

**Information Society Technologies
6th Framework Programme
European Commission**

**Project N°: IST-2002-507424
Acronym: ALLADIN**



**Deliverable 7.1:
ALLADIN website and dissemination material**

List of Partners: Arteveldehogeschool (B)
Language and Computing NV (B)
Budapest University of Technology and Economics (HU)
Univerza v Ljubljani, Fakulteta za Elektrotehniko (SL)
Zenon SA, Robotics and Informatics (EL)
University of Wales Cardiff (UK)
Multitel ASBL (B)
The Provost Fellows and Scholars of the College of the Holy and
Undivided Trinity of Queen Elizabeth near Dublin (IRL)
Országos Orvosi Rehabilitációs Intézet (HU)
Scuola Superiore di studi universitari e di perfezionamento Sant'Anna (I)
Università Campus Bio-Medico (I)

<i>Document identifier:</i>	D7.1 rev7
<i>Version:</i>	1.0
<i>Delivery Date:</i>	March 31, 2007
<i>Task</i>	T7.1
<i>Deliverable:</i>	D7.1
<i>Nature:</i>	R (Report)
<i>Dissemination level</i>	PU – (Public)
<i>Lead participant</i>	SSSA – Scuola Superiore Sant'Anna – Pisa (Italy)
<i>Authors of the Document:</i>	SSSA – Stefano Mazzoleni UCBM – Eugenio Guglielmelli AHS – Jo Van Vaerenbergh with contribution from all Partners
<i>Editing of the document</i>	SSSA - Stefano Mazzoleni

D7.1 - Table of Contents

1	EXECUTIVE SUMMARY	3
2	INTRODUCTION	4
3	DESCRIPTION OF THE DISSEMINATION PLAN.....	4
3.1	DISSEMINATION OBJECTIVES	4
3.2	SCIENTIFIC DISSEMINATION STRATEGY	5
4	PUBLICATIONS.....	5
4.1	CONFERENCES.....	5
4.2	JOURNALS	7
4.3	IN PREPARATION.....	7
4.4	TARGET JOURNALS AND MAGAZINES	8
5	DISSEMINATION EVENTS	10
5.1	CONFERENCES AND EXHIBITIONS.....	10
5.2	TARGETED WORKSHOP AND SEMINARS.....	15
5.2.1	<i>International Workshop on Motor Learning in Stroke Recovery.....</i>	<i>15</i>
5.2.2	<i>6th International Conference on the Management of Healthcare & Medical Technology.....</i>	<i>16</i>
6	DISSEMINATION FACTS.....	17
7	THE ALLADIN WEBSITE.....	22
	APPENDIX	26

1 Executive Summary

The aim of this document is twofold:

- *to provide a presentation of the objectives and the plan that guided the dissemination of the ALLADIN Project;*
- *to describe the material and the actions carried out during the project in order to follow the dissemination plan and reach the targeted objectives.*

Deliverable D7.1 is one of the main outcomes of Workpackage 7/Task T7.1 'Dissemination', led by Scuola Superiore Sant'Anna (SSSA), in collaboration with University Campus Bio-Medico (UCBM).

A Plan for Using and Disseminating Knowledge (D7.2.1) was already delivered and describes a first plan of dissemination activities and the use of ALLADIN project results. A Final Plan describing the Dissemination Roadmap after the project (D7.2.2) is going to be produced together with the present deliverable.

T7.1 has been carried out in tight co-operation with the project co-ordinator but also asking feedback for the material and plan of dissemination by the other ALLADIN clinical partners.

2 Introduction

The dissemination activities performed during the whole duration of the project aimed at the creation of public and scientific awareness on project achievements. The dissemination was both a collective activity managed by the entire consortium and an individual set of actions handled by each single partner on a local level. In addition to the scientific community, three major audiences were and are particularly important for the commercial exploitation: HIS vendors, healthcare organisations/professionals, and healthcare financing organizations.

For this purpose the Consortium has disseminated the results of the project in various ways:

- Dissemination of the project via the Internet. An ALLADIN Web site was set up at the beginning of the contract and it is used to promote and present the project. It is regularly updated with results, demos. Materials with dissemination nature can be freely accessed. Project documents, interim results and developments, measurement records and patients' data will be archived. All information available on the Web site will be classified into various security grades in order not to influence the commercial interest of the Consortium and mechanisms will be implemented for granting access only the authorised users.
- Demonstration of ALLADIN application to hospitals, clinical centres, research institutions, public health care systems, and other groups of interest at workshops and exhibitions. In the first project months, the consortium will decide in which exhibitions and conferences it will participate, according to a cost-benefit evaluation.
- Targeted workshop and seminars during the second half of the project and after its completion.
- Publication of technical papers including courses and course books for rehabilitation professionals on the daily use of ALLADIN system.
- Publishing ALLADIN in the printed and the electronic media.
- Producing promotional material, for example brochures, posters, CDs, and electronic newsletters.

Moreover, the partners are well aware that a successful exploitation of the ALLADIN results depends on the acceptance by the medical field of the project results. The dissemination activities of the clinical partners are therefore of great importance due to their already established contacts with organisations, institutes, hospital, etc., in the medical field.

3 Description of the Dissemination Plan

3.1 *Dissemination objectives*

The ALLADIN dissemination strategy aims at three main goals (Figure 1):

- scientific dissemination of research results, addressing the biomedical engineering and the rehabilitation medicine communities
- raising awareness on the potential impact of the ALLADIN system, addressing healthcare sector stakeholders, rehabilitation professionals, patients, etc.
- support to the definition of exploitation plans in view of the clinical application and industrial development of the ALLADIN system (and sub-systems)

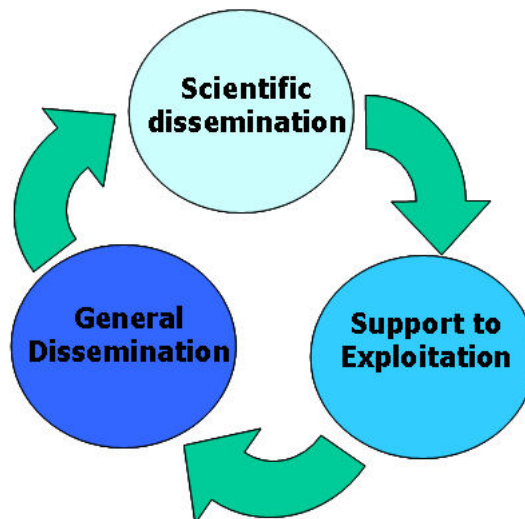


Figure 1. The Alladin dissemination strategy

3.2 Scientific dissemination strategy

The dissemination throughout the Alladin project life was divided into three main phases. The detailed description of each phase follows.

