

UNITWIN/UNESCO Chairs Programme Progress report 2009-2011

«If this has not yet been done, please forward your progress report before
31 May 2011» to the Director, Division of Higher Education.

Period of activity: 2010-2011

Title: UNESCO CHAIR TELEMEDICINE

Report established by: Prof.Dr.O.Ferrer-Roca,
Function / Title: responsible UNESCO Chair Telemedicine 1999-2011
Full Professor in Pathology. Responsible of the Telemedicine Training at the University of La Laguna.
Canary Islands. Spain

To be sent by electronic mail to: unitwin@unesco.org
or to UNESCO, Division of Higher Education
7, place Fontenoy – 75352 Paris 07 SP
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Classically, first and second trimester ultrasound markers were based on multiple anthropometric data, both morphological and functional, but the most significant can be summarized as follows: 34

NUCHAL TRANSLUCENCY THICKNESS 34

HYPOPLASIA-AGENESIS OF THE NASAL BONE 34

The applications of three dimensional (3D) ultrasound in pregnancy, especially at an early stage, can be summarized as: 35

Detection of chromosomopathy between weeks 10th and 14th of pregnancy. 35

Analysis of possibilities to identify and validate markers of chromosomopathy 35

Detection of embrionic / fetal abnormalities 35

Detection of adnexal abnormalities 35

Investigation on new markers (currently under investigation and at the validation stage). 35

We now have grounds to state that 3D ultrasound has clinical utility, established by consensus in the field of obstetrics. 35

Current expert opinion is that 3D ultrasound has certain advantages over two-dimensional ultrasound, because: 35

It establishes diagnoses and classification of anomalies 35

It constitutes a tool to explain the significance of an anomaly 35

It provides objective information on the malformation under study. 35

Comparatively, diagnostic sensitivity before 23 weeks of gestation is 85% for 3D ultrasound versus 30% for two-dimensional ultrasound. 35

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Outputs-II 37

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-

I. Address

	Address of the Host Institution	Address of the Coordinator
Name	Prof. Dr. O. Ferrer-Roca	Prof. Dr. O. Ferrer-Roca
Function/Title	Chair of Pathology	Chair of Pathology
University/Institution	University of La Laguna	University of La Laguna
Faculty/Department/Centre	Faculty of Medicine	Faculty of Medicine
P.O.Box	La Cuesta	La Cuesta
Street	La Laguna	La Laguna
Postal Code	38071	38071
City	Santa Cruz de Tenerife	Santa Cruz de Tenerife
Province	Canary Islands	Canary Islands
Country	Spain	Spain
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II. Available resources

1. Human resources

1. For the administration of the UNESCO Chair or Network

Partial time support Secretary	Isis Klein
Partial time support Secretary	Jesica González

2. For the teaching/training/research activities

Please specify number of full professors , researchers, visiting professors, lecturers, others

Prof. Dr. O. Ferrer-Roca	Francesco Ettore
Electronic Engineer, Fellowship	Francisco Marcano Serrano
Computer Engineer	Álvaro Díaz-Cardama López
Telecommunication Engineer	Juan José Quintana Melián
Technical Engineer in computer	Xiomara Antonia Santos Palacios
Technician in Computer	Pedro Najor Cruz Cruz
Computer Engineer	Leonardo José Uztariz Nuñez
Computer Engineer	Noor Al-Din Al-Jouni González.
Computer Engineer	Jesús Montañez Diaz
Computer Engineer	David Airan Hernández Rodríguez

3. For the information and documentation activities:
Prof. Dr. O.Ferrer-Roca
4. For other activities: The international courses brought to teaching and training a total of 30 professors coming from European, African and Ibero-American countries (Greece, Germany, Brazil, Spain, Uganda, Norway, Italy, Portugal, Venezuela, Argentina, Hungary).

2. Material resources

1. For the administrative work: Computers fax machines, xerocopy machines, printer, and storage systems.
2. For the teaching/training/research activities: Videoconference, workstations, ultrasounds, video-edition, projector, Book edition, CD-edition, Proceedings editions, e-learning, Digital Fingerprint control systems, Breeze server, iPhone medical applications.
3. For the information and documentation activities: Web site, Posters, brochures, Proceedings, Book editions, CD-edition
4. For other activities (*Please specify*): Videoconferencing, 3D-virtual reality, Distant control, iphone applications (blood pressure, ECG, EEG).

III. Activities

Please, provide information on items 1 to 7 for each activity, when available, and specify:

- Target groups, in accordance with Annex 1
- Geographical coverage, in accordance with Annex 2
- Funding sources, in accordance with Annex 3.

1. Education/Training/Research

1.6. Title and expected results for each course, workshop,...

See joined memorandum and programs of the Winter Course of the CATAI (Annex 5-Form 3)

- Duration: 1 weeks.
- Target groups: doctors, nurses, health-care providers, NGO's
- 5.1.1. Partnership (please specify the name of the Institution, city, country):
Universities Trier-DE, Postdamm-DE, Humboldt Univ. Berlin-DE, Makerere-Uganda, Simon Bolivar-Caracas-Venezuela, Athens Univ. of Economics and Business-GR, Istanbul-Turkey, El Cairo- Egypt, EntreRios-Argentina, Barcelo Univ Buenos Aires, Argentina, Pontificia Universidade Catolica do Rio Grande do Sul (PUCRS) Porto Alegre-Brazil, Porto-Portugal, Univ Oslo, Oslo-Norway, Univ Munich-Munich- Germany, Universidad Politecnica Barcelona (UPB)-Spain. Hosp. Clinic Barcelona-Spain, Univ. Di Roma Sapienza-Italy, Univ Budapest-Hungary, Univ Udine, Italy. Univ. Cheikh Anta Diop, Dakar, Senegal, Univ d'Abomey Calavi (Cotonou), Rép. Du Benin y Univ Nacional de Guinea Ecuatorial (UNGE), Guinea Ecuatorial.
- Geographical coverage for partners and participants: Europe-Africa-South & North America.
- Funding sources: CATAI founding. Telefónica SL.
- Outputs: Please specify number of doctoral students: 150-200 students per year. For the publications, complete form of Annex 4, and Annex 5 for the multimedia material.

2. Conferences/Congresses/Meetings

2.6. Title and expected results for each conference, meeting...:

Always in Telemedicine. Expected increase of knowledge and training of how to handle medicine at distance for people and areas underserved or with health care constrains availability.

- Dates and place: *III International symposium of Biomedical informatics in EU HealthInfo & Biostec. Rome Italy 25-27th January 2011. VIII Reunión Foro Telemedicina 2010. XIII Congreso Nacional de Informática Médica. INFORMED 2010 17-19 de Noviembre de 2010 San Sebastián. España, III International Symposium on Biomedical Informatics in Europe. 17-19 de Noviembre de 2010 San Sebastián. España, Jornada Cátedra Telefónica con la Universidad de Las Palmas de Gran Canaria. I Jornada de innovación de Atención Sanitaria con las TICs 2010 (29th September) ,XXIII Imagen Analysis of ULL y XVIII CATAI Winter Course. IoT. Internet of Things for Medical Devices 2010 (8th March-14th March 2010), International Workshop on e-Health in Emerging Economies. IWEE 2010 10-12 de Febrero de 2010 Las Palmas de Canarias. Islas Canarias. pHealth 2010 Third international Conference on Health Informatics 20th - 23th January 2010 Valencia—Spain, Biostec 2010 3rd international join Conference on Biomedical Engineering Systems and Technologies 20th - 23th January 2010 Valencia—Spain, Encuentro de Cátedras UNESCO de España. Cordoba 2009 (6 al 9 de Octubre 2009) 22th European Congress of Pathology-Florence, Italy (4-9 September 2009), pHealth 2009 the 6th international workshop Micro and Nano technologies for personalized*

Health-Oslo, Norway (24-26 June 2009), , Madrid Telemedicine Chair (22 January 2009) Superresolution and Optical Biopsy-Tenerife Winter Course (9th-15th March 2009)

- Partnership (please specify: Name of the Institution, City, Country): see joined programs plus Mulago Hospital-Uganda; Roche Research Center, Univ Perm-Russia, Casablanca-Marrocco, Pontificia Universidade Catolica do Rio Grande do Sul (PUCRS) Porto-Alegre-Brazil. Technical University Munich (Germany). Israel Institute of Technology (Haifa-Israel).
- Participants (number): 100 up to 1000 depending of the type of meeting
- Geographical coverage for participants and partners: Europe, Africa, South-America, Asia & Australia.
- Funding sources: CATAI funding. Telefonica SL.
- Outputs: Please complete Annex 1 for the publications and Annex 2 for the multimedia material.
- Actually **“Telemedicine Master”** at distance, with the Universities of Makerere-Uganda, Beijing-China, New Delhi-India, Istambul-Turkey, El Cairo- Egypt, Queensland- Australia, Casablanca- Marrocco; Albenia.

3. Missions / Travels abroad

Destination: University La Laguna-UNESCO Chair Telemedicine.

From : Entre Rios-Argentina, Makerere-Uganda and Caracas-Venezuela

Purpose: Students training in telemedicine

Duration: from 1 to 2 month

Funding source: University of La Laguna/Telefónica SL / Catai fundings/

Outputs: 1- Training of students to provide telemedicine in underserved areas.

2- A/026283/08 - Desarrollo Rural: Web Semántica para la Gestión, planificación t coordinación descentralizada en Telemedicina.

http://www.uib.es/catedra_iberoamericana/PCI09/laguna.pdf

4. Visiting professors / Fellowships

Number: (22)

Duration: 1-2 month

University of origin: *Potsdam-Germany (2), U.-Caracas-Venezuela (2), , Clinical university of the Charité-Berlin (2), U. Makerere - Uganda (1), , Univ Oslo, Olso, Norway (2), Univ Athens (3), Univ Munich- Germany (2), Univ Mainz, Germany (1) Univ Budapest, Hungria (2), U. Rio Grande do Sur-Brazil (1); U. Politecnica Barcelona (2).Univ Madrid, Madrid, Spain (2),*

Funding sources: University of La Laguna, CATAI fundings, Telefonica SL.

5. Information and documentation activities

- 5.2. **CATAI 2011** “I-Phone & 4G mobile phone in Telemedicine ” Ed: Prof.Dr.O.Ferrer-Roca. CATAI Ed 2010. Tenerife. ISBN. 978-84-614-5897-1
- 5.3. **CATAI 2010** “IoT Internet of Things for Medical Devices. Health 2.0 to Health 3.0” Ed: Prof.Dr.O.Ferrer-Roca. CATAI Ed 2009. Tenerife. ISBN. 978-84-612-8620-1
- 5.4. **CATAI 2009** “Superresolution and Optical Biopsy” Ed: Prof.Dr.O.Ferrer-Roca. CATAI Ed 2008. Tenerife. ISBN. 978-84-612-8620-1
- 5.5. European Master of Telemedicine and Bioengineering applied to Telemedicine, **Volume V**. CATAI Editions 08. ISBN 978-84-612-8290-6
- 5.6. European Master of Telemedicine and Bioengineering applied to Telemedicine, **Volume VI**. CATAI Editions 09. ISBN 978-84-613-7245-4.
- 5.7. European Master of Telemedicine and Bioengineering applied to Telemedicine, **Volume VII**. CATAI Editions 10. ISBN 978-84-614-5996-4.

6. Others

6.1. Written agreements with Universities

- 6.1.1. Preparing written agreements with the University of Barcelona to provide distant teaching.
- 6.1.2. Agreements with the Pontificia Universidade Catolica do Rio Grande do Sul (PUCRS), Porto-Alegre, Brazil for training in telemedicine. http://www.teide.net/catai/Catedra_Unesco/catedra_unesco_esp.htm.
- 6.1.3. Agreements of the students interchange in the field of Telemedicine and for third cycle students with the Universities of Postdamm-DE (6 Students), Charite-Berlin-DE (6 Students) and Univ. Udine-IT (6-students) as Erasmus students, plus 1 or 2 professors from each University.
- 6.1.4. Agreements with Universidad Autónoma del Caribe- Colombia to develop the Telemedicine network.

6.2. Training Books donations

- 6.2.1. Donations of the vol. V of the European Master of Telemedicine and Bioengineering applied to Telemedicine. to the Universities of Entre-Rios (5), Makerere (6), Caracas (5), Greece (5), Univ. Rio Grande do Sur.Brazil (6).
- 6.2.2. Donations of the vol. VI of the European Master of Telemedicine and Bioengineering applied to Telemedicine. to the Universities of Entre-Rios (5), Makerere (6), Caracas (5), Greece (5), Univ. Rio Grande do Sur.Brazil (6), Senegal (3), Rép. Du Benin (6) y Guinea Ecuatorial (4).
- 6.2.3. Donations of the vol. VII of the European Master of Telemedicine and Bioengineering applied to Telemedicine. to the Universities of Entre-Rios (5), Makerere (6), Greece (5), Univ. Rio Grande do Sur.Brazil (6).

6.3. International projects

- 6.3.1. . Joined projects of the Ministry of Foreing Affairs and International Cooperation with Venezuela. BOE nº6 1495-1592, 2009. AECI- A16183/08 - *Desarrollo Rural: Web Semántica para la Gestión planificación y coordinación descentralizada en Telemedicina*
- 6.3.2. Joined cooperative projects with the Ministry of Education and Research and de Ministry of Brazil in the Bazilian-Spanish interuniversity cooperation programm. PHB 2008-0021-TA. *Role of Superresolution in Telemedicine*
- 6.3.3. CAP2009-1ª call with the title: *Biopsia Óptica por Endoscopia Confocal. Técnica no invasiva para zonas rurales indígenas del Brasil.*
- 6.3.4. Concesión de Becas. Según el BOC Nro. 023 Jueves de 4 de Febrero de 2010 – 602. de África Noroccidental y Universidades de Canarias y el Gobierno Autónomo de Canarias. Université Cheikh Anta Diop de Dakar, País: Senegal, Université d'Abomey Calavi (Cotonou), País: Rép. Du Benin y Universidad Nacional de Guinea Ecuatorial (UNGE), País: Guinea Ecuatorial.
- 6.3.5. Proyectos de cooperación entre Universidad de La Laguna e Israel.

IV. Impact

1. In Uganda, their initiatives with the use of VHF in walky-talkies to support midwives, has decreased the mortality of new-born babies by 30%. <http://www.iicd.org/articles/iicdnews.2006-05-08.0697050392>
2. With the Simon Bolivar University in Caracas Venezuela, bring the development of rural areas accessing distant diagnosis of vaginal cytology.

3. With Pontificia Universidade Catolica do Rio Grande do Sul (PUCRS) PortoAlegre in Brazil have been started obtaining founding for a join seminar of training and extending the telepathology to telepathology and teledermatology mission to the Amazon (City of Jiparana)and in Amazon area (Rondonia State) this summer.
4. With Entre-Rios cooperation have extended the telemedicine into the Peru selvage areas in the Napo river
5. Scholarships of the GD of the relations with Africa from the Canarian Governement.

One of the principle obstacles in the wide use of Telemedicine is the lack of specific training and qualifications in the health care environment (doctors, nurses, paramedics, managers, NGO's) as well as related areas from which they require support (computer science, telecommunications).

