

Enseignement, aides et soutiens, Fonctions hospitalières *Educational, funding and Hospital Fonctions*

Pendant 50 ans j'ai été Assistant Professeur, Attaché Chargé de Cours, Professeur et chef de Service dans les Universités suivantes:

During 50 years, I have been Visiting Professor, Teacher, Assistant Professor, Research Professor, Professor and Chairman at:

UER Sciences Odontologiques Lyon (Dental Faculty). FRANCE

UER Sciences Odontologiques Marseille/Nice (Dental Faculty). FRANCE

University of Southern California (USC Los Angeles) USA

Nippon Dental University (NDU, Niigata-Tokyo) JAPAN

UFR Sciences Odontologiques Montpellier (Dental Faculty) FRANCE

Le devoir d'un chercheur est de transmettre sa connaissance sur un nouveau sujet aussi, dès 1985 après 6 ans d'enseignement de biochimie, je me suis attaché à mettre au point l'enseignement de la Dentisterie Numérique grâce à la protection bienveillante d'un grand nom de notre profession, le **Professeur Raymond Sangiollo**, doyen de l'UFR de Marseille et conseillée au ministère. Ainsi en 1985 a été conçu et réalisé le premier enseignement de la CFAO au GBM de Lyon puis la Dentisterie Numérique au sens large à Marseille et à Nice avant mon départ aux USA. **J'ai mis au point et dispensé en France les premiers cours au monde consacré à la dentisterie numérique** en 2^e cycle et en DU (comme directeur) appelé DUBIP totalement orienté vers le fondamental et l'application de l'informatique en Odontologie ((incluant CFAO, Intelligence Artificielle, système experts et RA ou de gestion ...). Des praticiens aujourd'hui très connus ont suivi cet enseignement. Grâce à la société SOFREB, chaque élève présentait une conférence durant l'année de cours.

J'ai été alors appelé au USA par 5 Universités et j'ai choisi USC (University of Southern California) pour renouveler cette expérience. Si l'encadrement des chercheurs fut aisée, les cours ont difficilement été mis en place dès 1990.

Le même travail devait être fait au Japon, mais après une année, mes travaux ont porté plus sur les études fondamentales des matériaux de CFAO, Zircone comprise, que sur l'enseignement, le problème de la langue étant trop difficile à résoudre.

C'est donc très logiquement qu'en 1999 j'ai reporté cette expérience à l'UFR de Montpellier grâce aux Professeurs qui deviendront mes amis, je veux parler des doyens Dominique Deville de Perrière puis Jean Valcarcel et Philippe Gibert, le patron du service de prothèse Jacques Margerit et bien entendu ... mon grand ami Bruno Pélissier,.

Aujourd'hui ce type d'enseignement existe dans toutes les universités du monde.

Il faut savoir que sur ces 50 ans, par passion de l'enseignement et la transmission du savoir, je n'ai été payé que pendant 13 ans (4 ans en France comme assistant et 9 ans aux USA comme professeur, chef de service, soit 25% du temps passé.

C'est dire ma passion pour l'enseignement !

The task of a researcher is to pass on his knowledge on a new subject also, since 1985, I have endeavoured to develop the teaching of the Digital Dentistry through the benevolent protection of a great name of our profession, **Professor Raymond Sangiollo**, Dean of the UFR of Marseille and advised the ministry. Thus in 1985 was conceived and realized the first

teaching of the CadCam in Lyon, then all digital Dentistry in Marseille then in Nice before my departure in the USA. **I developed and taught the world's first digital dentistry graduate courses and Master's degree** (as director) called DUBIP that is totally oriented towards the fundamental and application of computer science in Odontology (including CadCam, Expert System, management ...). Well-known practitioners have followed this teaching. Thanks to the SOFREB academy, each student could presented a lecture during the course year.

I was then called to 5 USA University and I select USC (University of Southern California) to renew this experience. If the supervision of the researchers was easy, it was difficult to set up the courses after 1990... no comment.

The same work was to be done in Japan, but after one year, my work focused more on the fundamental studies of CadCam materials, including Zirconia, than on teaching, the problem of language being too difficult to solve.

It is therefore very logical that in 1999 I took this experiment to Montpellier thanks to its deans Dominique Deville de Perrière then Jean Valcarcel, Philippe Gibert, the head of the prosthesis service Jacques Margerit and of course ... my great friend Bruno Pélissier,.

Today this type of education exists in every university in the world.

It is important to know that over these 50 years, because passion for Teaching and the transmission of knowledge, I was paid only for 13 years (4 years in France as assistant and 9 years in the USA as teacher, head of department, or 25% of the time spent.

That's my passion for teaching!

