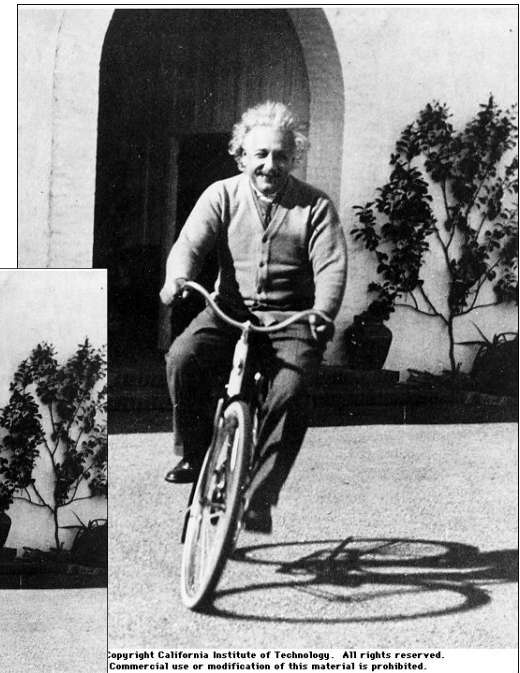
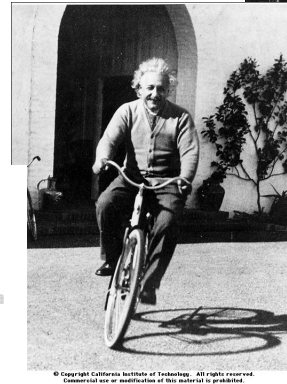


# Welcome to the SiPM matching event!

CERN, February 16 & 17, 2011

## Organizing Committee:

- Massimo Caccia
- Hartmut Hillemanns
- Lorenza Paolucci
- Emmanuelle Carrier



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# HEP Tech

Leading HEP technologies for industry  
Technology Transfer opportunities

A quality label being proposed & refined by the

## Technology Transfer Network



A cluster of TT Offices from  
~15 institutions located in the  
CERN member states, driving  
pilot projects for enhancing  
the Knowledge &  
Technology Transfer process  
in HEP community

# Council approved the creation of the TT Network in March 2008

## Purpose:

- Establish a genuine partnership / collaboration amongst institutes active in Particle Physics in MS with a view to enhancing Technology Transfer activities
- Develop the image of the PP community as a source of knowledge that benefits society

## Programme of work:

- 3-year project to develop tools and methods in order to support a permanent operation

\*TT Network members on February 2011, KFKI, Hungary observer status

Institution	Country
CEA/IRFU	France
CERN	
CHALMERS	Sweden
Copenhagen University	Denmark
CNRS/IN2P3	France
DESY	Germany
EPFL	Switzerland
GSI	Germany
INFN	Italy
JSI Jožef Stefan Institute	Slovenia
PSI Paul Scherrer Institute	Switzerland
National Technical University of Athens	Greece
LIP	Portugal
STFC, Scientific & Technology Facilities Council	UK
University of Sofia	Bulgaria
CPAN	Spain