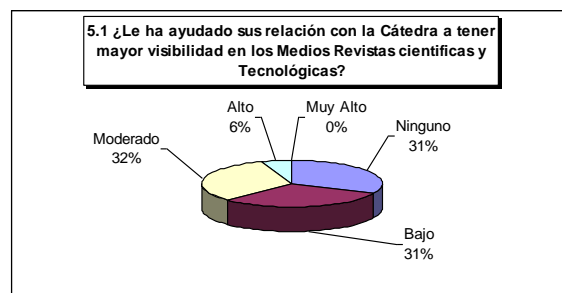
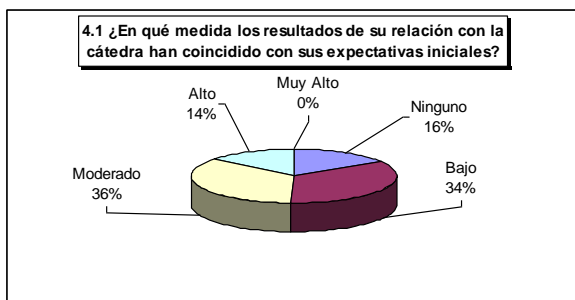
SURVEY ANALYSIS RESULTS

http://www.teide.net/catai/catedra_unesco/surveyFrames.htm



250 questionnaires. 40 Questions

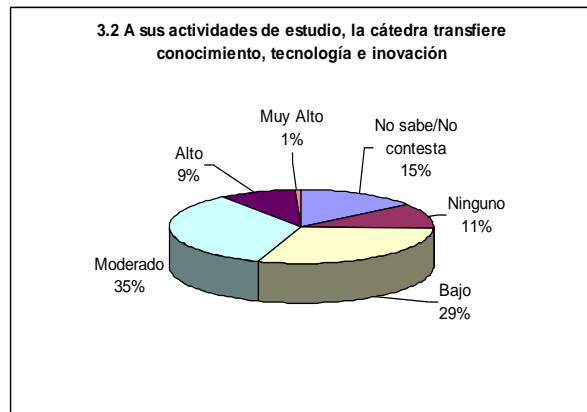
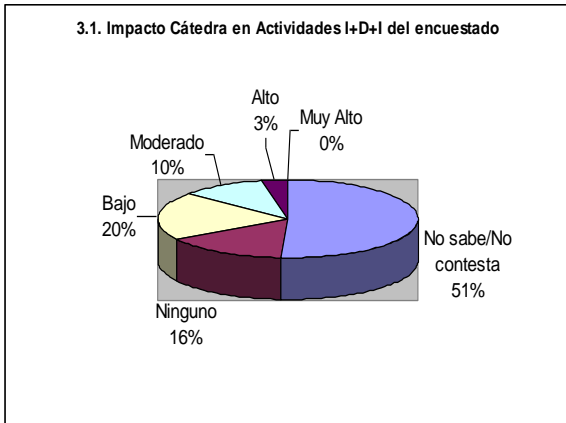
Most of the questionnaires were answer by students, not by the usual cooperative people working with the chair for many years.





Impact of the UNESCO Chair activity

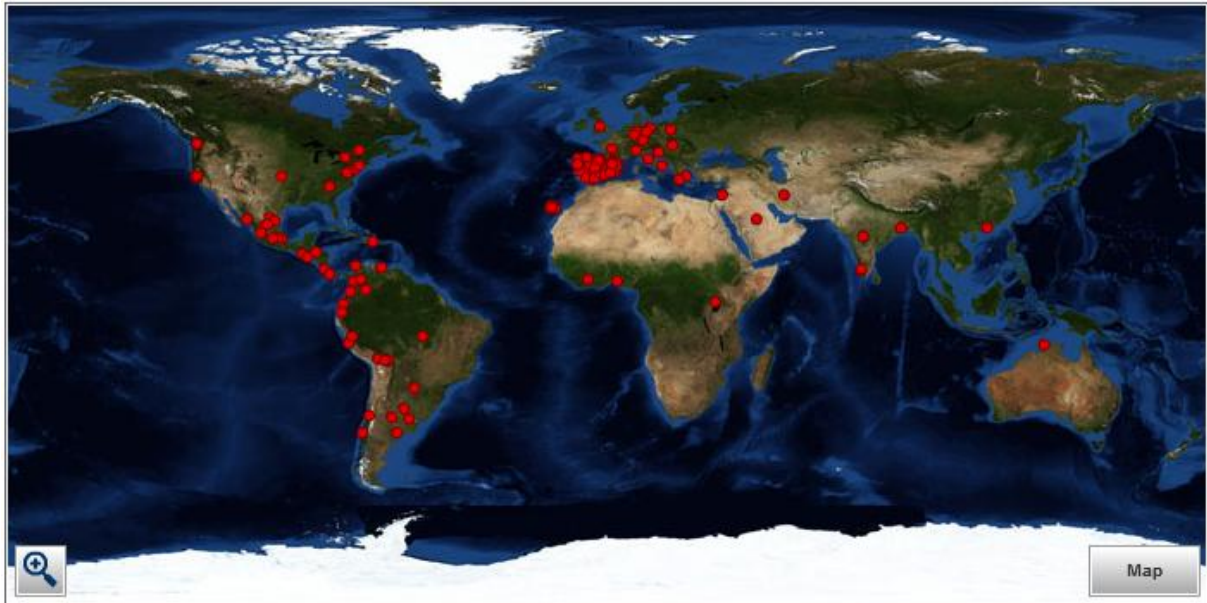
Transfer technology by the UNESCO Chair.



Relation Article Citation in international collaborations



Geographic distribution of web visitors 1 year:



Google Search: Telemedicina- UNESCO

All links belong to the UNESCO Chair of the ULL either in Spanish or in English (telemedicine-Unesco)

1. [UNESCO Chair in Telemedicine - Wikipedia, the free encyclopedia](#) - [[Traducir esta página](#)]
 UNESCO Chair of *Telemedicine* (UNES_CT) was founded in 1999. Undertakes international activities related to the promotion of the information society and ...
[en.wikipedia.org/.../UNESCO_Chair_in_Telemedicine](#) - [En caché](#) - [Similares](#)
2. [UNESCO Chair in Telemedicine \(467\) | UNESCO](#) [[Traducir esta página](#)]
 To facilitate training and skills acquisition on the *Telemedicine*; directed towards the geographic areas and the medical application that show real needs ...
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[es-es.facebook.com/.../Unesco-Telemedicine/100001744731128](#) - [En caché](#)
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 UNESCO_Chair_in_Telemedicine; Catedra *Telemedicina* (spanish); *Telemedicine* ...
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 15 Jul 2010 ... Acuerdo cátedra UNESCO. Cátedra UNESCO de *telemedicina* HANDBOOK of *Telemedicine*. Editado por Olga Ferrer-Roca y Marcelo Sosa-Iudicissa ...
[www.teide.net/catai/](#) - [En caché](#) - [Similares](#)
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18 Oct 2010 ... *UNESCO Chair of Telemedicine* and Chair of *Telemedicine* of Telefonica -- University of La Laguna. From Clinfowiki ...
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La UNESCO de Telemedicina hijo de El Análisis de la imagen en general, ... *La UNESCO de Telemedicina* de Presidente del grupo de investigación se centra principalmente en ...
www.teide.net/CATAI/catedra_UNESCO/pag5253.pdf
9. **[Unesco de Telemedicina | Jumo](#)** - [[Translate this page](#)]
16 de septiembre 1996 ... La gente de *la Unesco de Telemedicina* está siguiendo. Cerrar. Las personas que siguen *la Unesco de Telemedicina* ... Los proyectos de *la Unesco de Telemedicina* está siguiendo ...
www.jumo.com/unescotelemedicine - En caché
10. **[Telemedicina | Acerca de este Blog](#)**
Obtuvo la Cátedra *UNESCO de Telemedicina* en 1999 para la Universidad de La Laguna. Desde 1996 imparte *Telemedicina* a los estudiantes de medicina y Ciencias ...
catai.net/blog/acerca-de-este-blog/ - En caché - [Similares](#)
11. **[iPhone & Telemedicine. | Telemedicina](#)**
Telemedicina Cátedra Telefónica en la Universidad de La Laguna. Cátedra ...
catai.net/blog/2011/03/iphone-telemedicine/ - En caché
12. **[UNESCO Chair in Telemedicine | Facebook](#)** - [[Traducir esta página](#)]
Welcome to the Facebook Community Page about *UNESCO Chair in Telemedicine*, a collection of shared knowledge concerning *UNESCO Chair in Telemedicine*.
www.facebook.com/.../UNESCO...Telemedicine/123985257646829 - En caché
13. **[DOC] [Teaching activities of the UNESCO chair of Telemedicine](#)** - [[Traducir esta página](#)] Formato de archivo: Microsoft Word - [Vista rápida](#)
The *UNESCO chair of Telemedicine* began his activities on September '99 to acquire knowledge on the topics before any *Telemedicine* practices. ...
www.medetel.eu/download/2002/.../teaching_activities_of_unesco.doc
14. **[UNESCO Chair of Telemedicine - www.redkbs.com](#)**
[[Traducir esta página](#)]
11 May 2007 ... The University of La Laguna have since 16 of September of 1999 the first *UNESCO chair of Telemedicine*. The sign of the agreement took place ...
www.redkbs.com/Catai/catedra_unesco_ing.htm - En caché
15. **[Prensa ULL - El XIX curso de telemedicina de la ULL centra su ...](#)**
25 Mar 2011 ... El XIX curso de *telemedicina* de la ULL centra su interés en aplicaciones ... y en Facebook, buscando las palabras "*Unesco Telemedicine*". ...
www.ull.es/Noticias/ULL/Investigacion - En caché
16. **[Chair UNESCO of Telemedicine - Activities in Iberoamerica](#)** - [[Traducir esta página](#)]
UNESCO Chair meeting - Iberoamerica ... *Telemedicine* in Medical Education (spanish) · *Telemedicine* activities of University of Entre Ríos, Argentina. ...
www.teide.net/catai/catedra_unesco/activities_ib.htm - En caché
17. **[UNESCO chair of telemedicine - TeideNet - Proveedor de servicios ...](#)**
[[Traducir esta página](#)]

11 May 2007 ... The University of La Laguna have since 16 of September of ...
www.teide.net/catai/catedra_unesco/catedra_unesco_ing.htm - [En caché](#)

18. [CATAI Telemedicine Courses](#) - [[Traducir esta página](#)]
This activity is linked with the initiative of the *UNESCO Chair of Telemedicine* to apply the consortium experience towards the urgent demand of *Telemedicine* ...
anpat.drmm.uniud.it/ctc/activities.html - [En caché](#) - [Similares](#)
19. [Cátedra de Telemedicina de Telefónica da USC](#)
10:00-10:30, Enseñanza reglada de la *Telemedicina*. Olga Ferrer Roca. Directora de la Cátedra *UNESCO de Telemedicina*, Universidad de La Laguna, Tenerife. ...
www.usc.es/~catelmed/2005/telemedicinaEnEspana.html - [En caché](#)
20. **[PDF]** [03 Ate urg 7342 alta mar 93 \(4\)](#)
Formato de archivo: PDF/Adobe Acrobat - [Vista rápida](#)
Papel de la *telemedicina*. Olga Ferrer-Roca. Cátedra *UNESCO de Telemedicina*. Cátedra de Anatomía Patológica. Facultad de Medicina. Universidad de La Laguna. ...
www.jano.es/ficheros/sumarios/1/0/1708/29/00290032_LR.pdf
21. [Revista Habanera de Ciencias Médicas - Telemedicina: futuro o presente](#)
de M Jorge Fernández - 2010 - [Artículos relacionados](#)
1991: En la Cátedra *UNESCO de Telemedicina*, Catai, se realiza la primera cuantificación de ADN a distancia en el mundo, aplicado al análisis de imagen de ...
scielo.sld.cu/scielo.php?pid=S1729...script=sci_arttext - [En caché](#)
22. [El XIX curso de telemedicina de la ULL centra su interés en ...](#)
25 Mar 2011 ... El XIX curso de *telemedicina* de la ULL centra su interés en aplicaciones ... y en Facebook, buscando las palabras "*Unesco Telemedicine*". ...
www.tribunadelalaguna.com/Article6789.phtml - [En caché](#)
23. [Blogtelemedicina: TECLEE33. Telemedicina en Extremadura](#)
23 Nov 2010 ... *Unesco Chair Telemedicine* dijo... Teneis el video difundido en nuestro blog en: <http://catai.net/blog/2010/11/eficiencia-contra-la-economia> ...
blogtelemedicina.blogspot.com/.../tecllee33-telemedicina-en-extremadura.html - [En caché](#)
24. **[PDF]** [USO DE HERRAMIENTAS TIC's, PARA LA ATENCIÓN Y EDUCACIÓN EN SALUD ...](#) Formato de archivo: PDF/Adobe Acrobat - [Vista rápida](#)
contribuyeron al desarrollo de la misma. En 1991, inicia la cátedra *UNESCO de Telemedicina*; en CATAI, la primera cuantificación de ADN a distancia en el ...
www.utpl.edu.ec/.../USO-DE-HERRAMIENTAS-TICs-PARA-LA-ATENCIÓN-Y-EDUCACIÓN-EN-SALUD-EN-EL-CANTÓN-YACUAMBI...
25. **[PDF]** [Telemedicine ontology for AIED](#) - [[Traducir esta página](#)]
Formato de archivo: PDF/Adobe Acrobat - [Vista rápida](#)
de O Ferrer-Roca - [Artículos relacionados](#)
Telemedicine ontology for AIED. O. Ferrer-Roca, A. Figueredo, K. Franco, A. Diaz -Cardama. CATAI. *UNESCO Chair of Telemedicine*. University of La Laguna. ...
www.dcs.warwick.ac.uk/~acristea/.../10-new-AIED2005_OFRmodrev--.pdf
26. [Vídeos sobre telemedicina unesco](#)
[Dn Luis Ortega](#) 10 min - 8 Oct 2010
Subido por cataiyt ww.youtube.com
27. [JSA Health Telepsychiatry Repost of Telemedicine and E-Health News ...](#) [[Traducir esta página](#)]

1 Apr 2011 ... The announcement, which was made during the CATAI/UNESCO meeting on iPhone & 4G Mobile Phones in *Telemedicine* in Tenerife, notes that the ...
jsahealthmd.com/.../telemedicine-and-e-health-news-april-1-2011/ - En caché

28. [Vol. - REVISTA ESPAÑOLA DE PATOLOGÍA](#)

Cátedra UNESCO de *Telemedicina*. CATAI. Facultad de Medicina. ... ellos pertenecen también al área de la ingeniería biomédica y otros a la de *telemedicina*, ...
www.patologia.es/volumen42/vol42-num1/42-1n03.htm - En caché

29. [PDF] [Telemedicina: ¿futuro o presente?](#)

Formato de archivo: PDF/Adobe Acrobat - [Vista rápida](#)
de T DE LA SALUD - 2010 - [Artículos relacionados](#)
1991: En la Cátedra UNESCO de *Telemedicina*, Catai, se realiza la primera cuantificación de ADN a distancia en el mundo, aplicado al análisis de imagen de ...
scielo.sld.cu/pdf/rhcm/v9n1/rhcm17110.pdf

30. [IGI Global - Grid Technology in Telepatology and Personalised ...](#)

[[Traducir esta página](#)]

de O Ferrer Author(s): O. Ferrer-Roca (UNESCO Chair of *Telemedicine*, University of La Laguna , Spain); F Marcan (UNESCO Chair of *Telemedicine*, University of La Laguna ...
www.igi-global.com/bookstore/chapter.aspx?TitleId=45561

31. [PDF] [Quality Control in Telemedicine - "CE" Label](#) - [[Traducir esta página](#)]

Formato de archivo: PDF/Adobe Acrobat - [Vista rápida](#)
UNESCO Chair of *Telemedicine*. Faculty of Medicine. University of La Laguna. 38075 La Laguna. Tenerife. Canary Islands. Spain. 1. Introduction ...
www.intechopen.com/download/pdf/pdfs_id/14282

32. [P159Three-dimensional ultrasound reconstruction and telemedicine](#)

...

[[Traducir esta página](#)]

de O Ferrer-Roca - 2000 - [Artículos relacionados](#)
5 Jan 2002 ... CATA, UNESCO Chair of *Telemedicine*. 2. Ultrasound Division and Fetal Medicine, University Hospital of Canary Islands, Tenerife, Spain ...
onlinelibrary.wiley.com > ... > [Journal Home](#) > [Vol 16 Issue](#)

33. [The Telemedicine experience in U](#) - [[Traducir esta página](#)]

4 Aug 2010 ... The TeleInViVo project: This has been the first UNESCO supported *telemedicine* project and was initiated as an application of the ...
www.docstoc.com/docs/.../The-Telemedicine-experience-in-U - En caché

34. [La formación médica en la sociedad de la información. Preparación](#)

...