1. Theoretical and Practical Courses (cours theoriques et pratiques) at the bachelor, graduate or Master levels.

1972 to 1973 Instructeur en Micobiologie, Instructor of Microbiology.(freshman/ 2e année) UER Odontologie de Lyon . 9 classes of 3 hours each. (27 hours)

1973 to 1974 Instructeur en Biochemistry: Instructor in Biochemistry 18 lessons of 3 hours each. (freshman/2e année) (54 hours), UER Odontologie Lyon (France)

1974 to 1975 Instructeur en Biochemistry: Instructor in Biochemistry 27 lessons of 3-1/2 hours each (134 to 174 hours) , (freshman/2e année)
Chargé de cours, Visiting Professor for 40 hours of Dental Biochemistry (sophomore/3e année) UER Odontologie Lyon (France)

1975 to 1976 Instructeur en Biochemistry Instructor in Biochemistry 27 lessons of 3-1/2 hours each (134 hours). (freshman/2e année)
Chargé de cours, Visiting Professor for 40 hours of Dental Biochemistry (sophomore/3e année) UER Odontologie Lyon (France)
Editeur Editor, of first Dental Biochemistry textbook for Lyon's Sophomore (126 pages : 21X29.7; fig. ill.). UER Odontologie Lyon (France)

1976 to 1977 Professeur Assistant en Biochimie. Assistant Professor (freshman/2e année) in Biochemistry, 18 lessons. UER Odontologie Lyon (France)
Professeur Assistant Assistant Professor (seniors. 5e année) Semiology, 2 days per week. Hospices Civiles de Lyon (France)

Professeur Assistant en Biochimie. Assistant Professor (sophomores/3e année) 36 hours in dental Biochemistry. UER Odontologie Lyon (France)

1977 to 1978 Professeur Assistant en Biochimie. Assistant Professor (freshman/2e année) in Biochemistry, 7 lessons. UER Odontologie Lyon (France)

Professeur Assistant Assistant Professor (seniors. 5e année) Semiology, 2 days per week. Hospices Civiles de Lyon (France)

Professeur Assistant Assistant Professor (sophomores/3e année) 30 hours in dental Biochemistry. UER Odontologie Lyon (France)

1978 to 1979 Professeur Assistant en Biochimie. Assistant Professor (freshman/2e année) for 9 TP in Biochemistry. UER Odontologie Lyon (France)

Professeur Assistant Assistant Professor (seniors. 5e année) Semiology, 2 days per week. Hospices Civiles de Lyon (France)

Professeur Assistant en Biochimie. Assistant Professor (sophomores/3e année) 30 hours in dental Biochemistry. UER Odontologie Lyon (France)

1979 to 1980 Professeur Assistant en Biochimie. Assistant Professor (freshman/2e année) for 9 TP in Biochemistry. UER Odontologie Lyon (France)

Professeur Assistant Assistant Professor (seniors. 5e année) Semiology, 2 days per week. Hospices Civiles de Lyon (France)

Professeur Assistant en Biochimie. Assistant Professor (sophomores/3e année) 30 hours in dental Biochemistry. UER Odontologie Lyon (France)

1980 to 1981 (Dental School did not renew my contract as an Assistant) (24 hours)

Chargé de cours en Biochimie. Visiting Professor for 24 hours of Dental Biochemistry (sophomore.3e année) UER Odontologie Lyon (France)

1985 to 1986 Chargé de cours Visiting Professor (GBM school) 2 hours on Digital Dentistry including Dental CadCam at the GBM. Lyon

1986 to 1987 Chargé de cours Visiting Professor (GBM school) 2 hours on Digital Dentistry including Dental CadCam, Lyon

Chargé de cours Visiting Professor for 14 hours on Digital Dentistry including Dental CadCam (Sénior/5 année) UFR Odontologie Marseille. (France)

Chargé de cours Visiting Professor and Responsible for 12 days on Digital Dentistry including Dental CadCam (Master/ DU BIP) UFR Odontologie Marseille. (France)

1987 to 1988 Chargé de cours Visiting Professor for 14 hours on Digital Dentistry including Dental CadCam (Sénior/5 année) UFR Odontologie Marseille. (France)

Chargé de cours Visiting Professor and **Responsible** for 12 days on Digital Dentistry including Dental CadCam (Master/ DU BIP) UFR Odontologie Marseille. (France)

1988 to 1989 Chargé de cours Visiting Professor for 14 hours on Digital Dentistry including Dental CadCam (Sénior/5 année) UFR Odontologie Marseille. (France)

