboldt Foundation, Bonn*

10³⁰-11⁰⁰

Coffee break

Chairman C. Quesne

11⁰⁰-11⁴⁵

**TURTLES AND TENSIONS IN HW/RS
GEOMETRIES**
K. S. Stelle

11⁴⁵-12⁰⁰

Break

Chairman Vladimir Zima

12⁰⁰-12²⁰

**NEW SUPERSYMMETRIC GAUGE THEORIES
WITH 2-FORM GAUGE POTENTIALS**
Friedemann Brandt

12²⁰-12⁴⁰

**QUANTUM CORRECTIONS TO SUPERSPACE
CONSTRAINTS**
*Kasper Peeters, Pierre Vanhove, Anders
Westerberg*

12⁴⁰-13⁰⁰

D-BRANES AND VACUUM PERIODICITY
D.V. Gal'tsov and V.V. Dyadichev

13⁰⁰-14³⁰

Lunch

Chairman F. Toppan

14³⁰-14⁵⁰

**SUPERPARTICLES WITH TENSORIAL OR
SCALAR CENTRAL CHARGES AND SPINNING
PARTICLES**

V. G. Zima and S. O. Fedoruk

14⁵⁰-15¹⁰

**WORLD VOLUME REALIZATION OF
AUTOMORPHISMS**

Joan Simón

15¹⁰-15³⁰

**GENERALIZED TAUB-NUT METRICS AND
KILLING-YANO TENSORS**

Mihai Visinescu

15³⁰-16⁰⁰

Coffee break

Chairman F. Brandt

16⁰⁰-16²⁰

**ON THE CLASSIFICATION OF N-EXTENDED
SUPERSYMMETRIC QUANTUM MECHANICAL
SYSTEMS**

Francesco Toppan

16²⁰-16⁴⁰

**SUPERSYMMETRIC ODD MECHANICAL
SYSTEMS AND HILBERT Q-MODULE
QUANTIZATION**

Andrzej Frydryszak

16⁴⁰-17⁰⁰

**ROTATING SUPER BLACK HOLE AS
SPINNING PARTICLE**

A. Burinskii

17⁰⁰-17²⁰

Break

17²⁰-18³⁰

**Poster session and
Session of Discussion group 2**

19⁰⁰-20⁰⁰

Dinner

September 26, 2000

QUANTUM GROUPS, PART 2

Tuesday

8³⁰-9⁰⁰

Breakfast

Chairman A. Van Proeyen

9⁰⁰-9⁴⁵

PARA, PSEUDO, AND ORTHO-SUPERSYMMETRIC QUANTUM MECHANICS AND THEIR BOSONIZATION

C. Quesne

9⁴⁵-10³⁰

SPACE-TIME SUPERSYMMETRY AND QUANTUM DEFORMATIONS

Jerzy Lukierski

10³⁰-11⁰⁰

Coffee break

Chairman Jerzy Lukierski

11⁰⁰-11⁴⁵

EXTERNAL FIELDS AS INTRINSIC GEOMETRY

John Madore

11⁴⁵-12⁰⁰

Break

Chairman V. Lyubashenko

12⁰⁰-12²⁰

CAN THE CABIBBO MIXING ORIGINATE FROM NONCOMMUTATIVE EXTRA DIMENSIONS?

A. M. Gavrilik

12²⁰-12⁴⁰

NONCLASSICAL REPRESENTATIONS OF THE NONSTANDARD DEFORMATIONS $U'_q(\mathfrak{so}(n))$, $U_q(\mathfrak{iso}(n))$ AND $U'_q(\mathfrak{so}(n,1))$

N. Z. Iorgov

12⁴⁰-13⁰⁰

FOCK REPRESENTATION OF A *-ALGEBRAS ALLOWING WICK ORDERING

P. E. T. Jorgensen, D. P. Proskurin, Yu.S. Samoilenko

13⁰⁰-14³⁰

Lunch

Chairman B. Dragovich

14³⁰-14⁵⁰

**VECTOR FIELDS AND DIFFERENTIAL
OPERATORS FOR NONCOMMUTATIVE
GEOMETRY**

Andrzej Borowiec

14⁵⁰-15¹⁰

**CATEGORIES OF GELFAND-ZETLIN
MODULES**

Volodymyr Mazorchuk

15¹⁰-15³⁰

**SEMICLASSICAL DYNAMICS OF SU(2)
MODELS**

Adrian Alscher and Hermann Grabert

15³⁰-16⁰⁰

Coffee break

Chairman A. Burinskii

16⁰⁰-16²⁰

**EUCLIDEAN GIBBS STATES OF QUANTUM
LATTICE SYSTEMS**

Yuri Kozitsky

16²⁰-16⁴⁰

**APPROXIMATE MODEL OF THE SPACETIME
FOAM**

Vladimir Dzhunushaliev

16⁴⁰-17⁰⁰

**A METRIC-AFFINE FIELD MODEL FOR THE
NEUTRINO**

Dmitri Vassiliev

17⁰⁰-17²⁰

Break

ROUND TABLE DISCUSSION

17²⁰-17⁴⁰

**New principles in superstring model
building**

17⁴⁰-18⁰⁰

New trends in quantum groups

18⁰⁰-18³⁰

**Elaboration of the Recommendations and
preparation of a draft report**

19⁰⁰-20⁰⁰

Dinner

September 27, 2000

SUPERSYMMETRY, PART 2

Wednesday

8³⁰-9⁰⁰

Breakfast

Chairman Andrzej Frydryszak

9⁰⁰-9⁴⁵

SUPERSYMMETRY, NONINVERTIBILITY AND CATEGORIES

Steven Duplij

9⁴⁵-10³⁰

REPRESENTATIONS OF SIMPLE VECTORIAL LIE SUPERALGEBRAS AND SEMI-INFINITE COHOMOLOGY OF SUPERMANIFOLDS

Dimitry Leites

10³⁰-11⁰⁰

Coffee break

Chairman Dimitry Leites

11⁰⁰-11²⁰

HOWE DUALITY AND LIE SUPERALGEBRAS

Irina Shchepochkina (Paramonova)

11²⁰-11⁴⁰

SUPERANALOGS OF JACK POLYNOMIALS

Alexander Sergeev

11⁴⁰-12⁰⁰

Break

Chairman Irina Shchepochkina (Paramonova)

12⁰⁰-12²⁰

LOCALLY ANISOTROPIC (SUPER)SPACES AND STRINGS

S. I. Vacaru

12²⁰-13⁰⁰

FINITE UNIFIED THEORIES — THEORY AND PREDICTIONS

George Zoupanos

13⁰⁰-14³⁰

Lunch

Chairmen J. Wess and S. Duplij

14³⁰-14⁵⁰ A final report presentation

14⁵⁰-15¹⁰ Discussion of the Recommendation of
ARW

15¹⁰-15³⁰ Final comments:
J. Wess and S. Duplij

15³⁰-16⁰⁰ Coffee break

16⁰⁰-19⁰⁰

**Guided tour along the
downtown of Kiev**

19⁰⁰-21³⁰

Farewell dinner

September 28, 2000

Departure

Thursday

9⁰⁰-14⁰⁰

Departure

List of participants

- | | | | |
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| 10. Dmitri Galtsov | galtsov@grg.phys.msu.su | 35. Antoine Van Proeyen | Antoine.VanProeyen@fys.kuleuven.ac.be |
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| 25. Christiane Quesne | cquesne@ulb.ac.be | | |