[[Translate this page](#)]

de Ferrer-Roca - 2001
Cátedra de Anatomía patológica, Responsable Cátedra UNESCO de *Telemedicina* , Facultad de Medicina de la Universidad de La Laguna, La Cuesta, 38071 Tenerife. ...
www.ncbi.nlm.nih.gov/pubmed/11490906

35. [Journal of Medical Internet Research - Virtual Sonography Through ...](#)

de O Ferrer-Roca - 2001 - [Citado por 7](#) - [Artículos relacionados](#)
1Chair of Pathology and UNESCO Chair of *Telemedicine*, University of La Laguna, Spain
2Fellow at the UNESCO Chair of *Telemedicine*, Spain ...
<https://tspace.library.utoronto.ca/html/1807/4616/jmir.html> - En caché

36. **[PDF]** [Telemedicine intelligent learning. Ontology for agent technology](#)

[[Traducir esta página](#)]

Formato de archivo: PDF/Adobe Acrobat - [Vista rápida](#)

de AO Ferrer-Roca - [Artículos relacionados](#)

Olga Ferrer Roca is Full Professor of Pathology at the University of La Laguna, teaching *telemedicine*. Responsible of the UNESCO Chair of *Telemedicine*. ...
[internetjournals.net/journals/tar/2005/July/Paper%2007.pdf](#)

37. [Unesco Careers and Employment | Indeed.com](#) - [[Traducir esta página](#)]

Research and review *Unesco* jobs. Learn more about a career with *Unesco* ... lecture at the CATAI/UNESCO meeting on iPhone & 4G Mobile Phones in *Telemedicine* , ...

[www.indeed.com/cmp/Unesco](#) - [En caché](#) - [Similares](#)

38. [ecografía Tele-virtual](#) - [[Translate this page](#)]

de O. Ferrer-Roca - 2006 - [Por Citado 3](#) - [Artículos Relacionados](#)

Patología, *la UNESCO Cátedra de Telemedicina* . Facultad de Medicina. Universidad de La Laguna. 38071 Santa Cruz de Tenerife La Laguna. Tenerife, Islas Canarias, España ...

[www.reference-global.com/doi/abs/10.1515/JPM.2006.022](#)

etc.....

V. Forthcoming activities

1. XX WINTER COURSE OF THE CATAI –March 2012 – Tenerife – Spain
2. STUDENTS EXCHANGE TO TENERIFE
3. STUDENTS TRAINING IN TENERIFE
4. UGANDA DOCTORS TRAINING IN EUROPE
5. SCHOLARSHIPS FOR IBEROAMERICAN BIOENGINEERS
6. EU to IBEROAMERICA INTERCHANGE FOR SUPPORT.
7. TELEMEDICINE MASTER FOR DEVELOPING COUNTRIES
8. MASTER OF TELEMEDICINE AT DISTANCE.
9. TELEPATHOLOGY WITH “SSVS” IN DEVELOPPING COUNTRIES.
10. NON-INVASIVE BIOPSY IN DEVELOPPING COUNTRIES

VI. Development prospects

The activities of the Chair started on 1999 has expanded during the period 2009-2011 to:

1. – Brazil and the Norwest Amazonia Area.
2. – Cabo Verde islands
3. – Israel
4. – Columbia- Barranquilla
5. – Senegal
6. -- Republic. Du Benin
7. -- Guinea Ecuatorial

Annex 1

Target groups

Undergraduate students	YES
Graduate students	YES
Postgraduate students	YES
Academics	YES
Public administrators	YES
Employees from industry, or other private organizations (<i>please, specify</i>)	YES: NGO's
Teachers from primary education	NO
Teachers from secondary education	NO
Teachers from technical and vocational education	YES
Teachers from adult education	YES
Others groups (<i>Please specify</i>)	YES: VOLUNTIERS

Annex 2

Geographical Coverage

- National
 - **Spain:** Canary Islands (7 Islands)
Cataluña
Madrid
- Regional
 - **Africa:** Nairobi-Kenya, Makere-Uganda, Marrocco, Argelia; Cabo Verde, Senegal, Republic. Du Benin, Guinea Ecuatorial.
 - **Arab States:** Israel, Turkey-Istambul,
 - **Asia/ Pacific:** Kazakhstan, Israel-Tel Aviv, New Delhi-India, China-Beijing
 - **Eastern and Central Europe:** Sofia-Bulgaria, Rumania, Russia-Perm & Moscow-Albania – Lithuania Budapest. Hungary.
 - **Australia:** Queensland University.
 - **Western Europe and North America:** Germany-Regensburg/Postdamm/Berlin, Italy-Udine/Milan/Rome, Greece-Athens and Aegean islands, Austria-Tyrol, France-Strasbourg/Paris, Lachen-Switzerland, Oxford-UK, Cyprus, .
 - **Ibero-America:** Argentina-Entre-Ríos, Venezuela-Maracaibo, Venezuela-Caracas, Brazil- Rio Grande do Sur + Norwest Amazonia. Colombia-Barranquilla.
 - **USA:** Massachusets
- Interregional

Annex 3

Funding sources

Funding source	Type of Organization / Institution	Period	Amount US\$
UNESCO Contribution		2009/11	0
Other contributions: <i>Please specify, for each contribution:</i> <i>Institution, City, Country</i> ■	Host Institution	2009/11	24000
	Partner university/ institution	2009/11	30000
	Governmental body		
	Other public institution <i>Please specify</i>		
	UN Agencies		
	IGO's		
	NGO's: CATAI	2009/11	80000
	Industry		
	Other private sources <i>Telefónica SL -Spain</i>	2009/11	110000
TOTAL		2009/11	244000 €

Outputs-I
Form 1: Publication

1. Title of activity: STANDARDS IN TELEMEDICINE.

1.1. Title: i-Phone & 4G mobile phone in Telemedicine.

Publisher(s): CATAI 2010 Ed. Ferrer-Roca o. Ed. ISBN 978-84-614-5997-1 canary

Islands CATAI- Tenerife-Spain

Year: 2011

Number of pages: 54

Type of document/material:

* Book X

* Periodical

* Others (*specify, please*)

Teaching/learning material

Language(s): >Bilingual (English/Spanish)

Main keywords (4 or 5):

SHORT ABSTRACT

(Brief description of the content in English, French or Spanish)

Móviles 4G en Telemedicina, trata de los aspectos tecnológicamente mas avanzados sobre la gestión de los dispositivos a distancia a través de Telefonía móvil. Particularmente:

1.- El uso de los moviles de ultima generacion para la medicina y las aplicaciones H2H (health2health) y las Smart-GRID o el acceso universal en la Nube, además de los aspectos tecnicos del Packet Backhaul Technology, o las estrategias packet-core.

2.- El control de calidad de las aplicaciones de Telemedicina

3.-El informe: "Telecommunications, IT and Heathcare: Wireless Networks, Digital Healthcare and the Transformation of US Healthcare, 2006-2011" en el que se especifica que en USA la industria de TIC relacionadas con la salud se incrementara en un 8.4% en 5 años cubriendo desde \$7.5 billones en 2008 a \$11.3 billones en 2013. El gasto sanitario pasara de ser un 6% del PIB a un 16% to 18%. La industria sanitaria se ve forzada a operar de forma mas eficiente, y un elemento central sera la creacion de redes eficientes capaces de compartir no solo datos sino imagenes de calidad para el diagnostico remoto que se llevara a cabo con personal medico altamente cualificado. Un coste enorme se pierde en el sistema en la interfase medico-paciente – tiempo de desplazamientos, buscar plazas a los enfermos, buscar la atencion que requieren, administrar la atencion etc... - Por ello el control remoto es algo esencial Para ello contamos con expertos internacionales, especialmente seleccionados por sus aspectos innovadores en su clinica diaria o en sus investigaciones y por su apuesta por la estandarización y calidad de la asistencia

1.2. Title: i-Phone in Telemedicine. e-Health 4.0

Publisher(s): CATAI 2010 Ed. Ferrer-Roca o. Ed. ISBN 978-84-614-5997-1 canary

Islands CATAI- Tenerife-Spain

Year: 2011

Number of pages: 22-30

Type of document/material:

* Book X

* Periodical

* Others (*specify, please*)

Teaching/learning material

Language(s): English

Main keywords (4 or 5): iPhone, iPad, iPod, Telemedicine, Vital signs, Image diagnosis, hand-held devices.

SHORT ABSTRACT

(Brief description of the content in English, French or Spanish)

The quick introduction of iPhone, iPad, iPod products in medical delivery, together with the approval of several diagnostic-prognostic-distant care –management applications by the FDA, assure a non-stop deployment in modern medicine of mobile applications starting the i2i era. The present paper not only list approved application but already developed applications together with future deployments.

1.3. Title: Ultrasound in Telestroke- i-Phone services.

Publisher(s): CATAI 2010 Ed. Ferrer-Roca o. Ed.ISBN 978-84-614-5997-1 canary Islands CATAI- Tenerife-Spain

Year: 2011

Number of pages: 17-21

Type of document/material:

* Book X

* Periodical

* Others (*specify, please*)

Teaching/learning material

Language(s): English

Main keywords (4 or 5) Teleictus, Ultrasound, iPhone, iMedicine, 3DUS, Telemedicine.

SHORT ABSTRACT

(Brief description of the content in English, French or Spanish)

The project presented is dealing with the use of the ultrasonography in the field of neurology with portable solutions in two main applications: diagnosis of carotid artery stenosis and diagnosis and treatment of the ictus . The project aim to use the telemedicine and compared the results with the regular protocol at the hospital to see if the times and diagnosis can be reduced..

1.4. Title: Placental Virtual Biopsy

Publisher(s): CATAI 2010 Ed. Ferrer-Roca o. Ed.ISBN 978-84-614-5997-1 canary Islands CATAI- Tenerife-Spain

Year: 2011

Number of pages: 31-37

Type of document/material:

* Book X

* Periodical

* Others (*specify, please*)

Teaching/learning material

Language(s): English

Main keywords (4 or 5) Virtual Biopsy, Placenta, 3D-US, Hand-held US..

SHORT ABSTRACT

(Brief description of the content in English, French or Spanish)

The present study described the technique of PVB (placental virtual biopsy) and its future improvements, establishing the requirements for reproducible measurements and consider their extension to iPhone or hand-held US devices. From the data collected FI (Flow Index) was related with foetal circulation, while VI (Vascularization Index) was supposed to be maternal-related. The 3D-US Power Doppler had been diagnostic to detect GD with an increase in FI>45 and number of vessels (>30%). Whether VI changes could predict FI or fetal changes is a matter of discussion...

1.5. Title: Optical biopsy data base content retrieval with a smartphone

Publisher(s): CATAI 2010 Ed. Ferrer-Roca o. Ed. ISBN 978-84-614-5997-1 canary Islands CATAI- Tenerife-Spain

Year: 2011

Number of pages: 44-48

Type of document/material:

* Book X

* Periodical

* Others (*specify, please*)

Teaching/learning material

Language(s): English

Main keywords (4 or 5) Medical image search, CBIR, multimedia, images, metadata, search and retrieval, standard, MPEG, JPEG, MPQF, JPSearch, query format.

SHORT ABSTRACT

(Brief description of the content in English, French or Spanish)

An optical biopsy (OB) is an optic diagnostic method capable to analyze the tissue in surface and in deepness without the need to extract it from the body. When obtained through confocal laser endomicroscopy (OB-CLE), the optical biopsies are taken by endoscopists, not trained in microscopic morphology which is the domain of the surgical pathology. To gain diagnostic confidence, the endoscopists could consult the images to a pathologist or could query an OB database. This paper presents a case-based computer-aided diagnosis system that assists medical personnel in the interpretation of OB-CLE images. The system design enables operation from a smartphone. Users are able to retrieve information about precedent diagnostics by providing an example OB image for content based image retrieval (CBIR), by using keywords, or by filtering different fields for structured retrieval. To effectively ensure interoperability with potential third-party applications the system provides a standard interface based on ISO/IEC 15938-12:2008 (MPEG Query Format) and ISO/IEC 24800 (JPEGSearch)...

1.6. Title: Quality Control in Telemedicine - "CE" Label.

Book edited by: Georgi Graschew, ISBN: 978-953-307-159-6, Publisher: InTech,

Publishing date: March 2011

<http://www.intechopen.com/articles/show/title/quality-control-in-telemedicine-ce-label>

Year: 2011

Number of pages: Chapter 12

Type of document/material:

• Book X

• Periodical

• Others (*specify, please*)

Teaching/learning material X

Language(s): English

Main keywords (4 or 5):

SHORT ABSTRACT

(Brief description of the content in English, French or Spanish)

As explained previously [1], the European Directive for Medical Devices (MDs) and equipment, the DIR 2007/47/EC [2], aims at achieving the goal of quality of medical delivery at a distance, providing comparable demands in telemedicine or distance support as in face-to-face healthcare.

The transposition into Spanish law of the EU directive was the Royal Decree RD-1591/2009, dated 16 October 2009 [3], which regulates the use of medical devices called “PRODUCTOS SANITARIOS (PS)” (= health-care products) in Spanish, which came into force on the 21st of March 2010. As from that date, the CE-Label is always required in all “MDDS or Medical Device Data Systems” according to the FDA.

In this article, we will explain the philosophy behind the EU-Directive and the Spanish RD with respect to quality in medical assistance. We will also try to demonstrate that the same norms apply to Telemedicine, and we will finally underline the importance of training medical and health-care workers in those aspects linked to the Body of Knowledge of Telemedicine as well as in the essential safety aspects linked to medical assistance. These professionals may indeed be guilty of infringing the law and liable if the law is not applied. As is well known, ignorance of the law is no excuse. This has indirect consequences on the training and licensing of health-workers.

1.7. Title: Grid Technology in Telepatology and Personalised Treatment.

Publisher(s): Applications for Telemedicine Services & Delivery Editor: Dr. Ekaterina Kldiashvili. Georgian Telemedicine Union, Georgia IGI Global Publ. Philadelphia. USA.
[Grid Technologies for eHealth: Applications for Telemedicine Services & Delivery](#)

Year: 2011

Number of pages: 10

Type of document/material:

- Book X
- Periodical
- Others (*specify, please*)

Teaching/learning material X

Language(s): English

Main keywords (4 or 5): Patho-informatics, solo-pathology, quality control, automatic pathology, LBD techniques, MPEG, JPEG, ISO standards, GRID, PIMS

SHORT ABSTRACT

(Brief description of the content in English, French or Spanish)

Histopathology requires automation, quality control and global collaborative tools. Usually the PIMS (Pathology information management system) automates samples, images and reports and progressively incorporates the PI (Pathology informatics), the D-PATH (digital pathology), e-PATH (electronic pathology), the PPH (Patho-pharmacology), virtual autopsy (VA) and all type of translational research in the PMIS (pathology management information system).

Not being subject to a specific standard, quality control follows ISO-13485:2003 on services and medical devices, ISO 17025:2005 on technical aspects; and ISO-15198:2003 for automate and quantifiable procedures that being medical software is affected by the new European Directive on medical devices. For non-standardized procedures, consumers' requirements for test and calibration are essential.

The paper analyzed the non-standardized procedures: VS (Virtual Slides), GRID networking and Literature Based Discovery as tools for knowledge discovery of relevant relationships on image-diagnosis and personalized treatments. Standardized procedures available for search and annotation are the ISO/IEC 11179 Information Technology Metadata Registries specification, the ISO/IEC 13250:2003 for topics maps or MPEG-7 & 21 for images and the ISO/IEC 24800-3 for JPEG query search.

The forthcoming innovations prepare to quality certify the so called “solo-pathology” robotic labs, supported by telepathology to reduce diagnostic errors and carrying out a relevant task on personalized treatment through GRID technology. In this environment the JPEG query search play a relevant role on images which metadata can be annotated on natural language..

1.8. Title: E-Health Systems Quality and Reliability: Models and Standards.

Publisher(s): <http://www.igi-global.com/requests/details.asp?ID=579>.

Year: 2011
Number of pages: 20
Type of document/material:

- Book X
- Periodical
- Others (*specify, please*)

Teaching/learning material X

Language(s): English

Main keywords (4 or 5):

SHORT ABSTRACT

(Brief description of the content in English, French or Spanish)

A systematic gathering of glimpses related to future healthcare reveal at least two trends which might be interpreted as proposals of what the future of healthcare might look like. One trend embodies increased uses of nanotechnology, individualised drugs, cell-based computing and microchip-enhanced brains. The other one relates to emerging e-health care provision services, like telemedicine and e-health. Notwithstanding the previously mentioned prospects, both healthcare professionals and patients remain increasingly dissatisfied as a result of nebulous expectations and fundamentally different views with respect to the content of quality in healthcare as related to the reliability of systems and services.