- Chargé de cours** Visiting Professor and **Responsible** for 12 days on Digital Dentistry including Dental CadCam (Master/ DU BIP) UFR Odontologie Nice. **(France)**
- 1989 to 1991** **Research Professor and Co-Director** for sophomore (3e année) 2 hours on Digital Dentistry including Dental CadCam at University of Southern California. USC. **(USA)**
- 1992 to 1994** **Research Professor and Chairman** for Master (DU) 36 hours on Digital Dentistry including Dental CadCam at University of Southern California. USC. **(USA)**
Research Professor and Chairman for Master (DU) 15 hours on Practice Dental CAD/CAM at University of Southern California. USC. **(USA)**
- 1995 to 1999** **Research Professor and Chairman** for Master (DU) 15 hours on Practice Dental CAD/CAM at University of Southern California. USC. **(USA)**
- 1999 to 2003** **Attached/Visiting professor** (CadCam research) in Nippon dental University (Prof Ogura – Niigata/Tokyo) **(Japan)**
- 1999 to 2000** **Chargé de cours** Visiting professeur on Digital Dentistry including Dental CadCam (UFR de Montpellier) Sophomore (4e année) and junior (5e année) **(France)**
- 2001 to 2012** **Chargé de cours** on Digital Dentistry including Dental CadCam (visiting Professor Dental School) UFR Odontologie de Montpellier. (Sénior - 6e année). **(France)**
- 2013 to 2016** **Chargé de cours** de CadCam (visiting Professor Dental CadCam School) UFR Odontologie de Montpellier. Master (DU Esthétique B.Pélissier). **(France)**
- 2017 to 2018** **Chargé de cours** on Digital Dentistry including Dental CadCam UFR (visiting Professor Dental School) UFR Odontologie de Montpellier. Master (DU Esthétique B.Pélissier). **(France)**
+ Attaché, Chargé de cours on Digital Dentistry including Dental CadCam UFR (visiting Professor Dental School) UFR Odontologie de Montpellier. (Sophomore (4e année)). **(France)**

Remarks

- 1974** Création des premiers cours de biochimie dentaire à la Faculté de Lyon avec un manuel d'accompagnement que j'ai édité pour l'étudiant de 3e année et les professeurs.
- 1975** Création des premiers cours de biochimie dentaire et méthodes en Biochimie avec un manuel d'accompagnement pour le Master (CES de biologie orale) à la Faculté de Lyon.
- 1986** **Création des premiers cours au monde sur la dentisterie numérique**, y compris sur la CFAO dentaire à l'Université de Marseille (1987,1988).

- Création et direction du premier DU au monde** (diplome Universitaire – DUBIP) **en Dentisterie Numérique** à l’UFR Dentaire de Marseille sur la Dentisterie Numérique incluant le Dental CadCam.
- 1989** Création du premier laboratoire CadCam à l’USC.
- 1990** Création de la première formation en Université aux États-Unis sur la dentisterie numérique, y compris Dental CadCam à l’University of Southern California (USC) avec J Preston.
- 1999** Création de la première formation universitaire en dentisterie numérique incluant la CFAO dentaire à l’UFR d’Odontologie de Montpellier avec le Dr B Pélissier pour les étudiants de 2e (1999) et 3e cycle (2000) (France)
- 1974** Created the first dental biochemistry lesson’s at the Faculty Lyon with an accompanying textbook which I edited for Student and Professor.
- 1975** Created the first lesson’s in Dental Biochemistry with an accompanying textbook for the Master (CES of Oral Biology) at the Faculty Lyon.
- 1986** **Created and direction of the first Worldwide junior/senior lesson’s on Digital Dentistry** including Dental CadCam dentaire at the University of Marseille (1987,1988). **Created and direction of the first Worldwide University Master lesson and Graduate** on Digital Dentistry including Dental CadCam at the Dental Faculty of Marseille.
- 1989** Creation of the first CadCam Laboratory at USC with J Preston
- 1990** Created the first USA University training on Digital Dentistry including Dental CadCam at University of Southern California (USC) with J Preston.
- 1999** Created the first University training on Digital Dentistry including Dental CadCam at The Faculty of Montpellier with Dr B Pélissier. (France) and ..
Creation (2000) of the first Digital Dentistry including Dental CadCam Laboratory and Lesson (3 hours for basic training & 5 hours for practical training) at The Faculty of Montpellier with Dr B Pélissier. (France)

2. Theses

21. Encadrement de theses DDS comme “Jury Member”.

In all the theses presented, I took an active part. My own experiments were often presented.

