



Newsletter

01/2017

Upcoming events

Bethe Forum “Discrete Symmetries“

Organizers: Steve F. King (Southampton), Stefan Antusch (Basel), Hans Peter Nilles (Bonn) and Andreas Trautner (Bonn)

3rd to 7th April, 2017

More information is available on <http://www.bctp.uni-bonn.de/bethe-forum/2017/symmetries>

Bethe Forum “SUSY breakdown confronting LHC and other data“

Organizers: Xerxes Tata (Hawaii), Manuel Drees (Bonn), Hans Peter Nilles (Bonn) and Stefan Pokorski (Warsaw)

29th May to 2nd June, 2017

More information and the registration form are available on <http://www.bctp.uni-bonn.de/bethe-forum/2017/SUSY>

Lecture Series “Conformal Field Theories, Trace Anomalies and Their Applications“

by Stefan Theisen (MPI for Gravitational Physics, Potsdam-Golm)

3rd to 7th July, 2017

More information will be available on <http://www.bctp.uni-bonn.de/>

9th Bethe Center Workshop “Computational Sciences and Reality“

Physikzentrum Bad Honnef

Organizers: Markus Gabriel (Bonn), Tom Luu (Jülich), Ulf-G. Meißner (Bonn) and Carsten Urbach (Bonn)

2nd to 6th October, 2017

More information will be available on <http://www.bctp.uni-bonn.de/>

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Bethe Forum

SUSY breakdown confronting LHC and other data

**May 29th to June 2nd, 2017
Bonn, Germany**

Key participants include
Howard Baer (Norman)
Kerson Choi (Daejeon)
Michael Dine (Santa Cruz)
Luis Ibáñez (Madrid)
Joseph D. Lykken (Fermilab)
John March-Russell (Oxford)
Stephan Martin (Delft)
Pran Nath (Boston)
Mitsuo M. Nojima (Tsukuba)
Mariano Quiros (Barcelona)
Stuart Raby (Columbus)
Graham Ross (Oxford)

Organizers
Xerxes Tata (Hawaii)
Manuel Drees (Bonn)
Hans Peter Nilles (Bonn)
Stefan Pokorski (Warsaw)

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Additional information and application form:
<http://www.bctp.uni-bonn.de/bethe-forum/2017/SUSY>

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Bethe Colloquium

Richard Neher
Biozentrum, University of Basel

Rapid adaptation and the predictability of next year's flu

Evolution is simple if adaptive mutations, that is evolutionary innovations, appear and spread one at a time. However, in large microbial populations many mutations arise simultaneously resulting in a complex dynamics of competing variants. We discuss recent insights into universal properties of such rapidly adapting populations which has surprising parallels to the physics of front propagation and disordered systems. Not only do these models describe observations, but they also allow to predict which variants in the population are likely to be successful. When applied to seasonal influenza virus, such predictions can anticipate virus variants of future seasons and help to optimize the influenza vaccine.

Lecture Hall 1
Physikalisches Institut - Nussallee 12 - 53115 Bonn
Thursday, 4th May, 2017, at 16 c.t.

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Bethe Colloquium

Joseph D. Lykken
Fermilab (Batavia, Illinois, USA)

Supersymmetry and the Real World

Supersymmetry has proven to be one of the most powerful ideas in gaining a better theoretical understanding of how quantum physics behaves with gravity and other fundamental forces. However, it remains to be seen if supersymmetry is actually realized in the real world. This is a challenge for experiments, as well as for theorists exploring different mechanisms for how a universe born supersymmetric can evolve to the complexity that we see around us.

Lecture Hall 1
Physikalisches Institut - Nussallee 12 - 53115 Bonn
Thursday, 1st June, 2017, at 16 c.t.

Upcoming Bethe Colloquia

- **Richard Neher (Basel)**
Rapid adaptation and the predictability of next year's flu
Thursday, 4th May, 2017
- **Joseph D. Lykken (Fermilab)**
Supersymmetry and the Real World
Thursday, 1st June, 2017
This colloquium will take place within the program of the Bethe Forum on “SUSY breakdown confronting LHC and other data“.
- **Fernando Quevedo (ICTP, Trieste)**
Title: tba
Thursday, 22nd June, 2017
- **Zoltan Fodor (Budapest, Wuppertal)**
The Origin of Mass of the Visible Universe
Thursday, 6th July, 2017

Further information will be announced on <http://www.bctp.uni-bonn.de/>

Recent Events

From **10th to 14th October, 2016**, members of the Transregio 33 - The Dark Universe (Bonn, Heidelberg, Munich) and of SFB 676 - Particles, Strings and the Early Universe (Hamburg) met in the Physikzentrum Bad Honnef for the **8th Bethe Center Workshop “Particle Physics meets Cosmology”**.

For more information please see <http://bctp.uni-bonn.de/workshop2016/>

The **Bethe Forum “Beyond the standard Higgs-system”** took place from **28th November to 2nd December, 2016**, in the bctp. It was organized by Sabine Kraml (LPSC, Grenoble), Hans Peter Nilles (Bonn), Tilman Plehn (Heidelberg) and Veronica Sanz (Sussex). More information can be found on http://www.bctp.uni-bonn.de/bethe-forum/2016/beyond_Higgs/

From **6th to 10th March, 2017**, the bctp hosted the **Lecture Series “Neutrinos”** by Alexei Y. Smirnov (MPI for Nuclear Physics, Heidelberg). More information and the talks are available on <http://www.bctp.uni-bonn.de/bethe-forum/2017/neutrinos>

Recent Bethe Colloquia

- **Peter Scholze** (Bonn)
Hyperbolic 3-manifolds and Galois representation
Thursday, 27th October, 2016
- **Markus Gabriel** (Bonn)
What is Metaphysics and Why Does it Matter?
Monday, 14th November, 2016
- **Joachim Schultze** (Bonn)
Genomic Research goes Computational
Monday, 21st November, 2016
- **James Wells** (Ann Arbor)
The theoretical physics ecosystem behind the Higgs boson discovery
Thursday, 19th January, 2017

You are invited to participate in future bctp activities. Suggestions for Bethe Forum programs or workshops are welcome. Please contact theory@physik.uni-bonn.de.



For latest news, updates and application procedures, please visit our website: <http://www.bctp.uni-bonn.de>

