On the history of DYMAT
During the 70’s, very fast development of works concerning the dynamic behavior of materials, more and more laboratories all over the world were implied in this field of research.

In France, in the early 80’s, the DRET (Direction des Recherches, Études et Techniques) managed a working group gathering several labs from university, industry and institutes of research.

Progressively, the members of this group considered that, in regard to the works performed both in France and abroad, it would be convenient to organize an international congress.
On the initiative of the DRET, a **first meeting** took place at ETCA Arcueil, on **May 26th, 1983**:

- it is decided to organize an **international conference** in France,
- the organizing committee is set up, under the presidency of Jean Philibert, specialist in metallurgy and eminent professor of the University of Orsay
July 1983, first meeting of the Organizing Committee: difficulties appear
- no address
- no secretariat
- no bank account
- ...........

Obviously, the best way to get round these difficulties was to set up an association

Beginning September, JL. Lataillade proposed the draft of statutes, which are accepted

On September 29th, the statutes are sent to the French Administration (Sous-Préfecture de Palaiseau)

⇒ DYMAT is born officially on October 29th, 1983, with the announcement in the "Journal Officiel"
29 septembre 1983. Déclaration à la sous-préfecture de Palaiseau.


30 septembre 1983. Déclaration à la sous-préfecture de Palaiseau.


3 octobre 1983. Déclaration à la sous-préfecture de Palaiseau.

Institut de recherche, de formation et de créations culturelles et sociales audiovisuelles (Frassa). Objet: susciter des vocations dans toutes les disciplines culturelles et sociaux moyens d'expression et de communication audiovisuels.

3 octobre 1983. Déclaration à la sous-préfecture de Palaiseau.

L'association Section des sous-officiers retraités du département qui devient: Union des sous-officiers retraités du département de l'Essonne (U.D.S.O.R. - Essonne)
91640 Brils-sous-Toucy.
While waiting for the first General Assembly, temporary Governing Board constituted by the 7 founder members.

Fernand VIAL : President
Michel STELLY : Treasurer
Yves REMILLIEUX : Secretary

Official address of the Association :
147 Rue Marceau, 91120 Palaiseau

In practice, the mail address was ETCA Arcueil

Note that, in the statutes, it is specified that the duration of the Association is unlimited!!
Aim of the Association:

- to bring together engineers and scientists who are working in the field of the mechanical properties of materials at high rates of strain
- to promote the scientific exchanges between researchers
- to organize scientific events or to support the organization of scientific events
- to support students and education
The following step was the organization of a **General Assembly**.

It will be done with the opportunity of a visit in France of Professors Duffy and Symonds, from Brown University. A meeting took place in ETCA, on **April 84**.

At that moment, DYMAT numbered approximately 50 members, who elected the 14 members of the **Governing Board**.
April 84, DYMAT was ready to prepare it's first International Conference!
But all was to be made !!!

- To decide on the location
- To decide on the date, taking into account the other Conferences like Explomet and APS Shock Waves in USA, and Oxford in GB
- To find money
- To constitute the Selection Committee and International Committee
- To prepare an industrial exhibition
- To establish a mailing list and to send the announcements
- To choose social events
- To define the size of the Conference:
  - A single oral session and one or two poster sessions
  - Proceedings available at the opening of the Conference
  - Simultaneous translation, obligatory in France

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⇒ 1,5 year very intensive (without computer, web and e-mails)
The 1st International Conference

DYMAT 85 was a success:

- 220 attendees coming from 15 countries
- Most of the famous international labs were present
- 45 oral communications, 60 posters
- Fruitful scientific exchanges and discussions

- A memorable official dinner on a river boat .... 😊

→ Very positive results which encouraged DYMAT to go on with another congress, Ajaccio (1988), Strasbourg (1991)
ETCA largely contributed to the success of DYMAT 85!

Thanks to **Yves Rémilleux** who placed at the disposal of DYMAT the meeting rooms at ETCA (*and during a long time, almost until 2003!*), and particularly, the Department of Communication, headed by **Philippe Podevin**.