- First phase (m0 – m18)
 - Technical conference papers on the overall ADD system (co-authored by PI of all different partners)
 - Technical conference papers on ADD sub-systems (authored by relevant partners)
 - Medical and Bioengineering conference/journal review papers on methodologies for functional assessment of post-stroke patients
- Second phase (m18 – m39)
 - Technical papers on bioengineering journals
 - Medical conference papers on preliminary clinical results
- Third phase (3 months follow-up)
 - Submission of medical journal papers on the applications of the ALLADIN approach and technology to functional assessment of post-stroke patients

4 Publications

4.1 Conferences

- 1) J. Van Vaerenbergh, A. De Kegel, S. De Ruijter, S. Vandenberghe, Y. D'Hont, Is efficiency of gait improved in stroke patients using a dropped foot stimulator?, 9th Annual Conference of the International Functional Electrical Stimulation Society (IFESS), in conjunction with the 2nd Biennial Conference of UK FESnet. "Getting FES Into Clinical Practice", 6th-9th September 2004, Bournemouth, UK.
- 2) J. Van Vaerenbergh, S. De Ruijter, A. De Kegel, S. Vandenberghe, Y. D'Hont, L. De Briers, Quality and safety of gait in stroke patients using a dropped foot stimulator, 8th Vienna International Workshop on Functional Electrical Stimulation, Basics, Technology, Application, 10th-13th September 2004.

- 3) G. Kurillo, T. Bajd, A. Zupan, Assessment of grip force control in patients with muscular dystrophy, *Zdravniaki vestnik*, ISSN 1318-0347, 2004, 33 –38.
- 4) 2005,6-8 April, MULTITEL team, Poster presented at MEDeTEL Conference, Luxembourg
- 5) J. Cinkelj, M. Mihelj, M. Munih, Soft Real-Time Acquisition in Windows XP, Third IEEE International Workshop on Intelligent Solutions in Embedded Systems (WISES 2005) , May 20, 2005, Hamburg, Germany
- 6) S.Mazzoleni, J. Van Vaerenbergh, A. Toth, M. Munih, E. Guglielmelli, P. Dario, ALLADIN: A novel mechatronic platform for assessing post-stroke functional recovery, in *Proc. IEEE 9th International Conference on Rehabilitation Robotics (ICORR)*, 2005, Chicago, IL, USA. pp. 156-159.
- 7) G. Kurillo, M. Mihelj, M. Munih, T. Bajd, Grasping and Manipulation in Virtual Environment using 3by6 Finger Device, *IEEE 9th International Conference on Rehabilitation Robotics (ICORR 2005)*, June 28 - July 1, 2005, Chicago, IL, USA.
- 8) X. Ricco, S. Deketelaere, J. De Lafonteyne, A. Girardi, Visual Error Resolution Strategy for highly-structured text entry using Speech Recognition in FP6-ALLADIN project, Tenth IFIP TC13 International Conference on Human-Computer Interaction, 12-16 September 2005, Rome, Italy.
- 9) J. Van Vaerenbergh, S. Mazzoleni, A. Toth, E. Guglielmelli, M. Munih, E. Stokes, G. Fazekas, S. De Ruijter, Assessment of recovery at stroke patients by whole-body isometric force-torque measurements of functional tasks I: mechanical design of the device, 3rd European Medical and Biological Engineering Conference (EMBEC 2005) , November 20 - 25, 2005, Prague, Czech Republic,
- 10) J. Cinkelj, M. Mihelj, D. Bacciu, M. Jurak, E. Guglielmelli, A. Toth, J. De Lafonteyne, J. L. Verschelde, S. Mazzoleni, J. Van Vaerenbergh, S. De Ruijter, M. Munih, Assessment of stroke patients by whole-body isometric force-torque measurements II: software design of the ALLADIN Diagnostic Device, 3rd European Medical and Biological Engineering Conference (EMBEC 2005) , November 20 - 25, 2005, Prague, Czech Republic.
- 11) C. O'Connell, R. Galvin, A.C. Varghese, J. Lamson, E. Stokes, Analysis of the inter-rater reliability of the Motor Assessment Scale and the Fugl-Meyer Scale, Irish Society of Chartered Physiotherapists (ISCP) Annual Conference, November 10-11, 2005, Dublin, Ireland.
- 12) S. Mazzoleni, S. Micera, F. Romagnolo, P. Dario, E. Guglielmelli, An ergonomic dynamometric foot platform for functional assessment in rehabilitation, 1st IEEE / RAS-EMBS International Conference on Biomedical Robotics and Biomechanics (BIOROB), February 20-22, 2006, Pisa, Tuscany, Italy, pp. 619-624.
- 13) J. Van Vaerenbergh, Hans Cools, Sigried de Ruijter, Individual goal setting and motivational aspects in Robot Guided Neuro-rehabilitation: a clinical analysis, 1st IEEE / RAS-EMBS International Conference on Biomedical Robotics and Biomechanics (BIOROB 2006), February 20-22, 2006, Pisa, Tuscany, Italy
- 14) G. Van Dijck, M. Van Hulle, J. Van Vaerenbergh, Statistically rigorous human movement onset detection with the maximal information redundancy criterion, 28th IEEE EMBS Annual International Conference, New York City, USA, August 30-September 3, 2006, pp. 2474-2477.
- 15) G. Van Dijck, M. Van Hulle, J. Van Vaerenbergh, Hybrid feature subset selection for the quantitative assessment of skills of stroke patients in activity of daily living tasks, 28th IEEE EMBS Annual International Conference, New York City, USA, August 30-September 3, 2006, pp. 2474-2477.
- 16) M. Horváth, M. Trócsányi, G. Fazekas, A. Hering, K. Jeney, E. Herczeg, Application of biomechanical approach in rehabilitation of patients with hemiparesis, 25th Annual

Conference of the Hungarian Society of Rehabilitation and Physical Medicine, September 21-23, 2006, Galyateto, Hungary.