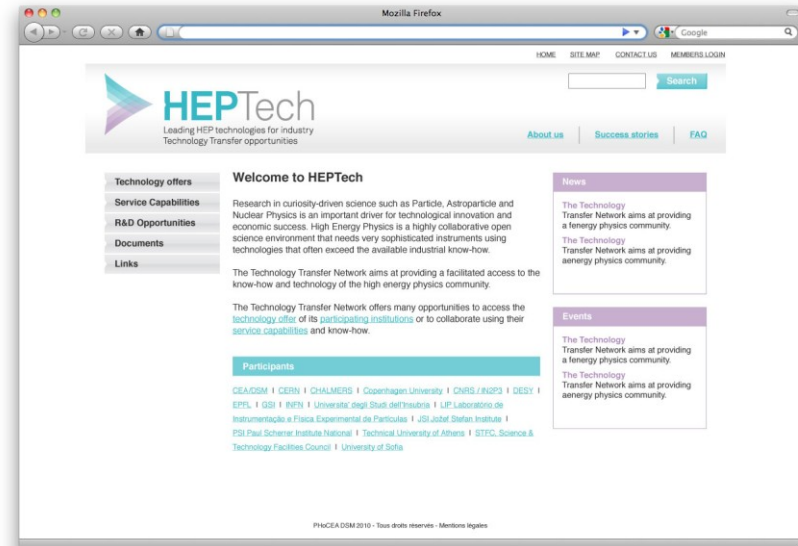
# Results

## Intellectual Property charter

- The TT Network has adopted the IP Charter as framework for the execution of KTT activities.

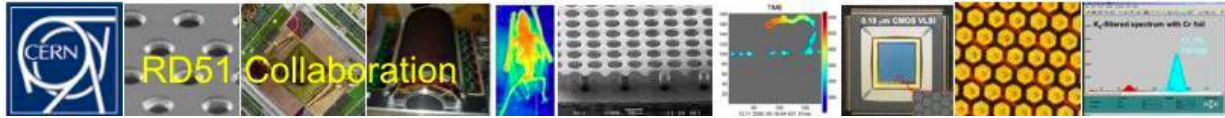
TT Network website [heptech.org](http://heptech.org):

“HEP Tech: Leading edge technologies for industry, TT opportunities”



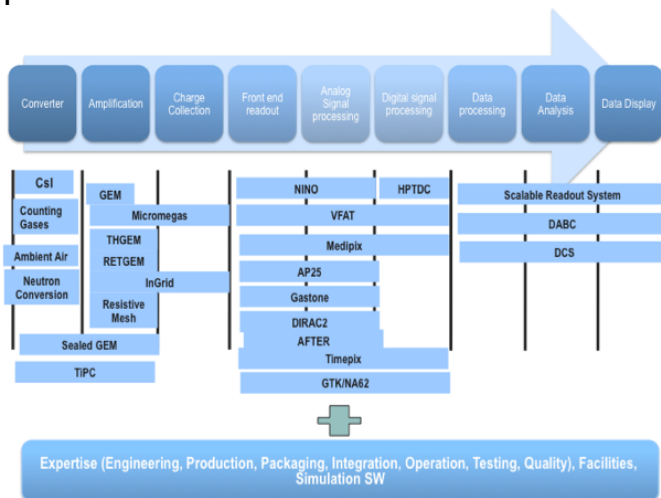
- PP Offer: Standard presentation of technologies and service capabilities
- R&D opportunities will come in a later stage
- Successful applications in research disciplines other than PP and in industry
- Trademark filing under evaluation, decision on December at next TT Network board meeting

# Operation activities: MPGD



## The RD51 collaboration on Micro Pattern Gas Detectors

- Mission: World-wide coordination of the research in the field to advance technological development of Micro Pattern Gas Detectors
  - RD-51 technology inventory consisting of information on the main technologies, expertise, production methods, test facilities and patents



- Classification of entries according to a conceptual gaseous detector
- User requirements elicitations for application devices in key domains
- Elaboration in collaboration with researcher of application device offers meeting user requirements and according to the conceptual gaseous detector layers

(\*) Micro Pattern Gaseous Detectors

# Operation activities: SiPM and related technologies

SiPM (Core technology delivered by industry, large PP expertise in systems)

- SiPM: Sensor manufactured by industry with unprecedented photon number resolving capability
- Turning SiPM into a real enabling technology requires:
  - Dedicated front-end electronics
  - Development of systems aspect
  - Data acquisition systems
- PP community pioneered the use of SiPM
  - Inventory of technologies and expertise available in the PP community
- Organisation of a workshop with PP experts, application domain users and High Tech companies (Original Equipment Manufacturers (OEM)) with a view to stimulating R&D projects

## Industry-academia matching event on SiPM and related technologies

16-17 February 2011 CERN  
Europe/Zurich timezone

!!! REGISTRATION CLOSED DUE TO LIMITED ROOM CAPACITY !!!