- | | | |
|---|---------------------------------------|------------------------|
| 1 | Mr. Arsam SIVACIYAN : | |
| | Salivary proteins dosage | No. 42 12 78117 - 1978 |
| 2 | Ms. Marie-Christine BRETON : | |
| | Absorption of salivary proteins on HA | No. 42 12 78118 - 1978 |
| 3 | Mr. Dominique CHASTAN : | |
| | Phosphate doses in the saliva | No. 42 12 78119 - 1978 |
| 4 | Ms. Françoise MOLLINAR MIN-FOURNET : | |
| | Bibliographic tests on strontium | No. 42 12 79 49 - 1979 |
| 5 | Mr. Yousef GOPAUL : | |
| | CAO symptoms and salivary parameters | No. 42 12 79 87 - 1979 |
| 6 | Mr. Gabriel GOULY : | |

| | | |
|----|---|-------------------------|
| | Study of doses of NA,K, Ca and K in the saliva. | No. 42 12 79 88 - 1979 |
| 7 | Mr. Patrick GIROD ROUX : Electro focalisation of saliva | No. 42 12 79 116 - 1979 |
| 8 | Mr. Thoy LANG PING NAM : Comparative study of electro focalisation | No. 42 12 79 105 - 1979 |
| 9 | Ms. Marielle SIMIAN-GUILLAT : Absorption of salivary glycoprotein's | No. 42 12 79 117 - 1979 |
| 10 | Ms. Marie Pierrette BAUPAIN : Kinetic absorption of GP | No. 42 12 79 117 - 1980 |
| 11 | Mr. Laurent CHALLIER : Circadian variations of salivary composition | No. 42 12 80 91 - 1980 |
| 12 | Ms. Isabelle MOSSE : Bibliographic study of the influence of saliva | No. 42 12 80 113 - 1980 |
| 13 | Ms. Martine PIW-PIROLLET : Study of potential salivary determinants | No. 42 12 80 114 - 1980 |
| 14 | Mr. Marc PAVIET SALOMON : Salivary excretion of pharmacological substances. | No. 42 12 80 115 - 1980 |
| 15 | Ms. Martine PANIEL BOST : Vascular effects of composites | No. 42 12 81 47 - 1981 |
| 16 | Ms. Fabienne JORDAN : Contribution to the study of various occlusal concepts | No. 42 13 86 - 1986 |

22. Encadrement de theses DDS comme "Thesis Director"

| | | |
|----|--|-------------------------|
| 17 | Ms. Martine BONNETAIN RIBAUT (Biblio.) : Structural biochemistry of enamel and ivory | No. 42 12 77 62 - 1977 |
| 18 | Ms. Martine DEVEAU : The laser in dental stomatology | No. 42 12 76 92 - 1976 |
| 19 | Ms. Ines PERNET (Biblio.) : Contribution to the biochemical study of bone tissue | No. 42 12 78 94 - 1978 |
| 20 | Mr. Christian TERMOZ (Biblio.) : The role of prostaglandins in the etiology of paros. | No. 42 12 78 116 - 1978 |
| 21 | Ms. Brigitte BIDAN-LAYOUS (Biblio.) : Intestinal absorption of calcium | No. 42 12 79 02 - 1979 |
| 22 | Ms. Mauricette (SIBUE) (experimental) : Fluoride and the teeth | No. 42 12 79 63 - 1979 |
| 23 | Mr. François COUDERT (Experimental) : Absorption of proteins | No. 42 12 79 85 - 1979 |
| 24 | Mr. Gérald BRAUN (Experimental) : Proteins doses | No. 42 12 79 86 - 1979 |
| 25 | Mr. Eric DENTAN (Experimental) : Phosphate doses | No. 42 12 79 106 - 1979 |
| 26 | Ms. Dominique AVET SEUX (Biblio.) : Mucuous | No. 42 12 80 46 - 1980 |

- 27 Mr. Jean Jacques ORSINI (Experimental) :
PEI No. 42 12 81 49 - 1981
- 28 Ms. Annie DURIEUX (Experimental) :
Protein doses No. 42 12 81 54 - 1981
- 29 Mr. Pierre MIERMONT (Experimental) :
Affinity of protein for HA No. 42 12 81 67 - 1981
- 30 Ms. Annie GASTALDIN-CASTELLI (Experimental) :
Varieties of salivary elements No. 42 12 81 143 - 1981
- 31 Ms. Annie LE MEUR-LOGEARD (Experimental) :
Varieties of ions No. 42 12 81 144 - 1981
- 32 Ms. Véronique LE GALL :
New method of scellement No. 42 12 84 - 1984
- 33 Mr. Philippe JOURDAN :
CAO and precision No. 42 84 44 - 1984
- 34 Mr. Lionel RIZZOLO :
Imprints by the optical method No. 42 15 84 - 1984
- 35 Ms. Nicole ZAGO :
The CCD in dentistry No. (Bordeaux)
- 36 Mr. Jean Luc BERRUET (Biblio.) :
Incidence of computers in the dental office No. 42 22 86 33 - 1986
- 37 Mr. Pierre ANCILLON (Biblio.) :
Incidence of computers in the dental office No. 42 22 86 34 - 1986
- 40 Ms. Fabienne JORDAN :
Contribution to the comparative study of various
occlu-prosthetic concepts No. (Lyon)
- 41 Mr. Renaud JOLIVET :
CAD/CAM in odontology: from the preparation
to the automatic milling No. 42 07 88 - 1988
- 42 Thesis on spectrophotometry
- 43 Thesis on spectrophotometry
44. Labadie, A.B.D., *matériaux composites architecturés et odontologie: le concept Aristée*,
in *Odontologie*. 1989: Toulouse. p. 115.
45. Laurès, M., *Comportement clinique de l'environnement parodontal d'une coiffe
prothétique réalisée dans un nouveau matériau et par conception et fabrication
assistées par ordinateur*, in *Faculté d'Odontologie*. 1989: Montpellier. p. 210.