- 17) G. Fazekas, M. Horváth, M. Trócsányi, A. Folyovich, Z. Dénes, I. Szél, E. Herczeg, Biomechanical aspects in rehabilitation of patients with hemiparesis, 6th Mediterranean Congress of Physical and Rehabilitation Medicine, October 18-21, 2006, Vilamoura, Portugal.
- 18) S. Mazzoleni, G. Cavallo, M. Munih, A. Toth, J. Cinkelj, M. Jurak, J. Van Vaerenbergh, D. Campolo, E. Guglielmelli, Towards application of a mechatronic platform for whole-body isometric force-torque measurements to functional assessment in neuro-rehabilitation, IEEE International Conference on Robotics and Automation (ICRA), 10-14 April 2007, Roma, Italy.
- 19) Van Dijck, G., Van Vaerenbergh, J., and Van Hulle, M.M., Posterior Probability Profiles for the Automated Assessment of Recovery of Stroke Patients. Twenty-Second AAAI Conference on Artificial Intelligence (AAAI-07), July 22-26 2007, Vancouver, British Columbia, Canada, in press.

4.2 Journals

- 20) G. Kurillo, T. Bajd, A. Zupan, Assessment of grip force control in patients with muscular dystrophy, *Zdravniaki vestnik*, ISSN 1318-0347, 2004, 33 -38.
- 21) G. Kurillo, M. Mihelj, M. Munih, T. Bajd, Multi-Fingered Grasping and Manipulation in Virtual Environment Using Isometric Finger Device, MIT-Presence (in press).
- 22) G. Kurillo, M. Mihelj, M. Munih, T. Bajd, Virtual Reality System for Assessment and Training of finger-force coordination, *Medical Engineering & Physics journal*.
- 23) C. O'Connell, A. C. Varghese, E. K. Stokes, Report on reserach in progress, *Physiotherapy Ireland*, 2006, 7(1): 23-36.
- 24) Trocsany M, Fazekas G, Horvath M, Herczeg E, Toth A, Jurak M, Parallel clinical and biomechanical assessment of status and follow-up in patients with hemiparesis: where are the corresponding points? *The ALLADIN project.*, *Rehabilitació*, 2006, (16):22-27.
- 25) S. Mazzoleni, A. Toth, M. Munih, J. Van Vaerenbergh, G. Cavallo, P. Dario, E. Guglielmelli, Dynamometric platform for whole-body isometric measurements on humans, *Special Issue on Robotic Platforms for Research in Neuroscience - Advanced Robotics* (submitted).

4.3 In preparation

- 26) S. Mazzoleni, S. Micera, F. Romagnolo, P. Dario, E. Guglielmelli, An Ergonomic Dynamometric Foot Platform for Functional Assessment in Rehabilitation, In *Proc. Int. Journal of NeuroEngineering and Rehabilitation* (<http://www.jneuroengrehab.com/>).
- 27) Review journal paper on new perspectives for post-stroke functional assessment (SSSA, UCBM, AHS).
- 28) Joint publication on the *Journal of Evaluation in Clinical Practice*, IF:1,562 (AHS, L&C)
- 29) Publication on *Physiotherapy Ireland* about the results of the reliability study, December 2006 (TCD).

4.4 Target journals and magazines

Some of the partners are subscribed to main magazines and journals of its particular discipline and they are from time to time invited to provide articles to them. This is a very effective method of disseminating information about ALLADIN technologies and procedures. Publications were prepared and submitted by each partner throughout the project life.

The partners have identified a first number of magazines and journals which may be appropriate for the ALLADIN project, see table below. The list will be updated and extended throughout the life of the project.

Magazines and Journals	Description
The Lancet (http://www.thelancet.com)	Peer-reviewed journal The Lancet is an international general medical journal that will consider any original contribution that advances or illuminates medical science or practice, or that educates or entertains the journal's readers.
Arch Phys Med Rehabil (http://www2.archives-pmr.org/)	This international journal has distinguished itself through its coverage of the specialty of physical medicine and rehabilitation and of the more interdisciplinary field of rehabilitation. The journal publishes original articles that report on important trends and developments in these fields. Archives of Physical Medicine and Rehabilitation brings readers authoritative information on the therapeutic utilisation of physical and pharmaceutical agents in providing comprehensive care for persons with disabilities and chronically ill individuals. The journal is recommended for initial purchase in the Brandon-Hill study, Selected List of Books and Journals for the Small Medical Library.
Clinical Rehabilitation (http://www.arnoldpublishers.com/journals/pages/cli_reh/)	Clinical Rehabilitation is a multi-professional journal covering the whole field of disability and rehabilitation, publishing research and discussion articles which are scientifically sound, clinically relevant and sometimes provocative. The journal acts as a forum for the international dissemination and exchange of information amongst the large number of professionals involved in rehabilitation. The leading journal in its field, Clinical Rehabilitation combines clinical application of scientific results and theoretical aspects in an ideal form. It gives high priority to articles describing effectiveness of therapeutic interventions and the evaluation of new techniques and methods.
Stroke (http://stroke.ahajournals.org/)	Audience: Neurologists, cardiologists, vascular surgeons, neurosurgeons, and physiatrists
Disability and Rehabilitation (http://www.tandf.co.uk/journals/titles/09638288.asp)	Disability and Rehabilitation is an international, multidisciplinary journal which seeks to encourage a better understanding of all aspects of disability, and to promote the rehabilitation process. The journal publishes review articles, experimental and clinical research papers, case studies, clinical commentaries, reports on rehabilitation in practice, rehabilitation engineering and major book reviews, spanning a range of issues including the severity and magnitude of disability, clinical medicine including gerontology, psychosocial adjustment, social policy issues, vocational and educational training, and rehabilitation engineering. Occasional special issues on specific themes of interest to the journal's readership are published.
Journal of Medical Internet Research (http://www.jmir.org/)	Leading international peer-reviewed journal for eHealth
Frontline	The Chartered Society of Physiotherapy fortnightly news magazine
Medical & Biological Engineering & Computing	This bimonthly journal of the International Federation for Medical & Biological Engineering (IFMBE) contains technical papers on biomechanics, biomedical engineering, clinical engineering, computing and data