Specially grateful to Philippe who took in charge the secretariat of the Conference, the mailing, the communication, and the whole practical organization (rooms booking, lunches, social events, ....). Philippe played the central role for the organization of the 3 first congress in France, and he continued punctually till the conference of Krakow (2000)
International Conferences

Ajaccio confirms the success of DYMAT 85, with 260 participants!

Attendees appreciated the scientific level of the congress, but also the overall organization…….! 😊

And everyday the local newspapers mentioned the conference!
CONGRÈS INTERNATIONAL « DYMAT »

Ingénieurs et chercheurs français et étrangers à Ajaccio

Créée en 1963 par des ingénieurs et chercheurs venant dans le même domaine en Allemagne, la société d’ingénierie en matière de défense est organisée par l’OD R-command. Les délégués des universités de vingt nationalités ont réuni depuis hier à Ajaccio, à l’occasion du deuxième congrès Dymat.

(Correspondant Pierre-Da Natale)

CONGRÈS « DYMAT » : LES TRAVAUX SE POURSUIVENT

Comme annoncé dans notre précédent numéro, les travaux se poursuivent à Ajaccio. La journée d’hier a été consacrée à la « caractérisation et relations entre microstructure et comportement mécanique ». Celle d’aujourd’hui sera réservée à la « rupture dynamique ». Clôture vendredi midi.

André CARCOPINO.

Échelle microscopique. Le président Yves Remilleux : « Cette année, un nouveau thème a été introduit : les modifications structurales des matériaux soumis aux ondes de choc créées par les faisceaux de hautes énergies (particules et lasers), les explosifs et autres moyens ».

1983 - 2013 : 30th anniversary of DYMAT Association June 14th, 2013, Cercle National des Armées
14/1983 - 2013 : 30th anniversary of DYMAT Association
June 14th, 2013, Cercle National des Armées

MATERIAUX : GUAUD PLANCHENT

AMERICAINS, CHINOIS, RUSSES ET EUROPEENS

planchent... sur le choc des matériaux...
European Association

Strasbourg (1991) kept a similar type of organization, moreover it marks the **opening to Europe.**

The transition from a French Association to a European Association needed a long time, many meetings, hard discussions and high energy!

After Ajaccio, DYMAT Association was well known, but the relations with foreign laboratories had to be improved in order to build a well structured network.

- On May 89, M. Stelly (President), Y. Remillieux and JL Lataillade met our **English colleagues** from Oxford (**Prof. Harding** and **Ruiz**) and Cambridge (**Prof. Field**). Result rather positive, they are interested by the French proposal about a European Association.

- On December 89, during the General Assembly in Bordeaux, J. Harding and J. Miles are elected as UK representatives in the Board, also **JF Kalthoff** and **HD Kunze** as German representatives. **G. Vignolo** (Oto Melara) is the first Italian Board member.

There is the beginning of Board meetings in English, with sometimes funny and strange discussions! We had great merit to understand the debates! 😊
New statutes are written, with European dispositions. They are accepted by the Extraordinary General Assembly, during the Strasbourg International Conference.

However, DYMAT remains an Association governed by the French law. During the GA, Prof. Kalthoff read a statement confirming his disapproval. German members leave the Board.

New German representatives are elected, A. Stilp (EMI) and K. Hoog (ISL).

John Harding is elected as President of EURODYMAT.
EURODYMAT 94 was a congress of transition.

- Mixing DYMAT Conferences with the Oxford Conferences held in 1974, 1979, 1984 and 1989
- Adaptation of the length and timing of the Oxford Conference with the DYMAT tradition
- J. Harding's request for a not too large attendance
- However, due to these changes, the Proceedings have been exceptionally published after the Conference
EURODYMAT 97 is the first conference showing the European nature of DYMAT:

- a local Organizing Committee, chaired by Carlos Navarro,
- a Selection Committee: Board + members of the International Committee
- under the initiative and the responsibility of DYMAT,

This type of organizing structure will be kept till now.