when I come back to France (Montpellier):

46. Guilhemat, B., *Eclaircissement des dents vitales: Efet électrochimiques d'un nouveau
dispositif au fauteuil*, in *Odontologie Conservatrice*. 2004, directeur de these et Jury ,
Faculté Dentaire: Montpellier. pp. 166.
47. Rouquette, H., *La blanchiment des dents non vitals: Apport d'un nouveau dispositif
électrochimique*, in *Odontologie Conservatrice*. 2004, Directeur de these et jury,
Faculté Dentaire: Montpellier. pp. 186.

48. Mazet, C., *La Conception et la Fabrication Assistées par ordinateur au fauteuil dentaire* in *Odontologie Conservatrice*. 2005, directeur de these et Jury , Faculté Dentaire: Montpellier. pp. 166.
49. Bertrand, C., *Le Blanchiment par Chromophorèse: analyse des mouvements ioniques*, in *Odontologie*. 2007, Odontologie: Montpellier. p. 140.
50. Nguyen.HCM, *jury de "Le Système LAVA de 3M ESPE"*, in *Odontologie*. 2008, Odontologie: Montpellier. pp. 140.
51. Rossolin, P., *jury de "Le Système Cercon de Dentsply"*, in *Odontologie*. 2009, Odontologie: Montpellier. pp. 108.
52. Hoa, D., *jury de "Le Système Procera"*, in *Odontologie*. 2006, Odontologie: Montpellier. pp. 156.
53. Elsaghir, T., *jury de "La CFAO: le système Everest"*, in *Odontologie*. 2008, Odontologie: Montpellier. pp. 146.
54. Rey, Patrick., *jury de Condor Scan , Premiers Resultats experimentaux*, in *Odontologie*. 2016, Odontologie Montpellier pp 148

23. postgraduate theses (2e cycle) as "director or jury member"

- 54 Mr. Bernard HINAULT (Experimental) : "Identification experimentation in legal Odontology" Tours University No. 43 55 86 - 1986
55. Dr Bruno Pelissier
" Influence du mode d'irradiation lumineuse sur le degré de polymérisation des biomatériaux composites et dérivés " Montpellier University, 4 mars 2002

3. Post-education : conferences regarding continuing education for DDS

Signalons, pour l'exemple, 8 journées de formations à titre purement indicative qui ne sont pas indiquées dans les 536 références de la page "conferences/lectures et video " adressées strictement à nos étudiants et nos confrères.

Note, for example, 8 days of training for purely indicative purposes which are not indicated in the 536 references of the page "conferences/readings and video", addressed to our students and our colleges.

1. Cavities and Diet
ODONTO-STOMATOLOGIC SOCIETY OF LYON
LYON, January 21, 1974
F. DURET
2. The Role of Fluoride
JOURNEES LYONNAISES D'ODONTOLOGIE,
LYON, April 28, 1977
F. DURET
3. Thoughts on the Use of Calcium in therapeutic odontology
JOURNEES LYONNAISES D'ODONTOLOGIE,
January 27, 1978
F. DURET

4. A New Eugenat
ODONTO-STOMATOLOGICAL SOCIETY OF LYON,
December 1979
P. BONIN ; J.P. DUPREZ ; F. DURET
5. Evolution of Material Composites
6th ENTRETIENS DE GARANCIERE
PARIS, October 16-20, 1980
P. BONIN ; J.P. DUPREZ ; F. DURET
6. When to Use the Cement Cavity
ODONTO-STOMATOLOGICAL SOCIETY OF LYON,
LYON, October 20, 1980
P. BONIN ; J.P. DUPREZ ; F. DURET
7. Antiseptics : Fundamental Basics
JOURNEES LYONNAISES D'ODONOTOLOGIE
LYON, 1981
F. DURET
8. Theory of optical imprinting in its historic context
13th JOURNEE DU CNOC
AGADIR, May 8-15, 1983
F. DURET

4. Exemple de plans de cours *Summary of teaching programs (just for example)*

41 .Tutorials in Freshman. (2e année)

I was responsible for organizing the tutorials in second year dental biochemistry. I completely revised the structures that had been in existence since 1973. To these purely administrative modifications were added the following :

- supervision by written and oral exams
- final exams
- graded report of tutorials.