http://www.iee.org/Publications/Journals/ProfJourn/MBE/C/index.cfm	processing, modelling, instrumentation, medical physics and imaging, physiological measurement, rehabilitation engineering and transducers and electrodes. The editorial content is refereed by an international panel of experts.
Journal of Biomechanics	Publishes reports of original and substantial findings using the principles of mechanics to explore biological problems. Analytical, as well as experimental papers may be submitted.
Journal of Applied Physiology (http://jap.physiology.org/)	Publishes original papers that deal with diverse areas of research in applied physiology, especially those papers emphasizing adaptive and integrative mechanisms. Adaptive physiology includes inherent adaptations such as those related to development, aging, and pathophysiological conditions.
IEEE Transactions on Biomedical Engineering (http://www.ieee.org/)	The field of interest of the Society is the application of the concepts and methods of the physical and engineering sciences in biology and medicine. This covers a very broad spectrum ranging from formalized mathematical theory through experimental science and technological development to practical clinical applications. It includes support of scientific, technological, and educational activities. The Society publishes IEEE Transactions on Biomedical Engineering (monthly), the IEEE Engineering in Medicine and Biology Magazine (6 issues per year), and the quarterly IEEE Transactions on Rehabilitation Engineering.
IEEE Engineering in Medicine and Biology Magazine (http://www.ieee.org/)	See above.
IEEE Transactions on Neural Systems and Rehabilitation Engineering (http://www.ieee.org/)	See the 2 nd above.
IEEE Transactions on Speech and Audio Processing (http://www.ieee.org/)	Speech and audio technologies and the sciences that support them. In speech, areas such as speech analysis, synthesis, coding speech recognition, speaker recognition, language modeling, speech production and perception speech enhancement. In audio: transducers, room acoustics, active sound control, human audition, analysis/synthesis/coding of music, and consumer audio.
Applied Bionics and Biomechanics	It is an international, peer reviewed journal of advanced technological developments based on the science of biological systems. While artificial body parts and related devices (both implantable and extracorporeal) will be a strong focus, other applications for synthetic bionic systems may also fall within the scope of the journal, particularly those that are medically oriented.
Journal of Robotic Systems	It publishes archival papers in all aspects of basic and applied research on the analysis, design, realization, and use of robots, robot components, and robot systems. The Journal places particular emphasis on publishing research contributions in emerging fields of robot system design and integration.
Journal of Dynamic Systems, Measurement and Control	It publishes theoretical and applied original papers in the traditional areas implied by its name, as well as papers in interdisciplinary areas. Theoretical papers are expected to present new theoretical developments and knowledge for controls of dynamical systems together with clear engineering motivation for the new theory.
Advanced Robotics	It is the international journal of the Robotics Society of Japan, published in eight issues per year. It publishes original research papers, short communications, reviews and reports. Issues contain papers on the analysis, design, implementation and use of robots in various areas such as manipulators, locomotion, sensors, actuators, materials, control, intelligence, language, software, man-machine systems and system architecture.
Journal of Autonomous Robots	The primary goal of <i>Autonomous Robots</i> is to report on the theory and applications of robotic systems capable of some degree of self-sufficiency. Thus, the journal is aimed at the growing trend in robotics toward mobility,

	intelligence and autonomy in an unstructured world.
IEEE Robotics and Automation Magazine	
IEEE Transactions on Robotics	The first issue appeared in August 2004.
IEEE Transactions on Automation Science and Engineering	It publishes the abstractions, algorithms, theory, methodologies, models, systems, and case studies that can be applied across industries to significantly advance efficiency, quality, productivity, and reliability for society. Its first issue appeared in July 2004.
IEEE Engineering in Medicine and Biology Magazine (EMBS)	Both general and technical articles on current technologies and methods used in biomedical and clinical engineering; societal implications of medical technologies; current news items; book reviews; patent descriptions; and correspondence. Special interest departments, students, law, clinical engineering, ethics, new products, society news, historical features and government.
IEEE Transactions on Biomedical Engineering	The IEEE Transactions on Biomedical Engineering is one of the leading research journals in the field of biomedical engineering and is widely disseminated throughout the world. It is published monthly with more than 1,500 editorial pages per year.
IEEE Transactions on Neural Systems and Rehabilitation Engineering	
International Journal of Robotic Research (IJRR)	

Table 1. List of magazines and journals

5 Dissemination events

The ALLADIN partners made use of appropriate events to disseminate information about the project and promote the technologies and procedures developed during the project. A list of relevant events is described in section 5.1.

5.1 Conferences and Exhibitions

Date	Type	Title	Place and web info	Involved Partners
2007				
April 10-14	Conference	2007 IEEE International Conference on Robotics and Automation (ICRA 2006)	Rome, Italy http://www.icra07.org	SSSA UCBM ULFE
March 19-20	Workshop	International Workshop on Motor Learning in Stroke Recovery	Rome, Italy http://www.unicampus.it/alladin/	Alladin Consortium
February 12-13	IST event	Personal Health Systems 2007: Deployment opportunities and ICT research challenges	Brussels, Belgium http://europa.eu.int/information_society/events/phs_2007/index_en.htm	AHS