Quality and reliability are thought to be measurable at least in specific domains. Thus, our knowledge on the subject could be compared with a fleeting glance. New ways of thinking should evolve based on what we actually know and that which we do not understand. The safest way to achieve this is to juxtapose the criticisms with the existing body of knowledge. Unilateral approaches, for instance those dealing only with continuous quality improvement or reliability assurance, do not work. Instead, a broad view of all ideas and tools used should be applied.

All the aspects for e-health systems design are discussed in this book to formulate epistemic criteria for evaluation purposes. The purpose of the book is to provide a comprehensive coverage of the ideas of quality assurance and continuous quality improvement in e-health. With respect to quality assurance, the objective will be achieved by including a review of the methods used for quality assurance, including both advantages and disadvantages. As far as continuous quality improvement is concerned, a critical presentation of great thinkers' ideas will be included. Finally, new topics like quality education in healthcare and patient safety will be explored. Furthermore, an overview of reliability modelling in e-health networks will be provided which includes various reliability evaluation aspects, such as network, system, software and diagnosis.

1.9. Title: Handbook Telemedicine

Publisher(s): ΘΛΕΪΑΤΡΙΚΗ Ed. Editor Papazisis Pubs Atenas. Grecia ISBN : 978-960-02-2295-1

Year: 2010

Number of pages: 300

Type of document/material:

- Book X
- Periodical
- Others (*specify, please*)

Teaching/learning material X

Language(s): Greek

Main keywords (4 or 5):

SHORT ABSTRACT

(Brief description of the content in English, French or Spanish)

Translation in greek of the classical Handbook of Telemedicine

1.10. Title: IoT. Internet of Things for medical devices.

Publisher(s): CATAI 2009 Ed. Ferrer-Roca o. Ed.ISBN 978-84-613-7246-1 canary Islands CATAI- Tenerife-Spain
Year: 2010
Number of pages: 66

Type of document/material:

- * Book X
- * Periodical
- * Others (*specify, please*)

Teaching/learning material

Language(s): >Bilingual (English/Spanish)

Main keywords (4 or 5):

SHORT ABSTRACT

(Brief description of the content in English, French or Spanish)

IoT. La Internet de los Dispositivos médicos. Salud 2.0 a Salud 3.0, trata de los aspectos tecnológicamente mas avanzados sobre la gestion de los dispositivos a distancia a traves de Intra o Internet, con identificacion univocas y altas en la red, que permiten la ubicación, gestion y modificación a distancia de los dispositivos medicos o mecanicos asociaciados (ejem: camillas...) de forma que se facilite no solo un MRP (management resource planning) sino una telemetria en condiciones de permitir la monitorizacion de los pacientes. En el segundo apartado nos movemos desde la Salud electronica 2.0 a traves de Internet en la que la calidad y control es limitado a la Salud 3.0 en la que se priman los criterios de control de calidad en todos los ambitos de automatizacion y robotizacion. Para ello contamos con expertos internacionales, especialmente seleccionados por sus aspectos innovadores en su clinica diaria o en sus investigaciones y por su apuesta por la estandarización y calidad de la asistencia.

1.11. Title: IoT in Health Care. Quality assessment of CAM images

Publisher(s): CATAI 2009 Ed. Ferrer-Roca o. Ed.ISBN 978-84-613-7246-1 canary Islands CATAI- Tenerife-Spain
Year: 2010
Number of pages: 36-40

Type of document/material:

- * Book X
- * Periodical
- * Others (*specify, please*)

Teaching/learning material

Language(s): English

Main keywords (4 or 5): Tele-pathology. CAM image. IoT. Superresolution. Digital images. 4M microscopes. Mobile phones. Image quality.

SHORT ABSTRACT

(Brief description of the content in English, French or Spanish)

IoT (Internet of Things) allows identifying, scheduling, controlling and evaluating devices through Internet including image quality for diagnostic purposes. The paper evaluates image quality in new

miniaturized computer-assisted microscopy (CAM) images. New appearing CAM systems are: (1) the Small Size Virtual Slides (SSVS) (2) Multi-Modal Miniature Microscopes (4M) images with or without confocal microscopy. (3) Smart phones of 12 Mega-pixels (12MpM) images through optical or fluorescence lenses. Parameters proposed to standardized multimedia images were: Digital Resolution (DR), Visual Magnification (VM), onscreen Magnification (SM) and Useful magnification (US). The study assesses surgical pathology and cytology images in digital format (D-image) considering a priori the analogue format (A-image) as the quality gold standard. Digital field of views-FOVs of under-sampled CAM-SSVS-images showed four-time higher discrimination power than analogue images up to 640x onScreen magnification (SM). Digital Region of Interest-ROIs of orto-sampled CAM-SSVS-images showed sixtime higher discrimination power than analogue images up to an SM of 3200x, which could never be reached using A-images. Chosen parameters evidenced that some D-images are CAM-images detecting details that escape to human eye in type I low aperture ($NA < 0.5$) wide field incoherent light systems. Theses parameters can be easily applied to standardized other CAM-image modalities such as 4M and hand-held or mobile phone microscopes..

1.12. Title: CBIR - Content based information retrieval in Optical Biopsies

Publisher(s): CATAI 2009 Ed. Ferrer-Roca o. Ed.ISBN 978-84-613-7246-1 canary Islands CATAI- Tenerife -Spain
 Year: 2010
 Number of pages: 41-46

Type of document/material:

- * Book X
- * Periodical
- * Others (*specify, please*)

Teaching/learning material

Language(s): English

Main keywords (4 or 5) Medical image search, CBIR, multimedia, images, metadata, search and retrieval, standard, MPEG, JPEG, MPQF, JPSearch, query format.

SHORT ABSTRACT

(Brief description of the content in English, French or Spanish)

The present paper describes the design and usage of an Internet medical image search engine based on the queryby- example paradigm and the multimedia standard ISO- 15938-12:2008. The system, which allows combining Content Based Information Retrieval (CBIR) techniques such as “query by image” with traditional XML metadata filtering, is applied to annotate and query Optical Biopsies-OB (in the present case Confocal endomicroscopy-CEM). The OB-CEM are taken by endoscopists, not trained in microscopic morphology which is the domain of the surgical pathology. To gain diagnostic confidence the endoscopists could consult the images to a pathologist or could use the system proposed in the paper. That is, to search for similar images to compare the diagnosis.

1.13. Title: The impact of telemedicine on quality of life in rural areas: the Extremadura model of specialized care delivery.

<http://www.teide.net/catai/TMJ.2009.0107.pdf>

Publisher(s): International of Telemedicine Journal e Health vol.16.2.
 Year: 2010

Number of pages: 233-243

Type of document/material:

- Book
- Periodical
- Others (*specify, please*) X-Article

Teaching/learning material X

Language(s): English

Main keywords (4 or 5): primary care, secondary care, tertiary care, telemedicine, quality of life, rural medicine

SHORT ABSTRACT

(Brief description of the content in English, French or Spanish)

Background: Referrals from rural health centers to urban hospitals join waiting lists as outpatients for hospital admission and hospital treatment. This influences quality of life (QoL) of the rural population and retired people who require medical attention without traveling, provided no risks are involved. For this reason, a rural region of Spain has adopted a strategy to deliver telemedicine (TM) specialized care (Extremadura model) as a political decision. Objectives: The present study aimed at objectively assessing QoL on aspects of health and well-being for citizens benefiting from this system. Methods: We performed a randomized study of 800 primary care patients referred for specialized care: 420 regular face-to-face hospital referrals and 380 referred to a hospital specialist at a distance by TM. The study used two questionnaires: a modified version of the classical SF-12v2 short form questionnaire for health and well-being and a specific author-elaborated questionnaire. The latter focused on major patient concerns such as (1) discomfort and pain relief, (2) swift diagnosis, (3) swift treatment, (4) swift decision on hospital admission or not, (5) avoidance of traveling, (6) avoidance of red tape, and (7) personal attention. QoL was assessed twice: before referral to a hospital specialist and 6 months after referral to the same. The results were statistically compared. Results: Both groups showed comparable health status with added advantages for TM referrals such as (1) less travelling ($p=0.0001$) and (2) faster diagnosis, health examination, and treatment ($p=0.0001$). Conclusion: Telemedicine care by a hospital specialist through videoconferencing was comparable to hospital referral for face-to-face medicine. Teleconsultations managed by nurses had a positive impact on the QoL of rural patients. They did not have to travel and thus diagnoses and examinations to start treatment were initiated faster.

1.14. Title: Mobile phones in pathology.

<http://jtt.rsmjournals.com/cgi/content/citation/16/3/164>

<http://www.teide.net/catai/Mobilephones%20in%20pathology.pdf>

Publisher(s): Journal of Telemedicine and Telecare 16: 3

Year: 2010

Number of pages: 164

Type of document/material:

- Book
- Periodical
- Others (*specify, please*) X-Article

Teaching/learning material X

Language(s): English

Main keywords (4 or 5): tele-haematology,

SHORT ABSTRACT

(Brief description of the content in English, French or Spanish)

I read with interest the article entitled 'Applications of camera phones in tele-haematology' by McLean et al.¹ The article deals with the use of mobile phones in pathology and specifically haematology in peripheral blood diagnosis. We have previously published² on the use of mobile phones in telemedicine, setting out three circumstances that favour their use:

(1) Mobile phones have been used with success in specialties in which diagnosis is based on images such as dermatology³; (2) Microscopes have been miniaturized to 4M (Multi- Modal Miniature Microscopes) 4,5 which make them easy to integrate with mobile phones; (3) Mobile phones now contain 12 Mpixel cameras.

The features of the McLean et al. study were that:

(1) Mobile phone cameras were positioned over the microscope eye-piece; (2) All the mobile phones had CMOS cameras, which are known to be particularly 'noisy'; (3) Detection of the lesion was done by comparing images on the screen of the capture mobile phone versus the receiver mobile phone in nine blood smears using a single image. It is well known that.

1.15. Title: Telepathology and optical biopsy.

Publisher(s): International Journal of Telemedicine and Applications.

<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2842892/>

Year: 2009

Number of pages: 6

Type of document/material:

- Book
- Periodical
- Others (*specify, please*) X-Article

Teaching/learning material X

Language(s): English

Main keywords (4 or 5): Optical biopsy; OCT; Super-resolution. Microendoscopy. Histoendoscopy. Immu-nomicroendoscopy

SHORT ABSTRACT

(Brief description of the content in English, French or Spanish)

Technological advances accessing microscopic level in vivo tissue without disruption, force to consider the role of the pathologist in the medicine now a days. Neither microscopes, nor staining or tissue processing are required for microscopic pathology diagnosis. It is urgent to have sufficient morphological publications to establish the gold-standard depending on the employed technique for in vivo biopsies or optical biopsies

The present paper introduces the non-disruptive optical diagnostic techniques, showing the diagnostic level of each one.

1.16. Title: Optical biopsy with confocal endoscopy diagnosed by pathologist.

Publisher(s): Virchows Archiv. Vol 455 Sup. 1 The European Journal of Pathology, 22nd European Congress of Pathology, OP8. 1.

Year: 2009

Number of pages: S29

Type of document/material:

- Book
- Periodical
- Others (*specify, please*)
- Teaching/learning material X

Language(s): English

Main keywords (4 or 5):

SHORT ABSTRACT

(Brief description of the content in English, French or Spanish)

1.17. Title: Endomicroscopía en anatomía patológica. Biopsia Óptica

Publisher(s): Revista Española de Patología. Volumen 42(3)

Year: 2009

Number of pages: 167-281

Type of document/material:

- Book
- Periodical
- Others (*specify, please*) Journal

Teaching/learning material X

Language(s): Spanish

Main keywords (4 or 5): Optical biopsy; OCT; Super-resolution. Microendoscopy. Histoendoscopy. Immu-nomicroendoscopy

SHORT ABSTRACT

(Brief description of the content in English, French or Spanish)

Technological advances accessing microscopic level in vivo tissue without disruption, force to consider the role of the pathologist in the medicine now a days. Neither microscopes, nor staining or tissue processing are required for microscopic pathology diagnosis. It is urgent to have sufficient morphological publications to establish the gold-standard depending on the employed technique for in vivo biopsies or optical biopsies

The present paper introduces the non-disruptive optical diagnostic techniques, showing the diagnostic level of each one.

1.18. Title: Superresolution & Optical biopsy..

Publisher(s): CATAI 2008 Ed. ISBN 978-84-612-8620-1 canary Islands CATAI-Tenerife-Spain

Year: 2009

Number of pages: 45-54

Type of document/material:

- Book
- Periodical
- Others (*specify, please*) X – Article.

Teaching/learning material

Language(s): English

Main keywords (4 or 5): Optical biopsy; OCT; Super-resolution. Microendoscopy.

Histoendoscopy. Immu-nomicroendoscopy.

SHORT ABSTRACT

(Brief description of the content in English, French or Spanish)

Technological advances accessing microscopic level in vivo tissue without disruption, force to consider the role of the pathologist in the medicine now a days. Neither microscopes, nor staining or tissue processing are required for microscopic pathology diagnosis. It is urgent to have sufficient morphological publications to establish the gold-standard depending on the employed technique for in vivo biopsies or optical biopsies

The present paper introduces the non-disruptive optical diagnostic techniques, showing the diagnostic level of each one.

1.19. Title: Superresolución & Biopsia Optica.

Publisher(s): CATAI 2008 Ed. ISBN 978-84-612-8620-1 canary Islands CATAI-Tenerife-Spain

Year: 2009

Number of pages: 33-44

Type of document/material:

- Book
- Periodical
- Others (*specify, please*) X – Article.

Teaching/learning material

Language(s): Spanish

Main keywords (4 or 5): Biopsia óptica; OCT; Superresolución. Microendoscopia.
Histoendoscopia. Inmunomicroendoscopia

SHORT ABSTRACT

(Brief description of the content in English, French or Spanish)

Los avances tecnológicos en el campo de la visión microscópica de las imágenes o la capacidad diagnóstica de una gran variedad de técnicas ópticas, obligan a analizar y re-ubicar el papel del Anatomopatólogo en la medicina. Ni los microscopios, ni la tinción, ni el procesado de tejidos son hoy en día imprescindibles para diagnosticar una lesión. Se hace necesario contar con publicaciones morfológicas que determinan el estándar-oro de acuerdo con la técnica empleada de estas biopsias in vivo o biopsias ópticas no disruptivas. Este cometido ha de estar en manos del patólogo. Este artículo introduce en las técnicas de diagnóstico óptico y en las técnicas de visión microscópica no invasiva mostrando los niveles diagnósticos de cada una..

1.20. Title: Superresolución & Biopsia Optica.

Publisher(s): CATAI 2009 Ed. Ferrer-Roca o. Ed.ISBN 978-84-612-8620-1 canary
Islands CATAI- Tenerife-Spain
Year: 2009
Number of pages: 86

Type of document/material:

- * Book X
- * Periodical
- * Others (*specify, please*)

Teaching/learning material

Language(s): >Bilingual (English/Spanish)

Main keywords (4 or 5): Biopsia óptica; OCT; Superresolución. Microendoscopia.
Histoendoscopia. Inmunomicroendoscopia

SHORT ABSTRACT

(Brief description of the content in English, French or Spanish)

Los avances tecnológicos en el campo de la visión microscópica de las imágenes o la capacidad diagnóstica de una gran variedad de técnicas ópticas, obligan a analizar y re-ubicar el papel del Anatomopatólogo en la medicina. Ni los microscopios, ni la tinción, ni el procesado de tejidos son hoy en día imprescindibles para diagnosticar una lesión. Se hace necesario contar con publicaciones morfológicas que determinan el estándar-oro de acuerdo con la técnica empleada de estas biopsias in vivo o biopsias ópticas no disruptivas. Este cometido ha de estar en manos del patólogo. Este artículo introduce en las técnicas de diagnóstico óptico y en las técnicas de visión microscópica no invasiva mostrando los niveles diagnósticos de cada una..

1.21. Title: Superresolution & Optical biopsy..

Publisher(s): CATAI 2008 Ed. Ferrer-Roca o. Ed.ISBN 978-84-612-8620-1 canary
Islands CATAI- Tenerife-Spain
Year: 2009
Number of pages: 45-54

Type of document/material:

- * Book X
- * Periodical
- * Others (*specify, please*)

Teaching/learning material

Language(s): >Bilingual (English/Spanish)

Main keywords (4 or 5): Biopsia óptica; OCT; Superresolución. Microendoscopia.