EURODYMAT 2000

- the simultaneous translation is stopped!
- for the first time, DYMAT delivers 2 "Thesis awards" for the best original scientific Phd contributions, James Shih (USA) and C. Denoual (F).

After a fall in Krakow due to the economic context at that time, the attendance increases at Porto (20th anniversary of DYMAT) and after, reaches again usual level, between 200 and 250 attendees, with a record of 275 participants at Brussels.
DYMAT 2009 was the first DYMAT Conference to deliver the "John Rinehart's Award".

The recipients were:
- Professor John E. Field (Univ. of Cambridge-UK)
- Professor Marc A. Meyers (Univ. of California SD – USA)

DYMAT 2012
"John Rinehart's Award" delivered to:
- Professor Alain Molinari (Univ. of Metz – F)

There were two publication options for the 10th International DYMAT Conference:
- as Proceedings Publications
- as Peer Reviewed Papers in an issue of "European Physical Journal - Special Topics" (EPJ-ST), entitled “Characterization, Modeling and Simulation of Materials at High Strain Rates".
1983 - 2013 : 30th anniversary of DYMAT Association

June 14th, 2013, Cercle National des Armées
Technical Meetings

On the idea of the first seminar which took place in ETCA on 1984, it was decided to organize each year a Technical Meeting, excepted the year of the International Conference

- 1,5 or 2 days meeting
- focussed on specific topics

The 2nd Technical Meeting was in Nantes, in 1986, chaired by Chi Yuen Chiem. Then Poitiers followed (end 1986), and Metz (87), Bordeaux (89) ......

Since 1983, 20 Technical Meetings took place in various European towns.

Still successful, gathering between 50 and 70 participants.
1  1984 Arcueil, France
2  1986 Nantes, France
3  1986 Poitiers, France
4  1987 Metz, France
5  1989 Bordeaux, France
6  1990 Gramat, France
7  1992 Saint-Louis, France
8  1993 Ispra, Italy
9  1995 München, Germany
10  1996 Saint-Jean-de-Luz, France
11  1998 Dijon, France
12  1999 Coimbra, Portugal
13  2001 Saint-Jean-de-Luz, France
14  2002 Sevilla, Spain
15  2004 Metz, France
16  2005 Brussels, Belgium
17  2007 Cambridge, United Kingdom
18  2008 Bourges, France
19  2010 Strasbourg, France
20  2011 Paris, France

21th Technical Meeting: November, London (UK)
High speed imaging for dynamic testing of materials and structures
Students and Training Courses

One of the objectives of DYMAT is to do a special effort for students:

- specific courses in university, included in academic programs (not successful)
- help to students to find training periods or labs for PhD research
- large discounts when attending DYMAT international conferences or TM Thesis awards

- proposed by JL Lataillade (President), in 1996
- delivered during the International Conference, for an original and high scientific level contribution (PhD thesis) in the field of dynamic behavior of materials
- procedure and call for candidates (JM Diani) on April 97 : to late for Toledo!!
- the first "Thesis awards" will be delivered during DYMAT 2000:
  - DYMAT 2000/Krakow : James SHIH (USA) and Christophe DENOUAL (France)
  - DYMAT 2003/Porto : Angel ARIAS (Spain) and Jean-Lin DEQUIEDT (France)
  - DYMAT 2006/Dijon : Nuno PEIXINHO (Portugal)
Student Camps

- to the initiative of Philippe Viot (2009)
- the overall aim is to encourage research students to make exchanges about their work
- there will be three senior invited speakers.
- a three day meeting, biennial event

1st Student Camp
Oct 2010, Guéthary (France)
Philippe Viot

2nd Student Camp
June 2012, Tampere (Finland)
V-T. Kuokkala

3rd Student Camp?
Training Courses

**M10 Course (1987)**
- organized by DYMAT within the EUROSAE advanced training scheme,
- aims at offering general information in the dynamic behavior of materials
  - Dynamic plasticity, damage and fracture
  - Rupture mechanics
  - Experimental methods
  - Modelling
- still in the list of EUROSAE, named GEM 010 course (B. Vivien), [www.eurosae.com](http://www.eurosae.com)

**Constitutive relations of materials under impact loading (2012)**
- organized by the International Centre of Mechanical Sciences (CSIM)
- coordinated by T. Lodygowski and A. Rusinek
- 5 days duration (July, 2012), Udine, Italy
Other Activities

Subgroups

Several working groups were constituted with the aim of studying narrower scope of research topics, included into the global field of the dynamic behaviour of materials.