2006				
November 21-23	IST event	IST 2006 - Strategies for leadership - FP7 European Research 2007-2013	Helsinki, Finland http://europa.eu.int/information_society/istevent/2006/index_en.htm	AHS
October 18-21	Conference	6th Mediterranean Congress of Physical and Rehabilitation Medicine	Vilamoura, Portugal http://www.medcongress.prm06.org	NIMR
August 30-September 3	Conference	28th Annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC 2006)	New York City, New York http://embc2006.njit.edu/	AHS
June 29-30	Conference	ICT for Bio-Medical Sciences 2006	Brussels, Belgium http://europa.eu.int/information_society/events/ict_bio_2006/index_en.htm	AHS
May 15-19	Conference	2006 IEEE International Conference on Robotics and Automation (ICRA 2006)	Orlando, Florida, USA http://www.icra2006.org/	SSSA
February 20-22	Conference	IEEE/RAS-EMBS 1st Conference on Robotics and Biomechanics (BioRob 2006)	Pisa, Italy http://www.biorob2006.org/	SSSA ULFE AHS
2005				
November 14-16	Conference	Communicating European Research 2005 International Conference (CER 2005)	Brussels, Belgium http://europa.eu.int/comm/research/conferences/2005/cer2005/	MULTITEL
September 12-16	Conference	10th IFIP TC13 International Conference on Human-Computer Interaction (INTERACT 2005)	Rome, Italy http://www.interact2005.org/	MULTITEL
September 1-4	Conference	27th Annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC 2005)	Shanghai, China http://www.ee.cuhk.edu.hk/EMBC05shanghai/	UCBM
August 2-6	Conference	2005 IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS 2005)	Edmonton, Alberta, Canada http://www.cs.ualberta.ca/~robotics/robocup/iros2005/	SSSA

July 18-20	Conference	12nd International Conference on Advanced Robotics (ICAR 2005)	Seattle, Washington, USA http://www.icar2005.org/	SSSA
June 28- July 1	Conference	IEEE 9th International Conference on Rehabilitation Robotics (ICORR 2005)	Chicago, Illinois, USA http://www.smpp.northwestern.edu/ICORR2005/	AHS BUTE ULFE NIMR
June 14- 15	Conference	2nd Hungarian Conference on Biomechanics	Debrecen, Hungary	BUTE
April 18- 22	Conference	2005 IEEE International Conference on Robotics and Automation (ICRA 2005)	Barcelona, Spain http://www.icra2005.org	SSSA
April 6-8	Conference	The International Trade Event and Conference for eHealth, Telemedicine and Health ICT (MEDeTEL Conference)	Luxembourg, Luxembourg http://www.medetel.lu	MULTITEL
April 10- 15	Conference	3rd World Congress of the International Society of Physical and Rehabilitation Medicine (ISPRM 2005)	Sao Paulo, Brasil http://www.isprm.org/	NIMR
March 16- 19	Conference	2nd International IEEE/EMBS Conference on Neural Engineering	Arlington, Virginia, USA http://www.dartmouth.edu/~ne2005/	SSSA
2004				
November 26	Conference	EUROREC 2004 Conference on Implementation Guidelines, Quality Labeling and Certification for Electronic Health Records (EHRs)	Brussels, Belgium http://www.prorec.be/events/eurorec2004/	AHS
November 25	Conference	Satellite Conference on Ontology: Interoperability of Patient Records and Biomedical Informatics	Brussels, Belgium http://www.ecor.uni-saarland.de/events.html#conferences	L&C
November 22-23	Symposium	Description Logics and reasoning about Patient Data	Saarbruecken, Germany	L&C

November 16	IST Event	IST Event 2004, Networking session, "Integrated biomedical information for better health"	The Hague, The Netherlands http://europa.eu.int/information_society/istevent/2004/	AHS
November 4-6	Conference	International Conference on Formal Ontology in Information Systems	Turin, Italy http://fois2004.di.unito.it/	AHS TCD
November 4-5	Conference	European Congress on Physiotherapy education	Estoril, Portugal http://www.apfisio.pt/ecpe/home.html	L&C
October 31- November 3	Conference	IEEE International Symposium on Micromechatronics and Human Science (MHS)	Nagoya, Japan http://www.mein.nagoya-u.ac.jp/mhs/MHS2004-Top.html	SSSA
October 9-14	Conference	Health records problems and their solutions (AHIMA)	Washington, US	L&C
September 30- October 2	Conference	3rd Joint Congress of the Swiss Society of Neurorehabilitation, Austrian Society of Neurorehabilitation, German Society of Neurorehabilitation	Zurich, Switzerland http://www.neuroplasticity.ch/wfnr/	SSSA
September 28- October 1	Conference	2004 IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS 2004)	Sendai, Japan http://www.irs.mech.tohoku.ac.jp/iros2004/ Special Session on Rehabilitation Robotics	SSSA ULFE
September 20-22	Workshop	13th IEEE International Workshop on Robot and Human Interactive Communication (RO-MAN 2004)	Kurashiki, Okayama Japan http://hint.cse.oka-pu.ac.jp/~ro-man2004/	SSSA
September 16-18	Conference	Yearly Meeting of the Hungarian Society for PMR	Szigetvar, Hungary	NIMR
September 13-15	Conference	Mechatronics & Robotics	Aachen, Germany http://www.mechrob.de/	ULFE
September 10-13	Workshop	8th International Workshop on Functional Electrical Stimulation (FES)	Department of Biomedical Engineering and Physics, University of Vienna, Medical School, Austria http://www.fesworkshop.org/2004/home.html	SSSA ULFE AHS
September 7-11	Conference	Biomedical Informatics for enhancing health care, research and education (MedInfo 2004)	San Francisco, California, USA http://www.medinfo2004.org/	L&C

September 6-9	Conference	9th Annual Conference of the International Functional Electrical Society (IFESS)	Bournemouth, UK http://www.ifessnet2004.tk/	AHS ULFE
September 1-5	Conference	26th Annual Meeting of the IEEE Engineering in Medicine and Biology Society (EMBS)	San Francisco, California, USA http://www.ucsfresno.edu/embs2004/	SSSA ULFE
July 31- August 8	Conference	Medicon and Health Telematics 2004	Ischia, Naples, Italy http://www.medicon2004.unina.it/	ULFE
June 14-16	Symposium	2nd International Symposium on Measurement, Analysis and Modeling of Human Functions	Genova, Italy http://www.dist.unige.it/ishf_mcm_2004/	SSSA
May 20-22	Workshop	International Advanced Robotics Program (IARP)	Hidden Valley, Pennsylvania (Pittsburgh), USA http://www.nsf.gov/eng/roboticsorg/IARPmedRobHome.htm	SSSA
31 May -1 June	Conference	e-HDC 2004, International Conference on e-health in Developing Countries	Rome, Italy http://ehdc.pc.unicatt.it/	AHS
April 26	Conference	ICRA 2004 (International Conference on Robotics and Automation 2004)	New Orleans, VA, USA http://www.egr.msu.edu/ralab/icra2004/T-WF-3_Dario.html Workshop on "Biomedical Robotics and Biomechatronics: Scientific and Technical Foundations of a new Interdisciplinary Field for Research, Medical Application and Industry"	SSSA

Table 1. List of attended events

5.2 Targeted workshop and seminars

5.2.1 International Workshop on Motor Learning in Stroke Recovery

An International workshop on motor learning in stroke recovery has been held in March 19-20, 2007 at Campus Bio-Medico University in Rome, Italy. The workshop is the final scientific event organized and sponsored by the IST– eHealth ALLADIN consortium.