The structure we developed is still used. In addition to instructing students, in 1975 moved the tutorials to their new location at the Faculty of Dentistry and we trained some attaché.

42 .Tutorials Sophomores.(3e année)

The functions of those responsible for the courses having begun in 1973, we created a course in Dental biochemistry (30 hours) for 3rd year students.

According to the official program, this course is given Wednesdays from 5:00 to 7:00 p.m. There were two oral exams (March and June).

- biochemistry of fluids (Saliva ...)
- biochemistry of conjunctive and epithelium
- biochemistry of hard tissues
- biochemistry of cavities and prophylaxis.

43 .Tutorials Juniors (4e année)

My functions as head of CAD/CAM education at the Marseille University (see Imetter from the dean) led us in 1986 to create a specific course for approximately 12 hours.

Faced with developing a course that had no precedents, we proposed the following program:

- history
- imprinting methods
- three-dimensional readings
- information processing
- CAD/CAM.

44. .Tutorials.Seniors. (5e année)

In order to continue the 4th year courses, in 1987 we also created an applied complementary course (12 hours) on the dental CAD/CAM.

The program covers clinical objectives rather than computer basics.

- clinical courses (crowns, bridges, inlays)
- orthodontic
- managing
- implants and attachment

45 .Tutorials, Graduates and Post graduates (Diplome Universitaire/ DU) :

451. in France UER Lyon, Marseille et Nice (1975 to 1988)

Biochimie orale (UFR Lyon) Ce cours a été donné le jeudi de 8 h 30 à 12 h 30 (35 cours, 45 heures). Encore une fois, nous avons dû créer ce cours. Il se composait d'une partie fondamentale (biochimie des os) et d'une partie appliquée (cours intensif de 3ème année).

Pedodontia (UFR Lyon) Ce cours d'environ 10 heures était concentré sur la physiologie des règlements vue d'un point de vue biochimique.

CFAO dentaire (UFR Marseille) A partir de 1985, nous avons créé et dispensé un programme dentaire spécifique CAD/CAM (8 puis 200 heures) en tant que chefs de service et enseignants. Alors qu'en 1986-1987, nous nous occupions de presque tout l'enseignement, en 1988, nous avons tenté de déléguer une partie du travail et avons pu établir le système actuel.

exemple du programme de MARSEILLE puis Nice 1988-1989

| | | |
|-------|---------------------------------------|--------------------|
| | MARCHE MÉTHODE ATOMIQUE ET STRUCTURE | Dr. F. DURET |
| | MÉTROLOGIE | Dr. Ph. JOURDAN |
| | LASER ET FIBRE OPTIQUE | Dr. Ch. PEUZIAT |
| AVRIL | IMAGES TRIDIMENSIONNELLES | Dr. F. DURET |
| | RADIOGRAPHIES ET ULTRASON | Dr. JL. PRADO |
| | SPECTROCOLORIMÉTRIE GÉNÉRALE | M. Y. DORDET |
| | SPECTROCOLORIMÉTRIE DENTAIRE | Dr. B. & C. VERGNE |
| | STRUCTURE INFORMATIQUE | Dr. JL. LABORIE |
| MAI | DENTAL MATERIALS D | r B. DURET |
| | TRAITEMENT DE L'IMAGE/SYSTÈME EXPERT. | M. JL. BLOUI |

Présentation par un étudiant d'un sujet de dentisterie numérique en congrès (ex SOFREB)

| | | |
|---------|-------------------------------------|----------------|
| JUIN | TRAITEMENT DES IMAGES DENTAIRES | Dr R. CHAPUIS |
| | OCCLUSION ÉLECTRONIQUE | Dr. JP. TOUBOL |
| | LIGNES MATHÉMATIQUES ET SURFACE | |
| | MORPHOLOGIE | Dr F. JOURDAN |
| | UTILISATION ET COMMANDES NUMÉRIQUES | Dr B. HINAULT |
| JUILLET | CAD/CAM DENTAIRE | Dr F. DURET |
| | CAD/CAM - INTELLIGENCE ARTIFICIELLE | Dr F. DURET |

conférences spéciales :

| | |
|----------------------|-------------------------------------|
| -RVG | (cours sur les rayons X) |
| -VISITRAINER / AA 4D | (cours en occlusion électronique) |
| -CAD/CAM DENTAIRE | (Cours en CAD/CAM dentaire) |
| -SPECTROCOLORIMÉTRIE | (Cours en Spectrocolorimétrie Oral) |

Biochemistry.(Lyon time) This course was given Thursdays from 8:30 a.m. to 12:30 p.m. (35 classes, 45 hours). Again, we had to create this course. It consisted of one fundamental part (Biochemistry of the Bones) and of an applied part (intensive 3rd year course).