Histoendoscopia. Inmunomicroendoscopia

SHORT ABSTRACT

(Brief description of the content in English, French or Spanish)

Technological advances accessing microscopic level in vivo tissue without disruption, force to consider the role of the pathologist in the medicine now a days. Neither microscopes, nor staining or tissue processing are required for microscopic pathology diagnosis. It is urgent to have sufficient morphological publications to establish the gold-standard depending on the employed technique for in vivo biopsies or optical biopsies The present paper introduces the non-disruptive optical diagnostic techniques, showing the diagnostic level of each one. Index Terms— Optical biopsy; OCT; Super-resolution. Microendoscopy. Histoendoscopy. Immu-nomicroendoscopy

1.22. Title: Telemedicina Parte 0. Declaración de Praga 2009

Publisher(s): Acta Médica. Vol. 165 ISBN: 1135-5824. Tenerife-Spain

Year: 2009

Number of pages: 23-24

Type of document/material:

- * Book
- * Periodical
- * Others (*specify, please*) X – Article.

Teaching/learning material

Language(s): Spanish

Main keywords (4 or 5): e-Health. Telemedicine.

SHORT ABSTRACT

(Brief description of the content in English, French or Spanish)

Como es bien sabido durante la conferencia ministerial de eHealth2009 que se celebro en Praga del 18-20 Febrero del 2009, se adapto la Declaración de Praga 2009. En ella se resume toda la política de la CE en los aspectos de Telemedicina y que iremos abordando en sucesivas.

Sin embargo la Declaración de Praga de 2009 va mas allá al considerar esencial el uso de la Telemedicina para el **Beneficio de los pacientes**, para el **Beneficio de la Sociedad** introduciendo la importancia de la *e-health literacy* o formación en las herramientas de Telemedicina y para el **Beneficio de la Economía**.

1.23. Title: Telemedicina Parte I. La e-Sanidad – La Telemedicina

Publisher(s): Acta Médica. Vol.167 ISSN: 1135-5824 Tenerife-Spain

Year: 2009

Number of pages: 10-11

Type of document/material:

- * Book
- * Periodical
- * Others (*specify, please*) X – Article.

Teaching/learning material

Language(s): Spanish

Main keywords (4 or 5): e-Health. Telemedicine.

SHORT ABSTRACT

(Brief description of the content in English, French or Spanish)

En este artículo y en los siguientes queremos resumir conceptos necesarios que los gestores, usuarios y responsables de la sanidad deben tener presente en la actualidad en el entorno electrónico de la sanidad a nivel europeo, Son aspectos culturales, técnicos, legislativos y organizativos que los colegios de médicos deben manejar, aplicar y hacer aplicar correctamente para la mejora, modernización y eficiencia de la medicina moderna dentro del marco de la Unión Europea.

Por ello y en esta primera parte se le dedica un gran espacio a familiarizarse con las definiciones propias del entorno electrónico y la motivación de la urgente necesidad de promoción de la telemedicina para la atención sanitaria.

1.24. Title: **Telemedicina Parte II.**

Publisher(s): Acta Médica. Vol.168. ISSN: 1135-5824.Tenerife-Spain

Year: 2009

Number of pages: 18-19

Type of document/material:

- * Book
- * Periodical
- * Others (*specify, please*) X – Article.

Teaching/learning material

Language(s): Spanish

Main keywords (4 or 5): e-Health, telemedicina

SHORT ABSTRACT

(Brief description of the content in English, French or Spanish)

Pasaremos revista en este artículo brevemente a un somera historia del desarrollo de la Telemedicina en el mundo y a la necesidad de promoción de la telemedicina por los beneficios que esta aporta. Para ello pasaremos revista a las premisas y recomendaciones publicadas por la Comisión Europea sobre interoperabilidad.

1.25. Title: **¿Son las unidades de ictus con telemedicina un requerimiento de equidad sanitaria?.**

Publisher(s): Revista de Neurología. Barcelona-Spain

Year: 2009

Number of pages: 2

Type of document/material:

- * Book
- * Periodical
- * Others (*specify, please*) X – Article.

Teaching/learning material

Language(s): Spanish

Main keywords (4 or 5): Tele-stroke. Telemedicine. Stroke

SHORT ABSTRACT

(Brief description of the content in English, French or Spanish)

El ictus es la segunda causa de muerte para mujeres y tercera para hombres (33.000 /año) y la primera

de discapacidad en España, con un gran impacto económico (≈5000 € paciente/año; 4% del gasto sanitario); su tasa de incidencia anual está entre el 130 al 170 por 100.000 habitantes, con una prevalencia entre 4% al 8% en la población de más de 65 años. En la fase aguda del ictus el 30% de los pacientes podrían ser candidatos al tratamiento trombolítico pero en Europa no lo reciben mas que el 2%. Además los beneficios se incrementan reduciendo los tiempos de demora Diagnostico-Traslado (código ictus), Puerta-Evaluación (criterios de inclusión-exclusión), Puerta-TC craneal (mismatch perfusión/difusión) y Puerta-Tratamiento Especifico (Bolos 10% en 60 segundos y bomba de infusión en 60 minutos con el resto de la dosis) antes de las 3 horas de inicio de los síntomas.

Igualmente no muestran la misma eficacia y eficiencia las Unidades de Ictus1 (UI) que los Equipo de Ictus (EI), al reducir la estancia media, mortalidad (Safe Implementation of Thrombolysis in Stroke-Monitoring Study - SITS-MOST- del 17,3% al 11% en 3 meses) y dependencia, complicaciones sistémicas y neurológicas (hemorragia cerebral SITS-MOST del 8.6% al 1.7%) y coste por paciente y global. Según la Stroke Unit Trialist Collaboration reduce un 18% el riesgo relativo en términos de mortalidad, morbilidad y discapacidad.

Por ello recientemente (17 marzo 2009) el Ministerio de Sanidad presento la estrategia de tratamiento en ictus aprobada por el Consejo Interterritorial del Sistema Nacional de Salud el 26 de noviembre del 2008, en el que se menciona 13 veces la telemedicina de forma indicativa y sin desarrollo alguno. Conociendo que la edad media de la población se incrementa y por lo tanto se incrementan de igual modo el riesgo de ictus y sus consecuencias, ¿No estará entonces justificada la mejora de la atención sanitaria al Ictus con Telemedicina (TM)?.

1.26. Title: Departamento de anatomía patológica a tenor de la Legislación Vigente

Publisher(s): In "Revista Española de Patología". Vol. 42, Nro. 1

Year: 2009

Number of pages: 17-23.

Type of document/material:

- Book
- Periodical
- Others (*specify, please*) X – Article.

Teaching/learning material

Language(s): Spanish

Main keywords (4 or 5): Bio-bank, bio-collection, Data protection, Pathology-informatics, Biomedical research, Legislation.

SHORT ABSTRACT

(Brief description of the content in English, French or Spanish)

The management of the pathology department specimens is directly influenced in Spain by the Data Protection Law, Patient autonomy law and the Biomedical research law.

Those laws have a strong influence in issues such as: the mandatory specimen storage at minimum 30 years, the requirement of an ethic committee to use them for research, requirement of an informed consent, and a total traceability as well as the registration in the biomedical bank, data among others.

This and other aspects that significantly influence specimens' management in a department of pathology are studied in the paper.

1.27. Title: Anatomía Patológica Digital. Control de calidad y Pato-informática

Publisher(s): In "Revista Española de Patología". Vol. 42 Nro. 2

<http://www.patologia.es/volumen42/vol42-num2/42-2n02.htm>

Year: 2009

Number of pages: 85-95.

Type of document/material:

- Book
- Periodical

- Others (*specify, please*) X – Article.

Teaching/learning material

Language(s): Spanish

Main keywords (4 or 5): Patho-informatics, solo-pathology, quality control, automatic pathology.

SHORT ABSTRACT

(Brief description of the content in English, French or Spanish)

Similarly to other hospital services, histopathology and morbid anatomy requires automation and a quality control. Usually the PIS (Pathology information system) automates samples, images and reports and progressively incorporates the PI (Pathology informatics), the D-PATH (digital pathology), e-PATH (electronic pathology), the PPH (Patho-pharmacology, virtual autopsy and in general in all type of translational research in the PMIS (pathology management information system).

Not being subject to a specific standard, quality control follows ISO-13485:2003 on services and medical devices, ISO 17025:2005 on technical aspects; and ISO-15198:2003 for automate and quantifiable procedures that being medical software is affected by the new European Directive on medical devices.

For non-standardized procedures, consumers' requirements for test and calibration are essential. i.e.: the requirements for virtual slides, according to our opinion, would not allow quality certify commercial scan devices.

The forthcoming innovations prepare to quality certify the so called "solo-pathology" robotic labs, supported by telepathology to reduce diagnostic errors

1.28. Title: Literature Mining in Cytology Discovery Virtual Images

Publisher(s): Archives of Pathology and Laboratory Medicine" (Vol. 133, No. 7),

<http://www.teide.net/catai/pubs/ArchPathLabMed133-2009.pdf>

Year: 2009

Number of pages: 1160

Type of document/material:

- Book
- Periodical
- Others (*specify, please*) X – Article.

Teaching/learning material

Language(s): English.

Main keywords (4 or 5):

SHORT ABSTRACT

(Brief description of the content in English, French or Spanish)

In the present paper we introduce the innovative technique of literature mining to discover relevant cytologic findings to automatically detect regions of interest (ROI) in cytologic virtual slides that are being assessed remotely...

2. Title of activity: REMOTE IMAGE ACCESS

2.1. Title: Placental Virtual Biopsy. 3D-US Hemodynamics of normal pregnancy versus gestational diabetes.

Publisher(s): Journal of Clinical ultrasound

Producer and/or distributor (*with address*):

Year: 2011

Number of pages: realese process

Type of document/material:

- Book

- Periodical
- Others (*specify, please*)

Teaching/learning material X

Language(s): English.

Main keywords (4 or 5):

SHORT ABSTRACT

(Brief description of the content in English, French or Spanish)

Three-dimensional ultrasound (3D-US) with Power-Doppler (PD) quantifies terminal vascular network with high precision. We used it to determine placental vascular growth in normal pregnancies (NP) and in Gestational Diabetes (GD). US device requirements and the training period were determined. Based on its histological correlation, the technique was considered the start point of the so-called Placental Virtual Biopsy (PVB).

The study relayed on 473 measurements from 43 NP between 20-40 week gestation and on 122 measurements from 70 insulin dependent GD. The standardization was achieved recording three successive placental vascular tree volumes by measuring a spherical volume between the chorionic and basal plates at the level of great vessels near umbilical cord. Parameters analysed were: Mean intensity of blood flow called Flow Index (FI); Percentage of area occupied by vessels called Vascularisation Index (VI); Vascularisation-flow relationship index (VFI) representing the intensity blood flow in the volume occupied by vessels.

The FI was a reliable and easy to measure parameter which training plateau was reached after six measurements. In NPs, FI increased throughout gestation, decreased before delivery (33 ± 3 below 30w and 40 ± 6 at 38w) and correlated with foetal parameters. By contrast in GDs, FI was high from the beginning, correlates better with placental maternal parameters and had a diagnostic cutting point at 45 only presented in 7% NPs at the end of gestation. The VI or number of vessels per volume expressed in percentage was variable and less diagnostic being related with maternal parameters; NPs showed significant lower values ($17.4\pm 7.4\%$) than GDs ($21\pm 12\%$) with a diagnostic cutting point at 31%. There was a physiological FI-peak at 32 week gestation two weeks later than the VI-peak. The VFI showed no differences.

In summary: The present study established the technique of PVB and its future improvement. The results showed that placenta blood flow or FI was related with foetal circulation, while percentage of vessels per volume or VI could be maternal-related. The 3D-US Power Doppler had been proved diagnostic of GD with a $FI > 45$ and a number of vessels $> 30\%$. The value of changes in VI to predict the foetal/ FI changes is discussed).

2.2. Title: Three-Dimensional Ultrasound in the Study of Chromosomopathy Markers.

Publisher(s): World Global Congress

Producer and/or distributor (*with address*):

Year: 2011

Number of pages: realese process

Type of document/material:

- Book
- Periodical
- Others (*specify, please*)

Teaching/learning material X

Language(s): English.

Main keywords (4 or 5):

SHORT ABSTRACT

(Brief description of the content in English, French or Spanish)

Classically, first and second trimester ultrasound markers were based on multiple anthropometric data, both morphological and functional, but the most significant can be summarized as follows:

NUCHAL TRANSLUCENCY THICKNESS

HYPOPLASIA-AGENESIS OF THE NASAL BONE

The applications of three dimensional (3D) ultrasound in pregnancy, especially at an early stage, can be summarized as:

Detection of chromosomopathy between weeks 10th and 14th of pregnancy.

Analysis of possibilities to identify and validate markers of chromosomopathy

Detection of embrionic / fetal abnormalities

Detection of adnexal abnormalities

Investigation on new markers (currently under investigation and at the validation stage).

We now have grounds to state that 3D ultrasound has clinical utility, established by consensus in the field of obstetrics.

Current expert opinion is that 3D ultrasound has certain advantages over two-dimensional ultrasound, because:

It establishes diagnoses and classification of anomalies

It constitutes a tool to explain the significance of an anomaly

It provides objective information on the malformation under study.

Comparatively, diagnostic sensitivity before 23 weeks of gestation is 85% for 3D ultrasound versus 30% for two-dimensional ultrasound.

2.3. Title: The Anatomy of an Optical Biopsy Semantic Retrieval System.

Publisher(s): Revista IEEE Multimedia.

Producer and/or distributor (*with address*):

Year: 2011

Number of pages: realese process

Type of document/material:

- Book
- Periodical
- Others (*specify, please*)

Teaching/learning material X

Language(s): English.

Main keywords (4 or 5):

SHORT ABSTRACT

(Brief description of the content in English, French or Spanish)

This paper addresses the question of how to build a case-based computer-aided diagnosis system that assists physicians and other medical personnel in the inter-pretation of optical biopsies obtained through confocal laser endomicroscopy (CLE). An optical biopsy is an optic diagnostic method capable to analyze the tissue in surface and in deepness without the need to extract it from the body. The system allows users navigating and searching over an image database containing optical biopsies of the human colon recorded with CLE. Users are able to retrieve information about precedent diagnostics by providing an example CLE image for content based image retrieval (CBIR), by using keywords, or by ltering dierentelds for structured retrieval. The system's CBIR approach involves a novel algorithm for automatic feature extraction in CLE images, showing promising results on inferring semantic metadata from low-level features. In order to eectively ensure the interoperability with potential third-party applications, the system provides an interface compliant with the recent standards ISO/IEC 15938-12:2008 (MPEG Query Format) and ISO/IEC 24800 (JPEG Search)..

2.4. Title: Solo-Medicine in Optical Biopsies

Publisher(s): Proceeding HEALTHINF 2011 Edited by:V Traver, A Fred, J Filipe, H

Gamboa. ISTICC isbn: 978-989-8425-34-8

Producer and/or distributor (*with address*):

Year: 2010

Number of pages: 441-445

Type of document/material:

- Book X
- Periodical

- Others (*specify, please*)

Teaching/learning material

Language(s): English & Spanish.

Main keywords (4 or 5): Solo-medicine, Optical biopsy, Confocal laser endomicroscopy, CLE, CBIR, Medical image retrieval, Query by image, ISO-15938-12, MPEG query format, MPQF, ISO 24800-3, JPSearch, JPEG query format, JPQF, Artificial intelligence, Multimedia standard.