It aimed at giving a comprehensive picture of most advanced approaches to stroke recovery by inviting leading medical and bioengineering researchers. It wants to identify and open new research avenues encouraging new ICT based solutions supporting stroke recovery and new translational clinical applications deriving from recent advancements in basic neuroscience. It aims at focusing solid and breakthrough project ideas to be submitted to the current and future Calls of the 7th R&D Framework Programme of the European Commission, but also to identify roadmaps for short term industrial application of recent research results made available by ALLADIN and other ongoing projects worldwide.

UNIVERSITA' CAMPUS BIO-MEDICO
ROMA, 22 MARZO 2007
La Scienza per l'Uomo

INTERNATIONAL WORKSHOP ON MOTOR LEARNING IN STROKE RECOVERY
March 19-20, 2007
Trigoria, Rome - Italy

HOME This international workshop is the final scientific event organized and sponsored by the IST– eHealth ALLADIN consortium.

OVERVIEW It wants to give a comprehensive picture of most advanced approaches to stroke recovery by inviting leading medical and bioengineering researchers

PROGRAMME It wants to identify and open new research avenues encouraging new ICT based solutions supporting stroke recovery and new translational clinical applications deriving from recent advancements in basic neuroscience.

SPEAKERS

SPONSORS It aims at focusing solid and breakthrough project ideas to be submitted to the current and future Calls of the 7th R&D Framework Programme of the European Commission, but also to identify roadmaps for short term industrial application of recent research results made available by ALLADIN and other ongoing projects worldwide.

ORGANIZATION

REGISTRATION

VENUE

ACCOMODATION

SOCIAL EVENTS

CONTACTS

NEWS

Advance Registrations are closed. A limited number of on-site additional registrations will be accepted. Please, contact the workshop secretariat at t.burelli@unicampus.it if you wish to join the workshop.

Thank you!

University Campus Bio-Medico of Rome - Via dei Compositori, 130 - Trigoria, Rome (ITALY)
Phone: (+39) 06.22.54.11 - Fax: (+39) 06.22.541.456

Figure 2. The International workshop website home page

The scope of the workshop spanned from basic understanding of human motor learning and control to the clinical application of advanced ICT and brain imaging technologies in post-stroke patients assessment and treatment.

The Workshop Programme was structured as a 2-day, single-track event embedding regular sessions, panels, hands-on demos. The official language of the workshop was English. 8 highly qualified invited speakers from US, Japan and Europe accepted to participate in this workshop, that really represents a unique opportunity to meet such a group leading experts all together.

The programme of the workshop also included a selected number of lectures by the ALLADIN partners.

A demo area was arranged: during the workshop the ALLADIN technology, the InMotion 2 & 3 systems (MIT-MANUS shoulder-elbow & wrist modules) and other prototypes of advanced technology for assisted therapy and functional assessment were presented in real operating conditions with patients.

The panels were specifically devoted to the presentation of possible new proposals for research activities to be carried out within the next 3-5 years, and also to the joint identification of candidate topics to be proposed for future 7 FP Calls under the HEALTH and ICT priorities, and that will be later negotiated with the European Commission.

The website of the workshop is available at <http://www.unicampus.it/alladin>

5.2.2 6th International Conference on the Management of Healthcare & Medical Technology

An international conference on the management of healthcare and medical technology will be held at Scuola Superiore Sant'Anna in Pisa, Italy on 3-5 October 2007. The theme of the conference is: "Towards responsibility and compliance in the innovation and management of healthcare technologies: international perspectives and comparative experiences".

Over the years in the previous HCTM annual conferences we have examined the returns and benefits of medical technologies, the application and organisational aspects of creating and implementing cutting-edge technologies, the trends and the advances made in the field of technology and its management in healthcare delivery, and the challenges for the future.

Against this background, the next conference in 2007 seeks to encourage an international and multidisciplinary debate on the "responsibility and compliance in the management of healthcare technologies in an integrated healthcare system". As this issue is complex and multifaceted, several different theories, approaches, perspectives and dialogues are required to achieve a common understanding necessary to define the state of the art. The conference will explore the issue of responsibility with respect to each phase of the healthcare technology life cycle; hence the conference will have the following general sections:

- **Section 1 - Healthcare technology development:** concept generation of innovative healthcare technology; ethical issues concerning innovative healthcare technology; projected future research direction needs; technology-driven innovations versus health need-driven innovations; uptake and safe diffusion of new medical technologies/ devices, constructive health technology assessment; product life cycle management models for healthcare technology.
- **Section 2 - Healthcare technology compliance and regulation:** commercialisation authorization; liability and insurance issues in healthcare technology; Health Technology Assessment and reimbursement decisions; trends, advances, and challenges of technology in healthcare and the social policy issues of health care delivery: affordability, access, availability.

Compliance and ethical implications; Trends and advances in technology for healthcare delivery and the issue of quality of care; The role of government and its influence on trends, advances, challenges and future research in technology for healthcare delivery.

- **Section 3 - Healthcare technology adoption by the healthcare organization:** hospital based-Health Technology Assessment; investment planning and programming; business planning;
- **Section 4 - Healthcare technology management by the healthcare organization:** organizational impacts, change management; business process re-engineering; technology overlapping; development of sound information systems; performance measurement; audit; maintenance; safety and replacement plans; anonymous incident reporting systems;
- **Section 5 - Contributions from PhD students are welcome and encouraged.** One section of the Conference is allocated to presentations by PhD students on the subject matter of their doctoral thesis (at all stages of preparation). The students presenting their work will thus have the opportunity to explain and defend their research questions, the investigative approach and methodology they have chosen to test their hypotheses to a qualified audience of experts, thus benefiting from useful suggestions and feedback on their work. Alternatively, PhD students whose research project is in an advanced stage can decide to present the outcome of their research in one of the above mentioned sections.