The "**Light-Weight Armour Group**" (LWAG), to study all modern body and vehicle armour, mainly focussed on light-weight metals, metal matrix composites, ceramic matrix composites (*Bradley Dodd, Erhardt Lach*)

The "**Security and Transport Group**" working on the dynamic behaviour of structures, durability of materials, crashworthiness, biomechanics (*Philippe Viot*)

The "**Industrial Dynamic Processes Group**" which organizes workshops on the numerical simulations of dynamic processes related to engineering applications, (*Alexis Rusinek, Ramon Zaera*)

*Seminars and workshops are organized, journals, minutes and reports are published*

Financial Support

Since 2007, DYMAT offers to provide **financial support** to scientific events within its topics of interest 😊
Relations with other scientific associations

- connected with AFM, member of the board during a long time
- joint annual meeting with Mecamat (MecaDymat Meeting)
- participation to the organization of the French Conference "Matériaux"

DYMAT Official Correspondents (2008)

- goal: strengthening and enlarging links with other countries active in the field of the dynamic behaviour of materials, inside and outside Europe,
- decided to set up a network of DYMAT Official Correspondents
- role: promotion of DYMAT Association in his country
European Journal

- March 92: first approach for the publishing of a scientific review (Michel Stelly)
- Scientific papers + DYMAT News
- First issue: July 1994
- The publication stopped because the few number of subscribers

Standardization and Recommendations

- Several but unfruitful contacts with Standardization Institutes (AFNOR, BSN, ...), with the goal of defining standards for dynamic experimental testing
- Decision to publish "Recommendations": Plate impact tests, Hopkinson compression tests, Taylor test, Expanding ring tests

Glossary

- 1990 - French - English - German Glossary, written by A. Lichtenberger
DYMAT News

DYMAT Nouvelles n° 1 ©
March 1985 ©
irregular but non stopped issues

DYMAT News n°37
December 2009

EDITORIAL
March 1985

Some words from the President

I would like to thank especially Richard Braverman, for his invaluable time and CEA Val de trez for the support organization for our last annual thematic meeting in 1989. It was a great success, there were about 80 participants and a lot of information and pleasant time was had by all. I also want to thank you that your most decade association is represented at CEA's annual meeting in three years in order that it will be a successful meeting.

With some of DYMAT News will be the first announcement EUROMAT2000 which is being organized by INURO in 2000 as a sequel to EUCO. DYMAT is participating in its organization and will chair a session on materials modelling and evaluation. It is a very good chance for DYMAT to advertise its work. We are sure that this conference is being held two months after our International Congress in London and therefore there is no chance of a clash.

Prof. Henry Braverman
Chairman of DYMAT

DYMAT FORUM ON THE WEB

Dr. Bradley Davis started a bulletin board or forum, where anyone can ask any questions and receive

DYMAT News

DYMAT News

waiting for papers
waiting for proposals
waiting for ideas
waiting for.....
Website

- 1998 - B. Dodd takes in charge the creation of a mail address : dymat@etca.fr
- Then, joint efforts Bradley Dodd and Michel Epinette (ETCA), development of a DYMAT website www.dymat.org, and a new mail address enquiries@dymat.org (Brad!)
- Middle 2000, M. Epinette leaves : difficulties for updating the website!
- 2006 - New but incomplete version of the website, which will be modified and updated by Gunther Dyckmans for DYMAT 2009
- G. Dyckmans leaves and Stefan Hiermaier produces the current website. 😊
1983 - 20??