### Event Description

Workshop Abstract

Timetable

Contribution List

Author Index

Registration

[Modify my registration](#)

Participants

[How to find the CERN](#)

[Globe of Innovation](#)

Accommodation

Job Opportunities

[Technology Offers and Opportunities For Collaboration](#)



The Technology Transfer Network for Particle, Astroparticle and nuclear physics (HEPTech), coordinated by CERN, the house of the particle super-colliders based in Geneva, Switzerland, is organizing an industry-academia matching event on Silicon Photomultipliers and related technologies. This event, hosted by CERN, aims at bringing together experts from academia and industry active in the field of leading edge photon detection, to provide an overview on state-of-the-art technologies and to define a roadmap towards collaborative R&D on key solutions for SiPM photo detection in different application domains.

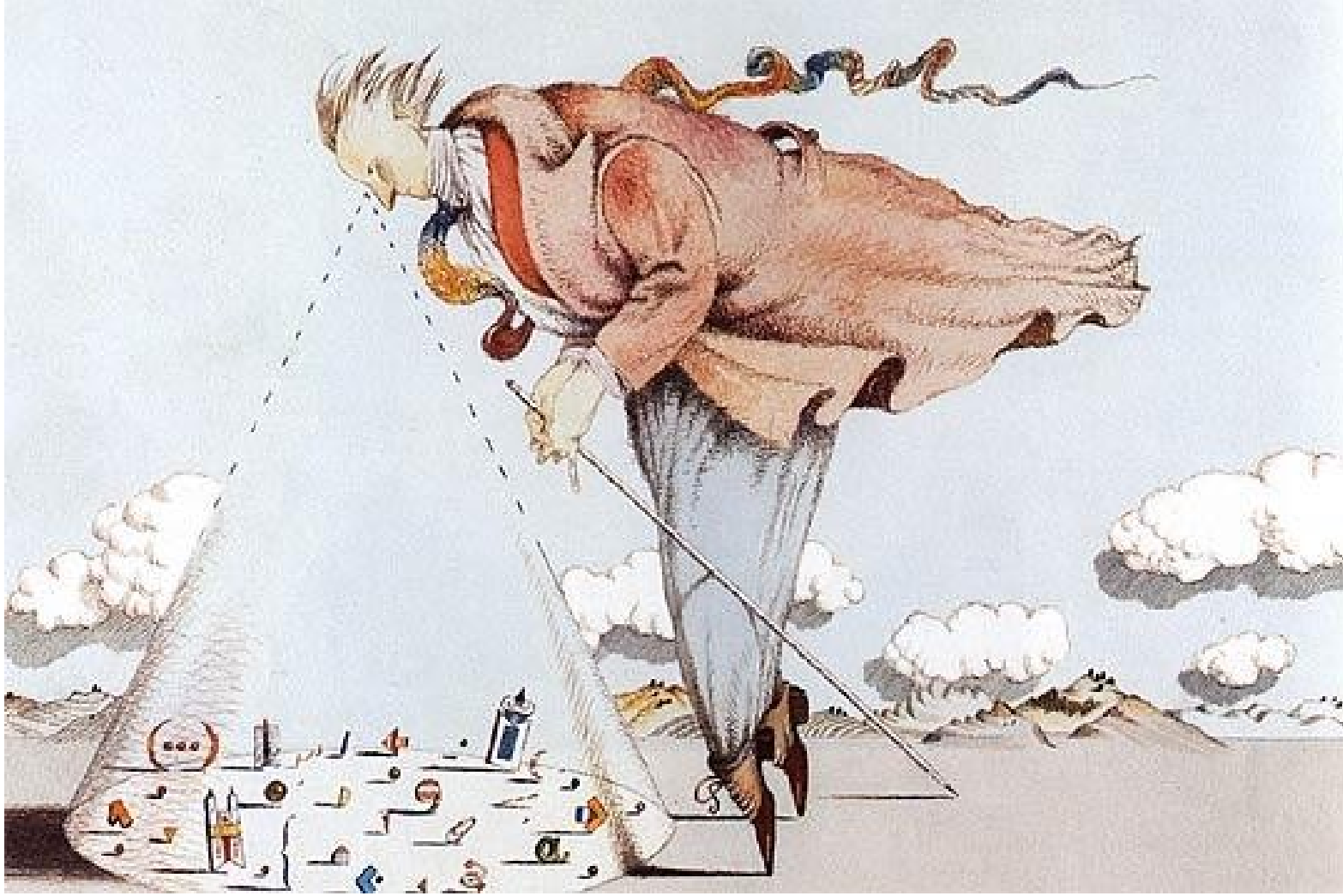
**Dates:** from 16 February 2011 09:00 to 17 February 2011 14:00