Pedodontia (Lyon time) This course of approximately 10 hours was concentrated on the physiology of regulations seen from a biochemical viewpoint.

Dental CadCam (Marseille time) Beginning in 1985, we developed a specific CAD/CAM dental program (8 then 200 hours) as department heads and teachers.

While in 1986-1987 we handled nearly all of the teaching, in 1988 we attempted to delegate some of the work and were able to establish the present system.

example of the programme of MARSEILLE then Nice 1988-1989

| | | |
|-------|--|--------------------|
| MARCH | ATOMIC METHOD AND STRUCTURE | Dr. F. DURET |
| | METROLOGY | Dr. Ph. JOURDAN |
| | LASER AND FIBER OPTICS | Dr. Ch. PEUZIAT |
| APRIL | THREE-DIMENSIONAL PICTURES | Dr. F. DURET |
| | X-RAYS AND ULTRASOUND | Dr. JL. PRADO |
| | GENERAL SPECTROCOLORIMETRY | Mr. Y. DORDET |
| | DENTAL SPECTROCOLORIMETRY | Dr. B. & C. VERGNE |
| | COMPUTER STRUCTURE | Dr. JL. LABORIE |
| MAY | DENTAL MATERIALS | Dr. B. DURET |
| | IMAGE TREATMENT/EXPERT SYST. | Mr. JL. BLOUIN |
| | PRESENTATION OF A CONTROL OF A STUDENT'S LECTURE IN A CONGRESS | Dr. F. DURET |
| JUNE | TREATMENT OF DENTAL IMAGES | Dr. R. CHAPUIS |
| | ELECTRONIC OCCLUSION | Dr. JP. TOUBOL |
| | MATHEMATICAL LINES AND SURFACE | |
| | MORPHOLOGY | Dr. F. JOURDAN |
| | NUMERIC USE AND COMMANDS | Dr. B. HINAULT |
| JULY | CAD/CAM DENTAIRE | Dr. F. DURET |
| | CAD/CAM - ARTIFICIAL INTELLIGENCE | Dr. F. DURET |

special lectures:

- | | |
|---------------------|----------------------------------|
| -RVG | (Course in X-Rays) |
| -VISITRAINER/AA 4D | (Course in Electronic Occlusion) |
| -CAD/CAM DENTAIRE | (Course in dental CAD/CAM) |
| -SPECTROCOLORIMETRY | (Course in Spectrocolorimetry) |

452.in USA au USC (1990-1998)

theoretical lessons on Dental CadCam at USC :

From November of 1990 to 1994, Dr Duret has given 2-4 hours/week of theoretical lessons to special students. thus far over 45 hours have been completed. The general lecture plan includes:

- general description of CAD CAM
 - background on CAD CAM
 - different CAD CAM systems
 - technology of impression making
 - palpation
 - optical
 - CAD and modelling
 - CAM
 - miscellaneous (IA, 4D occlusion, RVG, Spectro)
- This general plan involves 60 hours of theory lectures

practical training on CAD CAM at USC,

Each week , from October 1990 to 1994, these students worked on the Henson then the Sphera CadCam system gaining over 160 h of practical training and each of these students could work alone and prepare a crown in 2 hours.

453. Cours de 5e, 6e année et DU en France - UFR d'Odontologie Montpellier (Junior /Senior/DU lesson in France - dental school of Montpellier) (1999 - to 2018).

Notre cours, tant pour les 5e, les 6e année qu'au DU d'esthétique du Dr B Pélissier, avait pour but d'initier à la dentisterie numérique (cours théorique sur la dentisterie numérique) et sur la CFAO (historique et fonctionnement de la CFAO puis la CFAO dans le monde).

Our course, both for the 5th, 6th year, was intended to introduce to digital dentistry (theoretical course on digital dentistry) and the CadCam (operation of the CadCam and then the CadCam in the world).

5. PhD Teaching and training (DEA/DU - Master in France)

L'objectif de nos participations ou de nos créations suivies des directions des cours de DU (DEA) débutant au GBM de Lyon, continuant aux facultés dentaires de Marseille (DUBIP), de Nice (DUBIP), de USC (CadCam Master) aux USA, pour se terminer en France, à Montpellier (au DU d'esthetic) était d'initier puis de former à la dentisterie digitale, à l'intelligence artificielle et, bien entendu, à la CFAO dentaire.

The objective of our participations or our creations followed by the directions of the courses of DU (DEA) starting at the GBM of Lyon, continuing at the dental faculties of Marseille (DUBIP), Nice (DUBIP), USC (CadCam Master) in the USA, to end in France, in Montpellier (at the esthetic DU) was to initiate and then train in digital dentistry, artificial intelligence and, of course, dental CadCam.