The domain of the publications related to this conference is the identification and analysis of the different roles and the contributions, and therefore with the responsibilities of the different actors involved in the development, adoption and management of cost-effective and appropriate healthcare technologies, i.e., manufacturers, sales agencies, scholars, researchers, regulators, payers (including insurers), managers (including risk managers), and professionals.

Selected papers, following peer-review, will be included in a special issue of the International Journal of Healthcare Technology and Management. In addition, a book based on selected papers presented at the Conference is also planned.

The website of the conference is available at <http://www.sssup.it/HCTMconference2007>

6 Dissemination facts

- 15 scientific papers submitted, accepted and presented in international conferences and workshops
- 2 scientific papers submitted to international journals (plus 3 in preparation)
- presentations of the project in national and international conferences and workshops
- 15 additional conferences and workshops attended
- 5 posters submitted to Medical Conferences

Moreover the following dissemination activities were carried out:

- 1 contribution to ICT for Health Unit's report
- 1 presentation of the project on a local television (AVS, Oost-Vlaamse Televisie, Belgium)
- 15 different leaflet releases in different languages (English, Hungarian, Slovenian and French)
- 3 public exhibitions attended
- 2 companies (Gymna Uniphy NV, Opus Medical BVBA) contacted for possible commercialization of the Hand Device (part of the ADD, Alladin Diagnostic Device)
- First contact with WHO for possible contribution to standardization.



Figure 3 . Posters presented to Medical Conferences (NIMR team)

Attended conferences (since March 2006)

- November 21-23, IST 2006 - Strategies for leadership - FP7 European Research 2007-2013 Helsinki, Finland (AHS)
- October 18-21, 6th Mediterranean Congress of Physical and Rehabilitation Medicine, Vilamoura, Portugal, (NIMR)
- August 30-September 3, 28th Annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC 2006) New York City, New York (AHS, KUL, UCBM, SSSA)
- June 29-30, ICT for Bio-Medical Sciences 2006 Brussels, Belgium (AHS)
- May 15-19, 2006 IEEE International Conference on Robotics and Automation (ICRA 2006) Orlando, Florida, USA (SSSA)

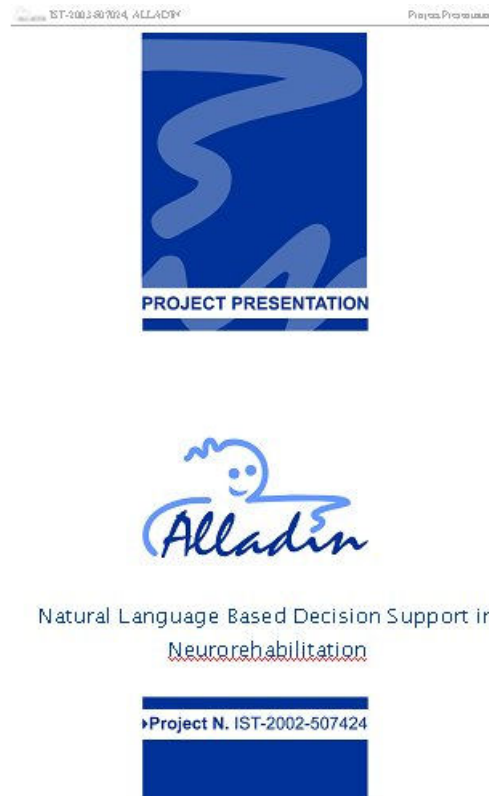


Figure 4 . The front cover of the project brochure

Other presentations and short communications at scientific Conferences

- March 16-19, 2nd International IEEE/EMBS Conference on Neural Engineering, Arlington, Virginia, USA (SSSA)
- April 18-22, 2005 International Conference on Robotics and Automation (ICRA 2005), Barcelona, Spain (SSSA)
- June 14-15, 2nd Hungarian Conference on Biomechanics, Debrecen, Hungary (BUTE)
- July 18-20, 12nd International Conference on Advanced Robotics (ICAR 2005), Seattle, Washington, USA (SSSA)
- August 2-6, 2005 IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS 2005), Edmonton, Alberta, Canada (SSSA)
- September 23, 2005. Workshop on digital inclusion and participation, Rome, Italy (AHS)
- November 14-16, Communicating European Research 2005 International Conference (CER 2005), Brussels, Belgium (MULTITEL)
- November, Workshop on “Use of the ICF in physiotherapy” at KUL, Katholieke Universiteit Leuven, Belgium (AHS)
- Project presentation to the Neurology and Rehabilitation Medicine Units, Campus Bio-Medico University Polyclinic, Rome (UCBM)
- July 2006, Project presentation to the local workshop on Technology Transfer of Innovative Biomedical Technologies, Campus Bio-Medico University, Rome (UCBM)
- Conference on “Recovery processes in rehabilitation“, Gavinana, Pistoia, Italy 27-28 October, 2006 (SSSA)

- Conference on “The Application of New Technologies in Neuro-rehabilitation“, Pavia, Italy, November 14, 2006 (SSSA)

Commercial and industrial dissemination

- Direct contacts and meetings with companies, potential partners for industrial exploitation (e.g. Gymna Uniphi, Opus Medical BV)
- MED-e-TEL 2005 (Multitel): about 200 visitors to the ALLADIN stand
- ICT for Health activities newsletter (November 2005)
- SSSA/UCBM stand at BIOROB06 stand: about 350 international participants



Figure 5. The Alladin stand at MED-e-TEL 2005

General dissemination actions and tools

- Creation of general awareness (healthcare stakeholders, medical doctors, physiotherapists, patients, professional associations)
- Dedicated publications and leaflets (in different languages)
- Newsletters
- Promotional material (ALLADIN brochure, leaflet and website)



The ALLADIN project *

Jo Van Vaezenbergh (Coordinator) Arteveldehogeschool - Gent

Evidence based neuro-rehabilitation badly needs the support of 'diagnostic precision'. Previous attempts to measure and predict functional outcome in stroke used coarse clinical parameters what means that the deficits being treated were rarely clearly specified.