**Venue:** CERN, Globe of Innovation, CERN, 1211 Geneva 23, Switzerland

**Organisers:** Prof. Massimo CACCIÀ, Dr. Hartmut HILLEMANN



.... This is how we got started, about 1 year ago



- ❖ perform an initial inventory of the ongoing developments in the Research teams
- ❖ think hard about the market potential
- ❖ check your thoughts with a bunch of well established industrial partners

# And this is how we ended-up, TODAY: a real MarketPlace



✧ certainly a bit messy..

✧ but with:

- 21 companies represented
- ~ 130 REGISTERED people
- booths for companies & R&D teams
- and more...



## Live shows are complemented by\*:

- Technology Offers (14, as of today)
- CV's by post-docs and experienced researchers (4 )
- Job Offers (3)



\*available on INDICO today, possibly moved to the [heptech.org](http://heptech.org) web site on a short timescale

Not all of the SiPM's were born equal...  
.... and most of the sensor producers are represented here:



- ✧ AdvanSid
- ✧ CPTA-Advatech
- ✧ CSEM
- ✧ Excelitas
- ✧ E2V
- ✧ Ketek
- ✧ HAMAMATSU
- ✧ PHILIPS Digital Counting
- ✧ PULSAR
- ✧ SENSL
- ✧ STm
- ✧ ZEKOTEK



Nicely complemented by end-users, OEM providers and more:



- ✧ AXINT
- ✧ Bruker-AXS
- ✧ CAEN
- ✧ IDEAS-GammaMedica
- ✧ IDQuantique
- ✧ RAYTEST
- ✧ ATOSTEK
- ✧ KROMEK
  
- ✧ DJH consulting



## Goodbye, Boris!

- ❖ Professor of the Moscow Engineering Physics Institute,
- ❖ Doctor of Physical and Mathematical Sciences,
- ❖ Member of Academy of Natural Sciences,
- ❖ Honoured Scientist of the Russian Federation,
- ❖ Head of elementary particle physics department of MePHI
- ❖ Pioneer in the Development and use of SiPM

Boris Dolgoshein  
April 26, 1930 - December 14, 2010

# don't miss the Link!

The screenshot shows a web browser window displaying a LinkedIn group page for 'Photosensors'. The browser's address bar shows the URL: <http://www.linkedin.com/groups?viewMembers=&gid=766557&ik=1297700492830>. The LinkedIn navigation bar includes 'Home', 'Profile', 'Contacts', 'Groups', 'Jobs', 'Inbox', 'Companies', and 'More'. The group name 'Photosensors' is prominently displayed, along with navigation tabs for 'Discussions', 'Members', 'Promotions', 'Jobs', 'Search', and 'More...'. A search box for members is on the left, and a list of 261 members is shown on the right, sorted by relevance. The first few members listed are:

- Massimo Caccia** (YOU): Professor at Universita' dell'Insubria - Dipartimento di Fisica, Milan Area, Italy. 49 followers | See activity »
- Delfo Sanfilippo** (TA): Semiconductor Devices Design Team Manager presso STMicroelectronics, Catania Area, Italy. 123 followers | Stop following | See activity »
- Massimo Mazzillo** (TA): Technology Development Senior Engineer II/Project Leader at STMicroelectronics, Catania Area, Italy. 500+ followers | Stop following | See activity »
- Andrew Stewart** (TA): System Development Engineer at Circadian Solar, Coventry, United Kingdom. 75 followers | Stop following | See activity »
- Jacopo Givoletti** (TA): President of CAEN Technologies, Inc. and share holder of CAEN SpA, Livorno Area, Italy. 226 followers | Stop following | See activity »
- Carl Jackson** (TA): Working hard to replace the aging vacuum tube





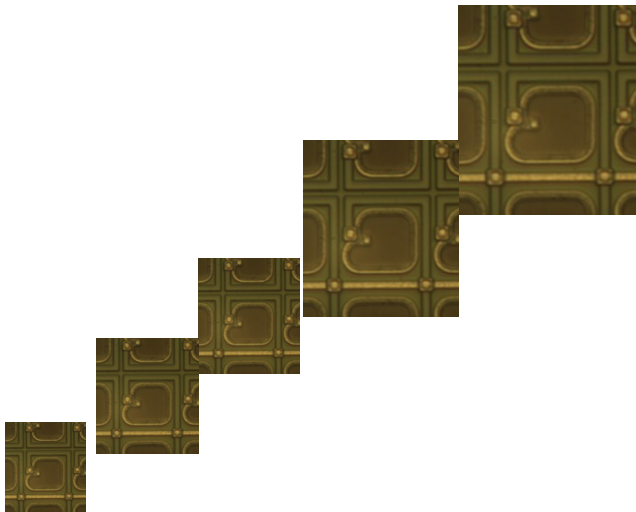
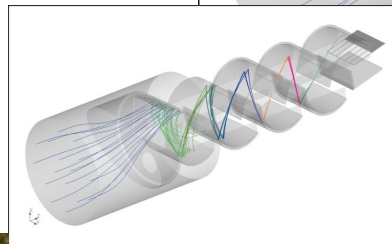
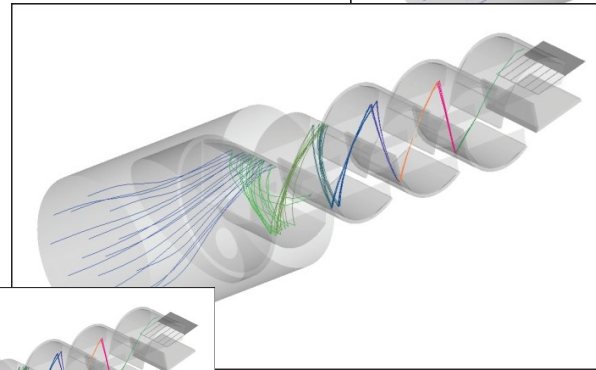
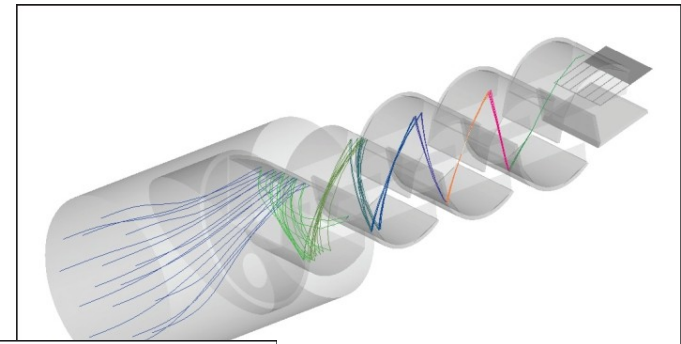
Enjoy the event!

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