Montpellier DU (Master) lesson's:

- 1- Digital Dentistry and technology (1.30 h)
- 2- History of Cad Cam (1h) and technology of Dental Cad Cam (2h)
- 3- Cad Cam around the World (2h)

6. CLINICAL and HOSPITAL FUNCTIONS

61. Chirurgien-dentiste privé. Dental Surgeon in Private Practice (16 years)

En 1972 puis 1973 j'ai été employé à temps partiel dans deux cabinets dentaires, l'un à Lyon (Dr Labbe) et l'autre à Thoissey (Rhones) dans le Cabinet du Dr Raclet. J'assurais aussi mon service à la Faculté dentaire depuis 1971.

In 1972 and 1973: employed part time by 2 offices in the Lyon area (France); At the Dental School (1971-1973) but also assistant of Dr Raclet (Thoissey – France) and Dr Labe (Lyon-France)

De 1974 à 1987 en plus de mon travail d'Assistant des hôpitaux aux Hospices Civils de Lyon (1976-1980) j'ai développé un petit cabinet de campagne tenu par un dentiste (Mr Gabert) depuis 1936 au Grand Lemps 38.690 (France). Je l'ai revendu en 1987 après l'avoir transformé en une Clinique de 3 dentistes, 2 employés et 3 prothésistes dans mon laboratoire de prothèse personnel.

From 1974 to 1987: had my own Office practice in 38690 Le Grand Lemps (France)

I purchased a small office in 1973 for 1 dentist then in 1987 I sold my personal clinical practice office after opened and funded myself a clinic with 4 chairs (3 dental surgeons, 2 employees, and 2 or 3 prosthesis's), and a recovery room from this small office.

62. Hospital and University

1972 and 1973. Interne à l'hôpital des Charpennes à Lyon / Intern assistant at Charpennes Hospital (dental office) in Lyon (1972 and 1973). (service de 2 demi journées par semaines)

1976-1980. Professeur assistant aux Hospices Civiles de Lyon. (Assistant Professor in Dentistry (UER Odontology Lyon - France) from November 1, 1976 to November 1, 1980.)

We held two weekly vacation clinics with 3rd, 4th and 5th year students.

During these vacation periods (Wednesday mornings and afternoons), we concentrated on diagnostic pedodontics. We were therefore particularly interested in the possibilities offered by an immediate diagnostical aid using an X-ray systems in real time.

1989-1992: Professeur de Recherche et co-directeur de service (Research professor and Co director at the University of Southern California (Los Angels USA) (from 05.89 to 09.1992)

1992-1998: Professeur, Chef de Service à l'Université de Californie du Sud (USC). Research professor and Chairman (from 05.89 to 09.1998) at the University of Southern California (Los Angeles USA)

7. Founding (Aides, Subventions et avances Remboursables ANVAR/BPI)

1963 and 1964: selection for stage of the National French Yatching team for the Olympic game in Rome (Italie)

1976: National funding from the Education Ministry: 165.000 \$ (four years) for my position of assistant professor in Biochimistry

1983: National funding for my reseach in CAD CAM (For the Hennson manufacture) from the Ministry of Research : 200.000 \$

1985: National funding for my reseach on Dental CadCam (For the Hennson manufacture) from the Ministry of Industry (ANVAR) : 5.000.000 \$

1988: National funding for my Reseach on Dental CadCam (For the Hennson manufacture) from the Ministry of Export : 1.000.000 \$

1989 and 1990: US funding for my Reseach and Teaching on Dental CadCam (For USC) from the US Governement (?) : 320.000 \$
French Sponsoring from Hennson International (French Society) : 840.000 \$

1991 and 1992: French Sponsoring from Sopha Bioconcept and Hospitex (For USC) : 288.000 \$ (?)

1993 to 1995: Sponsoring from GC Gompagny (For USC) : 270.000 \$ for 3 years

1996 to 1998: Sponsoring from Nobel Int. Med Cares (For USC) Canada : 45,000/years.

2003: National funding for my research on Bleaching (For Acteon manufacture) from the Ministry of Industry (BPI) : 800.000 \$

2010: National funding for my research on Condor System (For Aabam manufacture) from the Ministry of Industry (BPI) : 300.000 \$
Regional funding for my research on Condor System (For Aabam manufacture) from Regional Languedoc Roussillon (LR) : 300.000 \$



*Avec des amis de la faculté Dentaire de Montpellier et évidemment mon ami le Dr Bruno Pélissier (With my friends from the Faculty of Dentistry of Montpellier and of course my friend le Dr Bruno Pélissier
(Merci Jean, Philippe, Dominique, Jacques et Michel ...)*