SHORT ABSTRACT

(Brief description of the content in English, French or Spanish)

A way to practice Telemedicine is to access a data-base capable to assist you in medical procedures (diagnosis, treatment and prognosis), similarly to consult a book or to ask a college. In many countries the lack of specialists and training capabilities demand to practice solo-medicine, that in the case of surgery require robots capable to induce anesthesia or help in vision or handling instruments. A relevant case is the diagnostic self-training requirements for optical biopsies (OBs) obtained with confocal laser endomicroscopy (CLE) or the assistance in the diagnosis of pathology slides. In both cases it is required a training set of digital images against which to compare the question case by means of image-queryformat. The present paper present a content-based image retrieval system (CBIR) based on the MPEG Query Format Standard in order to provide a set of similar pictures and the corresponding diagnosis to help on diagnosis or just to train the doctor. The paper defined the Image Solo-Medicine Paradigm (ISMP) architecture merging medical image standards and MPEG and JPEG standards. It tested the solution with normal, and benign colon OBs with 90% congruency. The ISMP is of particular interest viewed the proliferation of iPhone medical applications aiming to train doctors and support medical decisions.

2.5. Title: Query by image medical training. Optical Biopsy with Confocal Endoscopy (OB-CEM).

Publisher(s): Proceeding Healthinfo 2010 Edited by: J Filipe, A Fred, H Gamboa.

Portugal: INSTICC isbn:978-989-674-016-0

Producer and/or distributor (*with address*):

Year: 2010

Number of pages: 166-172

Type of document/material:

- Book X
- Periodical
- Others (*specify, please*)

Teaching/learning material

Language(s): English & Spanish.

Main keywords (4 or 5): Optical Biopsy. Query by image. ISO-15938-12, MPEG Query format, MPQF, ISO 24800-3, JPSearch, JPEG Query Format, JPQF, Artificial Intelligence. Multimedia standard.

SHORT ABSTRACT

(Brief description of the content in English, French or Spanish)

The use of Optical Biopsies-OB (in the present case Confocal endomicroscopy-CEM) is limited due to difficulties to interpret images. The OB-CEM are taken by endoscopists, not trained in microscopic morphology which is the domain of the surgical pathology. To gain diagnostic confidence the endoscopists could consult the images to a pathologist or could use the technique proposed in the paper. That is, to search for similar images on Internet to compare the diagnosis.

The present paper is a positioning paper of how to build a CEM-image metadata to be used by the multimedia standards ISO-15938-12:2008 and ISO-24800-3 in order to search on line using a “query by image”. Metadata semantics based on Kudo colorectal crypt architecture was used for annotation or automatic image extraction. The training set was composed of 25 OB-CEM chromo-colonoscopy images taken with a FICE (Fujinon Intelligent Chromoendoscopy). Those parameters were, whenever possible, automatically extracted from the image and included in the metadata for image mining. Future developments will annotate histological images is such a way that the query could also retrieve the histological image.

2.6. Title: Computer assisted microscopy: The era small virtual slides & 4M microscopes.

Publisher(s): Proceeding Analytical and Quantitative Cytology and Histology. ISBN 978-989-674-018-4

Producer and/or distributor (*with address*):

Year: 2010

Number of pages: 517-522

Type of document/material:

- Book X
- Periodical
- Others (*specify, please*)

Teaching/learning material

Language(s): English & Spanish.

Main keywords (4 or 5): Tele-pathology, Super-resolution, Digital pathology, Digital images, 4M microscopes, Mobile phones, Image quality, Cytology.

SHORT ABSTRACT

(Brief description of the content in English, French or Spanish)

The present paper described the technique to evaluate digital resolution (DR), Visual Magnification (VM), on Screen Magnification (SM) and Useful magnification (US) in order to compare image quality and resolution for diagnostic purposes on computer assisted microscopes including Multi-Modal Miniature Microscopes-4M. The study was done on surgical pathology and cytological specimens comparing analog microscopic images versus digital Small Size Virtual Slides (SSVS) images. The SSVS were obtained with an 8 megapixel camera, in JPEG2000 format using a super-resolution algorithm of capture. The field of view-FOV images showed four times higher discrimination power, in spite of the low sampling density. The region of interest-ROI images, with a sampling density close to Shannon theory showed six times higher discrimination power. OnScreen magnification FOV achieved 640x and ROI 3200x augments that could never been reached using analog microscopy. The paper demonstrates that SSVS are ideal for hand-held microscopes or even mobile phones with ad-on capture systems.

Annex 5

Outputs-II

Form 2: Multimedia material

3. Title of activity: TELEMEDICINE-CD

3.1. Title: CATAI Telemedicine-CD. ISBN 84-923357-2-6

Producer and/or distributor (*with address*): CATAI

Year: 1999-2011

Teaching/learning material X

Type of material:

- Video
- CD ROM X with videos
- Visioconference:
- Other type of material

(Please specify)

Duration: 643 MB

Format: Word, Html, /ppt, /mpeg

Language(s): English- Italian-Spanish

Main keywords (4 or 5): Telemedicine

SHORT ABSTRACT

According to one of the numerous definitions of Telemedicine “providing medicine at a distance“, any doctor being trained in the use of some telematic devices could effort that practice. The reality is far from this because to assure a safe practice, people have to learn and bear a minimum understanding of a

wide range of topics: from economics to telecommunications and from medicine to legal aspects. Technology learning is not limited to technology itself but linked to its social practical consequences in all their aspects. To guarantee that none of the aspects related with Telemedicine are missed, this minimum knowledge has to be fixed, organised and in some way standardized. The main purpose of this book is to structure the basic knowledge linked to teaching to provide or to practise telemedicine, as well as an overview of the technology developments linked to this new discipline. As expressed in the title (Handbook of Telemedicine), the book is precisely structured as a “handbook” whose main value is the joint opinion of all the participating authors of what are the learning requirements for anyone that would like to practice Telemedicine. It is not a full treatise nor a complete collection of all telemedicine applications or telemedicine basics. It was built with the aim of creating awareness to the academic aspects (technology development, telecommunications approach, law and regulations, medical practice) as well as to the minimum knowledge requirements to guarantee safe and appropriate medical practice. Nowadays this fact is enhanced by the evidence that welfare expenses cannot be endlessly increased, whilst an efficient health provision system in the context of the information society, will mark a new trend to configure health care practice in the next century. If training and teaching schemes are to cope with the demands of society it seems obvious that those carers and professions should consider structured and sufficient training in Telemedicine.

4. Title of activity: EU-MASTER OF TELEMEDICINE DVD

4.1. Title: EU-Master of Telemedicine and Bioengineering applied to Telemedicine

Producer and/or distributor (*with address*): CATAI Ed. ISBN 84-609-2162-X

Year: 2004-11

Teaching/learning material X

Type of material:

- Video DVD with text & multimedia X
- CD ROM
- Visioconference:
- Other type of material

(*Please specify*):__

Duration: 2 GB

Format: RM (real media)

Language(s): English-Spanish

Main keywords (4 or 5): Telemedicine

SHORT ABSTRACT

Generic name of the list of DVDs with multimedia material produced to train at distance on Telemedicine and Bioengineering applied to telemedicine any people interested. No requirements needed except a DVD reader in the computer.

4.2. Title: EU-Master of Telemedicine and Bioengineering applied to Telemedicine. Volume I.

Producer and/or distributor (*with address*): CATAI Ed. ISBN 84-609-2163-8

Year: 2004-11

Teaching/learning material X

Type of material:

- Video DVD with text & multimedia X
- CD ROM
- Visioconference:
- Other type of material Other multimedia material

(*Please specify*):_____

Duration: 2 GB

Format: RM (real media); PDF; HTML

Language(s): English-Spanish

Main keywords (4 or 5): Telemedicine

SHORT ABSTRACT

Volume I of the multimedia material to train the people in Quality control and security in e-health. It include text, presentations and videos given by the more representatives professionals in the world in the topics of Minima requirements, Technical knowledge, Teleworking and teleteaching, Principal technical innovations,

Telemetry, Nanotechnology, Quality control and assessment, Legal requirements, Security, Internet, Standards, Electronical Health Record.

4.3. Title: EU-Master of Telemedicine and Bioengineering applied to Telemedicine. Volume II.

Producer and/or distributor (*with address*): CATAI Ed. ISBN 84-609-6488-4.

Year: 2005-11

Teaching/learning material X

Type of material:

- Video DVD with text & multimedia X
- CD ROM
- Visioconference:
- Other type of material

(*Please specify*):_

Duration: 2 GB

Format: RM (real media); PDF; HTML

Language(s): English-Spanish

Main keywords (4 or 5): Telemedicine

SHORT ABSTRACT

(*Brief description of the content in English, French or Spanish*)

Volume 2 of the multimedia material produced for distant training containing text, presentation and videos. Topics covered in this editions include Telemedicine applications, Minimal technical knowledge, Nanotechnology and new materials, Mobile and electronic learning, Digital signature, Security for health-care, Legal and liability issues, Artificial intelligent in the control of diseases, robotic surgery, ambience intelligence and virtual environment for disease control and treatment, telepresence.

4.4. Title: EU-Master of Telemedicine and Bioengineering applied to Telemedicine. Volume III.

Producer and/or distributor (*with address*): CATAI Ed. ISBN: 84-611-3589-X.

Year: 2006-11

Teaching/learning material X

Type of material:

- Video DVD with text & multimedia X
- CD ROM
- Visioconference:
- Other type of material

(*Please specify*):_____

Duration: 2 GB

Format: RM (real media); PDF; HTML

Language(s): English-Spanish

Main keywords (4 or 5): Telemedicine

SHORT ABSTRACT

Volume 3 of the multimedia material produced for distant training containing text, presentation and videos. Topics covered in this editions include mainly standards and technology linked to personalized medicine or *p*-Medicine, Non-invasive sensors, Security for health-care, Legal and liability issues, Artificial intelligent in the control of diseases, robotic surgery, ambience intelligence and virtual environment for disease control and treatment, telepresence.

4.5. Title: EU-Master of Telemedicine and Bioengineering applied to Telemedicine. Volume IV.

Producer and/or distributor (*with address*): CATAI Ed. ISBN: 978-84-612-1102-9.

Year: 2007-11

Teaching/learning material X

Type of material:

- Video DVD with text & multimedia X
- CD ROM

- Visioconference:
 - Other type of material
(Please specify): _____
- Duration: 2 GB
 Format: RM (real media); PDF; HTML
 Language(s): English-Spanish
 Main keywords (4 or 5): Telemedicine

SHORT ABSTRACT

(Brief description of the content in English, French or Spanish)

Volume 4 of the multimedia material produced for distant training containing text, presentation and videos. Topics covered in this editions include Global vision of standard in Telemedicine. Quality control in Teleophthalmology and OCT. Telemedicine cost in Primary Attention. New aspects in the DICOM standard. Wavelet compression on medical imaging. Image quality assessment. Identity management Quality of services in 4G networks. Telecardiology quality and reliability assurance frameworks. IHE in Spain. Data Protection Laws. Advances in Sanitary Regulation. OneQL: Efficiently Querying the Health Domain in the Semantic Web. Telemetry. Calibration of monitors in Radiology. Wide Spain. Standards of virtual reality. Environmental intelligence in telemedicine. Decision support system and robotics. Stitching & transmission in JPEG2000. Telemedicine in the Sea. Teleophthalmology in the HUC. Distance learning in surgery. Quality control and quality assessment medical device standards. Medical image modalities. Cardiac frequency and detection of cardiac events. Image stictchin in medicine. Telepsychyaty efficacy. Hand-held computer in medicine. Spanish law and Telemedicine. Ethics in Telemedicine.

4.6. Title: EU-Master of Telemedicine and Bioengineering applied to Telemedicine. Volume V.

Producer and/or distributor *(with address)*: CATAI Ed. ISBN: 978-84-612-8290-6.

Year: 2008-11

Teaching/learning material X

Type of material:

- Video DVD with text & multimedia X
- CD ROM
- Visioconference:
- Other type of material

(Please specify): _____

Duration: 2 GB

Format: RM (real media); PDF; HTML

Language(s): English-Spanish

Main keywords (4 or 5): Telemedicine

SHORT ABSTRACT

(Brief description of the content in English, French or Spanish)

Volume 5 of the multimedia material produced for distant training containing text, presentation and videos. Topics covered in this editions include Global vision of Quality control in Telemedicine. Biobanking.

4.7. Title: EU-Master of Telemedicine and Bioengineering applied to Telemedicine. Volume VI.

Producer and/or distributor *(with address)*: CATAI Ed. ISBN: 978-84-613-7245-4.

Year: 2008-11

Teaching/learning material X

Type of material:

- Video DVD with text & multimedia X
- CD ROM
- Visioconference:
- Other type of material

(Please specify): _____

Duration: 2 GB

Format: RM (real media); PDF; HTML

Language(s): English-Spanish

Main keywords (4 or 5): Telemedicine

SHORT ABSTRACT

(Brief description of the content in English, French or Spanish)

IoT. La Internet de los Dispositivos médicos. Salud 2.0 a Salud 3.0, trata de los aspectos tecnológicamente mas avanzados sobre la gestion de los dispositivos a distancia a traves de Intra o Internet, con identificacion univocas y altas en la red, que permiten la ubicación, gestion y modificación a distancia de los dispositivos medicos o mecanicos asociaciados (ejem: camillas...) de forma que se facilite no solo un MRP (management resource planning) sino una telemetria en condiciones de permitir la monitorizacion de los pacientes. En el segundo apartado nos movemos desde la Salud electronica 2.0 a traves de Internet en la que la calidad y control es limitado a la Salud 3.0 en la que se priman los criterios de control de calidad en todos los ambitos de automatizacion y robotizacion.

Para ello contamos con expertos internacionales, especialmente seleccionados por sus aspectos innovadores en su clinica diaria o en sus investigaciones y por su apuesta por la estandarización y calidad de la asistencia.

4.8. Title: EU-Master of Telemedicine and Bioengineering applied to Telemedicine. Volume VII.

Producer and/or distributor *(with address)*: CATAI Ed. ISBN: 978-84-614-5996-4.

Year: 2009-11

Teaching/learning material X

Type of material:

- Video DVD with text & multimedia X
- CD ROM
- Visioconference:
- Other type of material

(Please specify): _____

Duration: 2 GB

Format: RM (real media); PDF; HTML

Language(s): English-Spanish

Main keywords (4 or 5): Telemedicine

SHORT ABSTRACT

(Brief description of the content in English, French or Spanish)

Moviles 4G en Telemedicina, trata de los aspectos tecnológicamente mas avanzados sobre la gestión de los dispositivos a distancia a través de Telefonía móvil. Particularmente:

1.- El uso de los moviles de ultima generación para la medicina y las aplicaciones H2H (health2health) y las Smart-GRID o el acceso universal en la Nube, además de los aspectos tecnicos del Packet Backhaul Technology, o las estrategias packet-core.

2.- El control de calidad de las aplicaciones de Telemedicina

3.-El informe: "Telecommunications, IT and Healthcare: Wireless Networks, Digital Healthcare and the Transformation of US Healthcare, 2006-2011" en el que se especifica que en USA la industria de TIC relacionadas con la salud se incrementara en un 8.4% en 5 años cubriendo desde \$7.5 billones en 2008 a \$11.3 billones en 2013. El gasto sanitario pasara de ser un 6% del PIB a un 16% to 18%. La industria sanitaria se ve forzada a operar de forma mas eficiente, y un elemento central sera la creacion de redes eficientes capaces de compartir no solo datos sino imagenes de calidad para el diagnostico remoto que se llevara a cabo con personal medico altamente cualificado. Un coste enorme se pierde en el sistema en la interfase medico-paciente – tiempo de desplazamientos, buscar plazas a los enfermos, buscar la atencion que requieren, administrar la atencion etc...

- Por ello el control remoto es algo esencial Para ello contamos con expertos internacionales, especialmente seleccionados por sus aspectos innovadores en su clinica diaria o en sus investigaciones y por su apuesta por la estandarización y calidad de la asistencia.

5. Title of activity: WEB OF THE TELEMEDICINE GROUP

5.1. Title: www.teide.net/catai

Producer and/or distributor *(with address)*: CATAI

Year: 1997-2011

Teaching/learning material X

Type of material:

- Video
- CD ROM
- Visioconference:
- Other type of material X

(Please specify): _____ Web page; Videostreaming training

Duration:
Format: Html; RM (real media)
Language(s): English- Spanish
Main keywords (4 or 5): Telemedicine

SHORT ABSTRACT

The CATAI web has as main objective the spread of the Telemedicine in Spain and in developing countries. The non-for profit association for the CATAI (Center of Advanced Technology in Image Analysis) support Telemedicine activities and studies in the field of:

- Image Analysis at distance
- Data transmission
- Videoconsultation and videoconferences
- On Line training
- Distant telequantitation.

