



UPPSALA
UNIVERSITET

Department of
Theoretical
Physics

Partikeldagarna 2007

**Presentation of
the Department of Theoretical Physics,
Uppsala University**

by Maxim Zabzine



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Outline

- the structure of the group, people
- the scientific directions
- commercial advertising



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Our group consists of

$4P + 3L + 2F + 2pD + 6PhD = 17$ people

+ secretary !

the future is bright! ≥ 17



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People

Ulf Lindström (Prefekt, Professor)

Ulf Danielsson (Professor)

Joseph Minahan (Professor)

Antti Niemi (Professor)

Konstantin Zarembo (Lector)

Maxim Zabzine (For.ass.)

Lisa Freyhult (For.ass., just hired)

Rolf Paulsson (Lector) to retire soon → new job

Staffan Yngve (Lector) to retire soon → new job

2 postdocs and 6 PhD students



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**We are in the process of becoming
a part of the bigger department ...**

from 2008



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Scientific activities

Theoretical and Mathematical Physics

- Quantum Field Theory
- String theory



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AdS/CFT correspondence (Mihahian, Zarembo)

- the integrability of supersymmetric gauge theories
- string - gauge theory correspondence

hep-th/0212208 (421 citations)!!!



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String cosmology (Danielsson)

- the early universe can teach us about the quantum gravity
- string landscape



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Geometrical aspects of string theory (Lindström, Zabzine)

- string inspired geometrical ideas
(e.g. generalized complex geometry etc.)
- solving math problems using the physical tools



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Gauge theory, confinement (Niemi)

- solitons in gauge theory
- gauge invariant variables



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Commercial!!!



**WORKSHOP IN GEOMETRY AND SUPERSYMMETRY
ON THE OCCASION OF ULF LINDSTRÖM'S 60TH BIRTHDAY**

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A LIFE IN SUPERSPACE

15-16 NOVEMBER 2007

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GIL CAVALCANTI (Oxford) • MARC GRISARU (McGill U) • PAUL HOWE
(King's College) • CHRIS HULL (Imperial College) • ANDERS KARLHEDE
(Stockholm U) • SERGEI KUZENKO (U of Western Australia) • PETER
VAN NIEUWENHUIZEN (Stony Brook) • MARTIN ROČEK (Stony Brook) •
BILL SPENCE (Queen Mary College) • RIKARD VON UNGE (Brno) •
FRANK WILCZEK (MIT)**

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