The Summer and Winter Courses of the CATAI can also be followed on line during its production by means of the Helix Videoserver providing Real Media output that contain the Power Point presentation together with the video image of the speaker.

5.2. Title: Telemedicine BLOG <http://www.catai.net/blog>

Producer and/or distributor (*with address*): ULL

Year: 2008-2011

Teaching/learning material

Information material X

Type of material:

- Video
- CD ROM
- Videoconference:
- Other type of material X
(*Please specify*):_Noticias_

Duration: Always updated.

Language(s): English- Spanish

SHORT ABSTRACT

The blog of the TELEMEDICINE chair display all outstanding informations regarding the chair itself, the cooperation activity and the Unesco activity related with the chair of telemedicine, as well as the mission carried out in rural and depressed areas.

6. Title of activity: WEB & SMS Server for TM control at distance

6.1. Title: Diabetes control <http://193.145.112.231/CHS/>

Producer and/or distributor (*with address*): CATAI

Year: 2002-2011

Teaching/learning material

Type of material:

- Video
- CD ROM
- Visioconference:
- Other type of material X
(*Please specify*):_____ Support of diabetic people at distance

Duration:

Format: Html;

Language(s): English- Spanish

Main keywords (4 or 5): Telemedicine, Diabetes, SMS

SHORT ABSTRACT

Web Server available for groups of medical people in English and in Spanish to be able to test Diabetes control at distance. It is accessible by Internet and also using mobile phone SMS.

6.2. Title: Anticoagulant treatment control at distance
<http://193.145.112.231/INR/>

Producer and/or distributor (*with address*): CATAI

Year: 2002-2011

Teaching/learning material

Type of material:

- Video
- CD ROM
- Visioconference:
- Other type of material X
(Please specify): _____ Support of people treated with an anticoagulant treatment.

Duration:

Format: Html;

Language(s): English- Spanish

Main keywords (4 or 5): Telemedicine, INR, telemetry, anticoagulation, SMS

SHORT ABSTRACT

This web site is available for any patient or doctor that either can be controlled at distance o want to control de patient at distance. Include a Decision Support System (DSS) to advise the user on the type of treatment that should be implement plus the capability of give messages from doctor to patients and viceversa.

7. Title of activity: DISTANT TEACHING

7.1. Title: <http://alexandros.ccslab.aueb.gr/~ctc>

Producer and/or distributor (*with address*): CATAI

Year: 2000-2011

Teaching/learning material X

Type of material:

- Video
- CD ROM
- Visioconference:
- Other type of material X
(Please specify): _____ Web page

Duration:

Format: Html

Language(s): English-Spanish

Main keywords (4 or 5): Telemedicine distance training

SHORT ABSTRACT

The present activity carries out the diffusion of the structured training skills in the field of TELEMEDICINE. It introduces an innovative professional training by assuming new Information Society skills not only in the Health Care provision but also in the teaching methodology. The co-operation inside of the present CTC consortium will provide and update the contents of those rapidly moving technologies, and will bring innovative approaches in the teaching done at distance with experience of the ODL of APOLLO project as well as the experience on surgical virtual reality simulators provided by the new partners. The training is directed towards trainers to update their knowledge and skills, it means health care professionals (including directors and responsible people) in the European Union. This requires the updating of the Information Society training applied to health care.

This activity is linked with the initiative of the UNESCO Chair of Telemedicine to apply the consortium experience towards the urgent demand of Telemedicine in developing countries to improve their limited health care system efficiency and accessibility. The International teaching activities are arranged in intensive Winter and Summer Courses particularly to update trainers knowledge and teaching material. This activity also takes into consideration the fact that a complete training is not possible in each individual country due to the irregular Health Care technology developments throughout the European Union

7.2. Title: Distant coaching and training(BREEZE) <http://www.cataibreeze.ull.es/>

Producer and/or distributor (*with address*): CATAI

Year: 2006-2011

Teaching/learning material X

Type of material:

- Video X
- CD ROM
- Videoconference: X

- Other type of material X
(Please specify): Multimedia material and on-line session to train at distance in Telemedicine, including the official master students.
 Duration: Always updated. Up to now 3 months material
 Format: Macromedia Breeze (server-presenter); Macromedia Flash
 Language(s): English- Spanish
 Main keywords (4 or 5): Telemedicine training

SHORT ABSTRACT

Web Server available for training and coaching students on line and at distance in the Telemedicine topic as well as Bioengineering applied to telemedicine. Top multimedia material and test as well as on line conferences are included for study an review of the students. On line questionnaires will be available in the future.

7.3. Title: European master Telemedicine

<http://www.teide.net/catai/inscripcion/MASTERESP.htm>
http://www.bioingenieria.edu.ar/extension/secretaria/novedades/boletines/Boletin%20Institucional_76.htm

Year: 2007-2011

Teaching/learning material X

Information material

Type of material:

- Video
- CD ROM
- Videoconference:
- Other type of material X
(Please specify): PDF.

Duration: 2007-2009

Format: PDF

Language(s): English- Spanish

SHORT ABSTRACT

El objetivo del Master Europeo de Telemedicina y Bioingeniería aplicada a la Telemedicina es impartir una enseñanza de calidad en Telemedicina y Salud electrónica orientada a posgraduados en Medicina, Informática, Ingenieros, Economistas e incluso Abogados, habilitando a estos profesionales para desarrollar e implementar soluciones sobre atención médica a distancia en cada uno de sus entornos.

8. Title of activity: UNIVERSITY OF LA LAGUNA (ULL)

8.1. Title: Guide of the ULL

http://www.teide.net/catai/catedra_unesco/pag5253.pdf

Producer and/or distributor *(with address):* ULL (University La Laguna)g

Year: 2007-2008

Teaching/learning material

Information material X

Type of material:

- Video
- CD ROM
- Videoconference:
- Other type of material
(Please specify): PDF. (pages 52-53)

Duration: Always updated.

Format: PDF

Language(s): English- Spanish

Main keywords (4 or 5): UNESCO Chair information in the guide of the ULL

SHORT ABSTRACT

Refers the presence and the activity of the UNESCO Chair of the University of La Laguna in the general guide of the University in a prominent place.

9. Title of activity: UNESCO

9.1. Title <http://www.unesco.org/en/unitwin/access-by-region/europe-and-north-america/spain/unesco-chair-in-telemedicine-467/>

Year: 2011

Teaching/learning material X

Information material

Type of material:

- Video
- CD ROM
- Videoconference:
- Other type of material X
(Please specify): htm

Format:

Language(s): Spanish

SHORT ABSTRACT

- Para facilitar la capacitación y la adquisición de habilidades en la Telemedicina, dirigidos a las áreas geográficas y la aplicación médica que muestran las necesidades reales de apoyo a la telemedicina.
- Actuar como órgano intermediario o dar apoyo directo de telemedicina adaptado a las necesidades e infraestructura de los países que reciben apoyo.
- Para promover la telemedicina misión de la unidad central (MTCU) que proporciona: apoyo médico a través del teléfono, centros de coordinación (RCC) y centros de telemedicina de apoyo

9.2. Title http://www.ull.es/viewullnew/institucional/prensa/Noticias_ULL/es/2078715

Year: 2011

Teaching/learning material X

Information material

Type of material:

- Video
- CD ROM
- Videoconference:
- Other type of material X
(Please specify): htm

Format:

Language(s): Spanish

SHORT ABSTRACT

- La cátedra de Anatomía Patológica de la Universidad de La Laguna, ostentada por la doctora Olga Ferrer-Roca, ha organizado el XXIV Curso de Análisis de Imagen del CATAI (Curso Avanzado Tecnológico de Análisis de la Imagen), una iniciativa muy consolidada que pretende exponer a alumnos y profesionales del sector los últimos avances en telemedicina, motivo por el cual, además, este centro académico es acreedor de una cátedra UNESCO en la misma materia. El curso de este año comenzará el próximo lunes, 28 de marzo en la Facultad de Medicina, donde se impartirá hasta el 3 de abril, y estará dedicado a aplicaciones médicas para iPhone y móviles 4G.

9.3. Title : Encuentro de Cátedras UNESCO de España 2009

<http://catai.net/blog/2009/10/ctelemedicina-en-la-reunion-unesco/>
http://www.uco.es/catedraunesco/actividades/2009/091006_ecu09_catedras.html

Year: 2009

Teaching/learning material

Information material

Type of material:

- Video
- CD ROM
- Videoconference:
- Other type of material X
(Please specify): htm

Format:

Language(s): Spanish

SHORT ABSTRACT

• Del 6-9 Octubre tuvimos ocasión de participar en la reunión de la UNESCO en la que estaba presente nuestro amigo el Prof. Dr. Federico Mayor Zaragoza, tan activo y magnifico como siempre, que en su conferencia recalco el paso cualitativo de “desarrollo económico” a “desarrollo social” en la actualidad dirigido por el “ciudadano” y en el que las Cátedra UNESCO son el motor impulsor. E hizo especial hincapié en la presencia de las tres cátedras Canarias.

Nuestra cátedra, la primera en los listados participo en dos mesas: Iberoamerica-Caribe (IB-C) y la de Ciencia, Tecnología e Innovación, levantando grandes expectativas en la cátedra de bioética y derecho de la UB que poseen un apartado de ética en telemedicina y uno de cuyos promotores fue mi querido director de tesis doctoral el Prof. Dr. Dn. Egozcue Cuixart con el que establecimos la teoría de la correlación cariotipo-tumoral en 1975 antes de que se conocieran los oncogenes (Med Clin (Barc) Volumen: 65 Pages: p. 356-358 Published: 1975) y lamentablemente fallecido en el año 2006. Igualmente los representantes de la Casa de África de las Palmas Dn. Luis Padilla, para establecer contacto permanente.

Las conclusiones de la mesa de trabajo de Iberoamerica y el Caribe (IB-C) fueron: (1) Generar una red publica donde se publicaran los artículos y actividades de las cátedras. (2) Incorporar las TIC y el e-learning en las cátedras de IB-C. (3) Considerar los objetivos principales del Milenio de la ONU. De ellos merece la pena destacar por su relación con la telemedicina

Form 3: PROGRAMM OF COURSES

10.2009-Title of activity: SUPERRESOLUTION IN TELEMEDICINE

XVII Winter Course of CATAI

XXII Image Analysis Course of the ULL

9th March 2009-15th March 2009

ROLE OF SUPERRESOLUTION IN TELEMEDICINE.

La Laguna. Tenerife. Canary Islands. Spain.

Course recognized by: ESCAP (European Society of Analytical Cellular Pathology), ISDQP (International Society of Diagnostic Quantitative Pathology) and ISCO (International Society of Cellular Oncology). <http://www.qub.ac.uk/cm/pat/isdqp/>;

Course recognized by EFMI (European Federation of Medical Informatics)

<http://www.efmi.org/>; <http://www.gsf.de/imei/efmi/>

80 Teaching hours

Monday 9th March, 2009

16-20h • *Welcome to the Course*, **Prof. Dr. J. Marin Rodriguez**, Chancellor of Industrial Development and Technological Innovation. **Prof. Dr. E. Domenech** Head of the University of La Laguna (ULL), Tenerife. **Prof. Dr. L. Moreno Ruiz**, Vice-Rector of Research, University of La Laguna (ULL), Tenerife. *Security in Healthcare*, **Prof. Dr. Ch. Meinel**, Institute Hasso-Plattner-, University of Potsdam, Germany, <http://www.hpi.uni-potsdam.de/>

Tuesday 10th March, 2009

16-20h • *Ultrahigh Optical Coherence Tomography UH-OCT* **Prof.Dr. C. Pitris**, University of Cyprus Biomedical Imaging and applied optics. <http://www.eng.ucy.ac.cy/biaolab/> . *MicroMEMs*. **Dipl-Ing. Reiner Gotzen**, MicroTEC.Germany. http://www.microtec-d.com/html/d_company/e_fuehrung.html

Wednesday 11th March, 2009

16-20h • *Telepathology standards*. **Prof. Dr. V.Duval da Silva**, Department of Pathology, Brasil. Catholic University of South Rio Grande. <http://www.pathmax.com/microscopylink.html>. *ISO/IEC FCD 15938-12. ISO/IEC CD 24800-3:2008. Query formats for multimedia applications JPEG2000-MPEG-7* **Prof.Dr. R.Tous**, Universitat Politecnica Catalunya.(UPC) Computer architecture. <http://people.ac.upc.edu/rtous/docencia.html>

Thursday 12th March, 2009

16-20h • *Superresolution microscopes*, **Prof. Dr. O. Ferrer Roca**, UNESCO Chair of Telemedicine. ULL. <http://www.teide.net/catai>. *Telemedicine in the Amazonia*. **Prof. Dr. V. Duval da Silva**, Department of Pathology, Brasil. Catholic University of South Rio Grande. <http://www.mrc.ac.za/conference/satelemedicine/Russomano.pdf>

Friday 13th March, 2009

16-20h. *DICOM standard Basics and support for Teaching & Clinical Trial*. **Prof. Dr. A.Horsch**. Technical Univ. Munich. Germany. <http://www.efmi-wg-mip.net/>. *Standards on metadata annotations*. **Prof. Dr. A. Kastania**, Found Biomedical Res. Academy of Athens. <http://www.bioacademy.gr/EN.htm>.

Saturday 14th March, 2009

16-20h. *Techniques to Query the Semantics Web Efficiently*. **Prof. Dr. M. E. Vidal**. University Simon Bolivar. Venezuela. <http://www.usb.ve>. *Inefficiency of the super- resolution and possible solutions*. **S. G. Lipson**. Israel Inst Technology, Haifa, Israel <http://www.technion.ac.il/> ; <http://physics.technion.ac.il/>

Sunday 15th March, 2009

16-20h. *Telemetry*, **Mr. J. L. López**. COMITAS Communications. <http://www.comitas.es>. *Telesurgery*. **Prof. Dr. G. Graschew and V. Guerkan**, Clinical university of the Charité, Berlin, <http://www.rk-berlin.de/op2000>. ESA- European Space Agency, ESTEC- European Space Research and Technology Centre, Noordwijk, Holland, <http://www.esa.int/>

Workshops: Everyday from 8 to 16 h. 1. Tele-pathology systems: Texcan and Coolscope; 2. Automatic web gallery <http://people.ac.upc.edu/rtoous/projects/webgallery/index.html> ; 3. Flash Programming; 4. Telemetry with electronic stethoscopes, weights, ECG and vital sign control; 5. HTML & Blogs; 6. Portable ultrasonography; 7. Wireless sensors; 8. SMS management control; 9. Web control of diabetes; 10. SMIL Programming; 11. Wearable computers; 12. Distant control of monitors for image diagnosis.

11.2010-Title of activity: IoT. INTERNET OF THINGS FOR MEDICAL DEVICES.
HEALTH 2.0 TO HEALTH 3.0.

XVIII Winter Course of CATAI

XXIII Image Analysis Course of the ULL

8th -14th March 2010

**IoT. INTERNET OF THINGS FOR MEDICAL DEVICES.
HEALTH 2.0 TO HEALTH 3.0.**

La Laguna. Tenerife. Canary Islands. Spain.

Course recognized by: ESCAP (European Society of Analytical Cellular Pathology),
ISDQP (International Society of Diagnostic Quantitative Pathology) and ISCO (International Society of Cellular Oncology). <http://www.qub.ac.uk/cm/pat/isdqp/>;

Course recognized by EFMI (European Federation of Medical Informatics)
<http://www.efmi.org/>; <http://www.gsf.de/imei/efmi/>

80 Teaching hours

Monday 8th March, 2010

16-20h. *Welcome to the Course*. **Prof. Dr. J. Marin Rodriguez**, Chancellor of Industrial Development and Technological Innovation. **Prof. Dr. E. Domenech** Head of the University of La Laguna (ULL), Tenerife. **Prof. Dr. L. Moreno Ruiz**. Research Vice-Rector, Univ. of La Laguna, Tenerife. *Security in the Internet of Things for Medical Devices*, **Prof. Dr. Ch. Meinel**, Hasso-Plattner Institute, Potsdam University, Germany, <http://www.hpi.uni-potsdam.de/>

Tuesday 9th March, 2010

16-20h. *System integration in home-care*. **Prof. Dr. J. Roca**. ICT. Hospital Clínic Barcelona. <http://www.idibaps.ub.edu/cat/home.php>. *Endoscopy with confocal Microscopy*. **Prof. Dr. Martin Götz**. Oberarzt Gastroenterologie. I. Medizinische Klinik und Poliklinik. Univ Mainz. Germany. <http://www.uni-mainz.de/>

Wednesday 10th March, 2010

16-20h • *RFID & IoT scenarios in Healthcare*. **Prof. Dr. Carlo Maria Medaglia**- CATTID Univ Di Roma Sapienza. Italia. <http://w3.uniroma1.it/rfidlab/default.asp>. *Optical Biopsy and ethical problems*. **Prof. Dr. V.Duval da Silva**. Dpt. Pathology. Catholic University of Rio grande Sud. Brasil. <http://www.pathmax.com/microscopylink.html> .

Thursday 11th March, 2010

16-20h • *The Internet of the things in Telemedicine*, **Prof. Dr. O. Ferrer Roca**, UNESCO Chair of Telemedicine. ULL. <http://www.teide.net/catai>. *CBIR - Content based information retrieval in Optical Biopsies*. **Prof. Dr. R. Tous**. Politecnico University of Catalunya- UPC- Computer architecture. <http://people.ac.upc.edu/rtous/docencia.html>. *Robotic and distant diagnostic solutions of 3DHISTECH*. **Mr. H. Csaba** <http://www.3dhistech.com/> 3Dhistech. Budapest. Hungary.

Friday 12th March, 2010

16-20h • *DICOM extensions, image query solutions for teaching and training*. **Prof. Dr. A. Horsch**. Technical Univ. Munich. Germany. <http://www.efmi-wg-mip.net/>. *Standards in Telemedicine*. **Prof. Dr. A. Kastania**, Found. Biomedical Res. Academy of Athens. <http://www.bioacademy.gr/EN.htm>

Saturday 13th March, 2010

16-20h. *Techniques to Query the Semantics Web Efficiently*. **Prof. Dr. M. E. Vidal**. University Simón Bolívar. Venezuela. <http://www.usb.ve>. *Implementing and Working with an Open Source Hospital and Health Information System: the Medical Project in Latin America and Africa*. **Ing. Dr. L. Falcón**. Las Palmas de Gran Canaria. Canary Islands. <http://www.iweee.org>. <http://www.gnusolidario.org/en/>

Sunday 14th March, 2010

16-20h. *Telemetry*, **Mr. J. L. López**. COMITAS Communications. <http://www.comitas.es>. *Telesurgery*. **Prof. Dr. G. Grashew and V. Guerkan**, Clinical university of the Charité, Berlin, <http://www.rnk-berlin.de/op2000>. ESA- European Space Agency, ESTEC- European Space Research and Technology Centre, Noordwijk, Holland, <http://www.esa.int/>

Workshops: Everyday from 8 to 16 h.

1. *Tele-pathology 3Dhistech*; 2. *Robotic surgery and intelligent operating room* (Prof.Dr. A. Alarcó & Dr. A. Bravo). *.HTML & Blogs*; 4. *Portable ultrasonography*; 5. *Web control of diabetes*; 6. *Wearable computers*; 7.- *Neuroimaging* (Prof. Dr. JL Gonzalez-Mora, Antonio, Lic. F. Rodríguez Hernández; *Medicine*, Dr. G. Navarrete García. *Psychologies*, Lic. C. Modroño Pascual, *Mathematics y Psychologies*)

VENUE: Main hall of the Faculty of Medicine. University of La Laguna

12.2010-Title of activity: I JORNADAS DE INNOVACION DE ATENCION SANITARIA CON LAS TICs

DIA: 29 Septiembre 2010. 9-15h

SEDE: Sala de Audiovisuales de la Sede de Caja Siete en la trasera de la Calle Manuel Hermoso Rojas 8, c/ Unión Artística el Cabo frente al recinto ferial en Santa Cruz de Tenerife.

ORGANIZA: Telefónica SA, ULL, UPGC.

❖ *Inauguración*

Dn. Juan Jose. Flores Mederos,

Director Territorial de Telefónica en Canarias.

juanjose.floresmederos@telefonica.es

Dn. Pablo Baeza Bacaicoa

Unidad de Negocio de e-Health de Telefónica

Licenciado Informático por la Universidad Politécnica de Madrid y consultor sénior de la Unidad de e-Health de Telefónica España. PabloLuis.BaezaBacaicoa@telefonica.es

Dña Josefina Pérez-Hernández Ruiz-Falcó.

Gerente de las Cátedras Telefónica, S.A. josefina.perezhernandezruizfalco@telefonica.es

- ❖ *Introducción a los trabajos de Innovación en atención Sanitaria de la ULPGC.* **Prof. Dr. José Miguel Santos Espino.**
Prof. Dr. JM Santos Espino. Director de Política Informática de la ULPGC, Profesor titular de la Escuela Universitaria y Responsable Académico de la Cátedra Telefónica ULPGC de Tecnologías Accesibles de Telefónica SA. dpi@ulpgc.es
- ❖ *ACCESIBLE: a los servicios de emergencias para personas sordas.* **Dr. José Juan Hernández Cabrera.**
Dr. J J. Hernández Cabrera. Licenciado en informática y doctor por la ULPGC. Profesor titular de Escuela Universitaria, pertenece al Instituto Universitario de Sistemas Inteligentes y Aplicaciones Numéricas en la Ingeniería (SIANI). josejuanhernandez@gmail.com
- ❖ *CARDIODETECT. Detección y clasificación de las arritmias en tiempo real* **Dn. Ing. Santiago Pérez Suárez..**
Ing. Santiago Pérez Suárez. Ingeniero de Telecomunicación y DEA (Diploma de Estudios Avanzados) y ostenta encargo de profesor Titular de Escuela Universitaria. Desarrolla su actividad en el Departamento de Señales y Comunicaciones de la ULPGC sperez@dsc.ulpgc.es
- ❖ *Introducción a los trabajos de Innovación en la atención Sanitaria de la ULL.* **Prof.Dr.O.Ferrer-Roca.**
Prof.Dr.O.Ferrer-Roca. Médico especialista de Anatomía Patológica, Catedrático de Anatomía Patológica de la Facultad de Medicina de la ULL; Responsable de la Cátedra de Telemedicina de Telefónica SA; Responsable de la Cátedra UNESCO de Telemedicina. Presidente del CATAI. catai@teide.net
- ❖ *TELEICTUS.* **Dr. Joaquín Carneado-Ruiz, Dr. José Antonio Rojo Aladro y Dr. Juan Vicente Sánchez Andrés.**

Dr. **J. Carneado-Ruiz** es Médico especialista en Neurología. Máster en Patología Cerebrovascular por la Universidad Complutense. Acreditado en Neurosonología por la Sociedad Europea de Neurosonología y Hemodinámica cerebral. Jefe de Sección de Neurología del Hospital Infanta Elena de Madrid. Miembro del Comité Ejecutivo de la Sociedad Europea de Neurosonología y Asesor de la EMEA (Agencia Europea del Medicamento) para asuntos neurológicos. jcarnead@hotmail.com

Dr. **JA. Rojo Aladro** es Médico especialista en Neurología. Máster en Neurociencias por la Universidad de Barcelona. Capacitación Técnica Específica en Neurosonología por la Sociedad Española de Neurología. Colaborador Docente de Neurología, ULL. Tutor del Programa de Formación de la especialidad de Neurología, HUC. Miembro del Comité Científico de la Sociedad Española de Neurología.

Dr. **JV Sánchez Andrés** es Médico, Doctor por la Universidad de Alicante y Catedrático de Fisiología de la ULL. Realizó su formación postdoctoral en el National Institute for Neurologic Diseases and Stroke de los National Institutes of Health (NIH) en Bethesda (Maryland). Director asociado de la Revista de Neurología, asesor de la Clínica Mediterránea de Neurociencias y de la Fundación para el Conocimiento Madri+D. Miembro del consejo científico y tecnológico de la FECYT (Fundación Española de Ciencia y Tecnología). Vicepresidente de la Fundación Mediterránea de Neurociencia. Director Médico de Viguera Editores. Codirector Máster en Neurociencia (UPO) y Máster en Psicobiología (UAB). Gestor del Programa RevNeurol (Premio Mejor iniciativa editorial 2008, Fund. Lilly). Especialista en Gestión Clínica en Salud Mental y

Director del Programa Emprendeduría Universitaria de la Escuela de Organización Industrial.
jandres@ull.es

❖ **SONOGRAFIA VIRTUAL. Dr. Juan Mario Troyano Luque , Dña Fany Falcón, Ing. Dn. L. Ortega.**

Dr. JM Troyano Luque es Médico especialista de Obstetricia y Ginecología, Profesor Titular de Ginecología y especialista en Ultrasonografía. Jefe de la Unidad de Ecografía y Medicina Fetal del Hospital Universitario de Canarias (HUC), Presidente de la Sociedad Española de Ecografía Ginecología y Obstetricia (SEGO) y ex presidente de la Sociedad Mediterranean Ultrasound Obstetrics & Gynecology .MBA en dirección de sociedades científicas por la ESADE Bussinnes School Madrid. Académico de la Real Academia de Medicina de Madrid. jtroyanol@sego.es

Dña F. Falcón es la responsable de General Electrics Healthcare (GE-Healthcare) durante 15 años y del mini-ecógrafo portátil más pequeño del mercado el VSCAN con flujo color. Especialista en aplicaciones de ultrasonido y densitometría. fany.falcon@wanadoo.es

Ing. Dn. L Ortega Ingeniero Técnico Informático, Director General de Ibérica (España y Portugal) de GE Healthcare.

13.2011-Title of activity: 4G Mobile Phones in TELEMEDICINE

XIX Winter Course of CATAI

XXIV Image Analysis Course of the ULL

28th March-3th April 2011

4G Mobile Phones in TELEMEDICINE

La Laguna. Tenerife. Canary Islands. Spain.

Course recognized by: ESCAP (European Society of Analytical Cellular Pathology),
ISDQP (International Society of Diagnostic Quantitative Pathology) and ISCO (

International Society of Cellular Oncology). <http://www.qub.ac.uk/cm/pat/isdqp/>;

Course recognized by EFMI (European Federation of Medical Informatics)

<http://www.efmi.org/>; <http://www.gsf.de/imei/efmi/>

80 Teaching hours

Monday 28th March, 2011

16-20h. *Welcome to the Course.* **M. Mar Julios**, Chancellor of Industrial Development and Technological Innovation. **Prof. Dr. E. Domenech** Head of the University of La Laguna (ULL), Tenerife. **Prof. Dr. L. Moreno Ruiz**. Research Vice-Chancellor, Univ. of La Laguna, Tenerife. *Service Oriented architecture-SOA for National Cancer Center Registry*, **Prof. Dr. Ch. Meinel**, Hasso-Plattner Institute, Potsdam University, Germany, <http://www.hpi.uni-potsdam.de/>

Tuesday 29th March, 2011

16-20h. *iPhone system integration in home-care.* **Prof. Dr. J. Roca**. ICT. Hospital Clínic Barcelona. <http://www.idibaps.ub.edu/cat/home.php>. *Interpath a pathology application with iPhone.* **Prof. H. Danielsen**. Director Inst. Medical Informatics. Radiumhospitalet. Oslo University Hospital. <http://www.room4.eu/interpath.htm>

Wednesday 30th March, 2011

16-20h • *Telestroke services* **Prof. Dr. JV Sanchez Andres-** Prof. Physiology. ULL. *Ultrasounds in the Telestroke- iPhone services.* **Dr. J. Carneado Ruiz & JA Rojo Aladro.** Neurology section. Infanta Elena Hospital in Madrid & Clinic Hospital of Tenerife.

Thursday 31th March, 2011

16-20h • *Telemedicine with mobile phones,* **Prof. Dr. O. Ferrer Roca,** UNESCO Chair of Telemedicine. ULL. <http://www.teide.net/catai>. *Virtual sonography to detect and follow up risk pregnancies.* **Prof. Dr. JM Troyano Luque.** Prof. Gynecology, Sono-department University Hospital. Tenerife. Canary Islands.

Friday 1th April, 2011

16-20h • *Diagnostic DICOM images in 4G mobile phones.* **Prof. Dr. A. Horsch.** Technical Univ. Munich. Germany. <http://www.efmi-wg-mip.net/>. *Certified MMS in healthcare.* **Dn. S. Sapena Soler.** Lleida. <http://www.lleida.net> ; <http://www.doctormms.com/>

Saturday 2th April, 2011

16-20h. *CBIR – Optical biopsy data base content retrieval in 4G mobile phones.* **Prof. Dr. R. Tous.** Univ. Politec. Catalunya UPC, Computer architecture depart. <http://people.ac.upc.edu/rtous/docencia.html>. *Quality control in the medical applications for 4G mobile phones.* **Prof. Dr. A. Kastania,** Found Biomedical Res. Academy of Athens. <http://www.bioacademy.gr/EN.htm>.

Sunday 3th April, 2011

16-20h. *Students presentation of the IT works.* Coordinator: **Dr. O. Ferrer-Roca.** *Telemetry,* **Mr. J. L. López.** COMITAS Communications. <http://www.comitas.es>. *Telesurgery.* **Prof. Dr. G. Grashew and V. Guerkan,** Clinical university of the Charité, Berlin, <http://www.rk-berlin.de/op2000>. ESA- European Space Agency, ESTEC- European Space Research and Technology Centre, Noordwijk, Holland, <http://www.esa.int/>
Workshops: Everyday from 8 to 15 h.

Neuroimaging (Prof. Dr. JL Gonzalez-Mora, Antonio, Lic. F. Rodríguez Hernández; Medicine, Dr. G. Navarrete García. Psychologies, Lic. C. Modroño Pascual, Mathematics y Psychologies); 2. Robotic surgery and intelligent operating room (Prof. Dr. A. Alarcó & Dr. A. Bravo). 3. Digital signature in 4G mobile phones; 4. Portable ultrasonography; 5. Web control of diabetes; 6. Wearable computers; 7. Stroke image control with 4G mobile phones. **VENUE: Main hall of the Faculty of Medicine. University of La Laguna**

PRESS RELEASE

<http://www.cunoticias.com/noticiasde/curso-avanzado-tecnologico-de-analisis.php>

<http://www.comminit.com/en/node/121255/38>

<http://www.iweee.org/2010/speakers.html>

<http://instapedia.com/m/Telemedicine>

<http://en.wikipedia.org/wiki/index.html?curid=774446>

http://en.wikipedia.org/wiki/UNESCO_Chair_in_Telemedicine

http://raisingchooks.typepad.com/raising_chooks/2010/06/a-little-about-the-history-of-telemedicine.html ç

<http://www.yatedo.com/s/companynname%3A%28%28unesco%29+OR+%28telemedicine%29%29+AND+%28jobtitle%3A%28%28chair%29%29+OR+profession%3A%28%28chair%29%29%29/all>

<http://jsahealthmd.com/tag/telemedicine/>

<http://www.mmdnewswire.com/virtual-microscopy-application-ipad-34658.html>

http://www.europa-eu-un.org/articles/en/article_8653_en.htm

<http://www.reference.com/browse/telemedical>

<http://www.springerlink.com/content/687pt00001m33564/>

<http://www.springerlink.com/content/687pt00001m33564/fulltext.pdf> Translational Oncology

<http://eldigitaldecanarias.net/enviar46763.php>

<http://iphone-pc.net/tag/freetoplay>

<http://www.iweee.org/2010/speakers.html>.

<http://www.eldigitaldecanarias.net/noticia46763.php>

<http://www.juventudcanaria.com/es/noticias/index.php?id=10111>

<http://www.gobiernodecanarias.org/noticias/index.jsp?module=1&page=nota.htm&id=124173>

http://www.cenetec.salud.gob.mx/descargas/comite_e-Salud/FOROjunio08.pdf

http://www.infoamerica.org/primera/guia_catedras.pdf

<http://www.cunoticias.com/noticiasde/facultad-de-medicina.php>

http://www.ull.es/viewullnew/institucional/prensa/Noticias_ULL/es/335810

<http://www.tribunadecanarias.es/index.php?name=News&file=article&sid=18918&theme=Printer>
<http://www.ull.es/modules/ullnew/view.aspx?id=257097>