Fig. 1 The ALLADIN diagnostic device.

The ALLADIN project is the answer to a worldwide call for tailoring rehabilitation to the functional, but also societal demands on restoring independency for carrying out day-to-day activities. Three diagnostic devices (fig.1) consisting of five main functional units, a finger device, an arm device, a foot device, a trunk device, and a seat device, have been exploring since January 2005 the sensory motor reorganization in stroke patients admitted to the Maria Middelaers Hospital in Gent, the Szent Janos Hospital in Budapest and the Adelaide & Meath Hospital in Dublin. The tests are scheduled about 30 minutes for each patient. Sometimes it's hard for the patients to understand why this is done, but once they see the graphs (fig 2) on the computer with simple explanations added, they become receptive to new goals in their life.

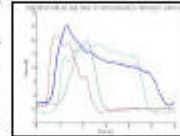


Fig. 2 Graphs for interpretation.

The values patients receive during the assessments are compared with 'normal models' of functional behaviour also developed during the ALLADIN project. Data mining technology charts the patient according his/her remaining capabilities and gives the neurologist and therapist an adequate instrument to refine future decisions.



Fig. 3 Clinical natural language descriptions.

The ALLADIN consortium was well aware of the possible high cost of these instruments. Therefore it had also ears for the wishes of physicians and therapists working in small centres or in private, who cannot afford to buy such expensive diagnostic tools. Consequently a cheap, easy to use application (fig.3) was built having direct relations to the by data mining created recovery maps. This application contains a speech recognition module imbedded in a PDA. It extracts clinical relevant information from 'natural language descriptions' recorded by the physician or therapist about his/her patient. To make this extraction possible, a huge number of natural language descriptions about stroke patients were collected as from the very beginning of the project with the aim to build a recovery

* Members of the ALLADIN consortium are: Arteveldehogeschool(B), Language and computing(B), Budapest University of Technology and Economics(HU), Faculty of Electrical Engineering, University of Ljubljana(SI), Zenon SA, Robotics and Informatics(EL), Cardiff University (UK), Multimed ASBL(B), Trinity College Dublin(IRL), National Institute for Medical Rehabilitation(HU), Scuola Superiore Sant'Anna(I), Campus Bio-medico(I)

Figure 6. A newsletter about the project (prepared by AHS team)

Dedicated publications

- 2005, on the Hungarian website of Weborvos (=Webdoctor) an article was published, which introduces the ALLADIN project
- 2005, AHS team (English version), ALLADIN: A helping hand for making the right choice in neuro-rehabilitation.
- 2005, AHS team (French version), ALLADIN: A helping hand for making the right choice in neuro-rehabilitation
- 2005, NIMR team (Hungarian versions)
- ALLADIN leaflet #1
- ALLADIN leaflet #2
- Article
- November 2005, AHS team, The ALLADIN project (leaflet)
- Alladin project booklet available at:

http://europa.eu.int/information_society/activities/health/docs/projects/fp6book/alladin.pdf

Dissemination numbers: at clinical sites

- National Institute for Medical Rehabilitation (NIMR), Budapest, Hungary
 - *Rehabilitáció* (Hungarian rehabilitation specialists, members of the Hungarian Rehabilitation Society): 3-4000 readers (doctors, health professionals,...)
 - *Orvosi Hetilap* (leading medical periodical in Hungary):6-7000 readers
 - *Humanitas* (periodical of the main society of people with disabilities): about 8-10 000 readers
 - *The periodical of Szt. Janos Hospital*: about 5-6000 readers (employees, patients and relatives)
- Maria Middelaes Hospital, Gent, Belgium
 - *brochures and leaflets*: 120 - 150 readers (physiotherapists, nurses, occupational therapists, speech therapists, etc.)
 - All patients who are possible candidates for the project received a brochure
 - Dissemination channel: from residential patients to the medical community
- Adelaide and Meath and the National Children Hospital (AMNCH), Dublin, Ireland
 - Presentation of the project to the Age Related Health Care (ARHC) Journal club meeting
 - Great interest from consultants, physiotherapists, occupational therapists, speech therapists, nurses, social workers
 - Information pack distributed at the meeting to all the wards (Ward Sisters).

7 The ALLADIN Website

It is available at <http://www.alladin-ehealth.org>. The website is composed by different areas:

- Home
- Overview
- Partners
- Events
- Community
- Publications
- Work in progress
- Moments
- Restricted: It contains a link to the present ALLADIN site:
<https://alladin.manuf.hu/files/>



[Home](#) | [Overview](#) | [EU Partners](#) | [Events](#) | [Community](#) | [Publications](#) | [Work in progress](#) | [Moments](#) | [Contacts](#) | [Restricted](#)

alladin-ehealth.org
 Welcome

News!

[International Workshop on Motor Learning in Stroke Recovery](#)
[Campus Bio-Medico University, Trigoria, Roma, Italy](#)
[March 19-20, 2007](#)

The ALLADIN project focuses on the development of a user-friendly natural language based decision support software for neuro-rehabilitation, in particular in stroke. ALLADIN, if implemented provides an adequate and fast solution for a client centred practice, for discharge planning and for utilization of rehabilitation resources. This fulfils the social and political expectation of a substantial but honest cost cutting by measuring therapeutic efficiency in terms of mean quality-adjusted duration.

Budget in Euro
 Total cost 4.090.347
 EU Contribution 3.900.000

Time table
 Start time 1 January 2004
 Duration 36 months

Figure 7. The project website home page promoting the International workshop in Rome

The following section were regularly updated with contributions from partners:

- Events
- Publications
- Work in progress
- Moments

Since March 2006, a free hit counter website counter¹ was inserted in each page in order to keep track of web accesses to the Alladin website. The main statistics related to the access to the Alladin website follow:

- 3.324 total visits
- 5.548 total page views
- Daily average visits: 5 (mon-fri: 6, sat-sun: 3)
- Trend visits: latest 12 months: +2,5%, latest 6 months: +26,5%, latest 3 months: +132.0%

Figures 8-13 show different statistics on the visits to the Alladin website.

¹ ShinyStat (<http://s4.shinystat.com/en/>)

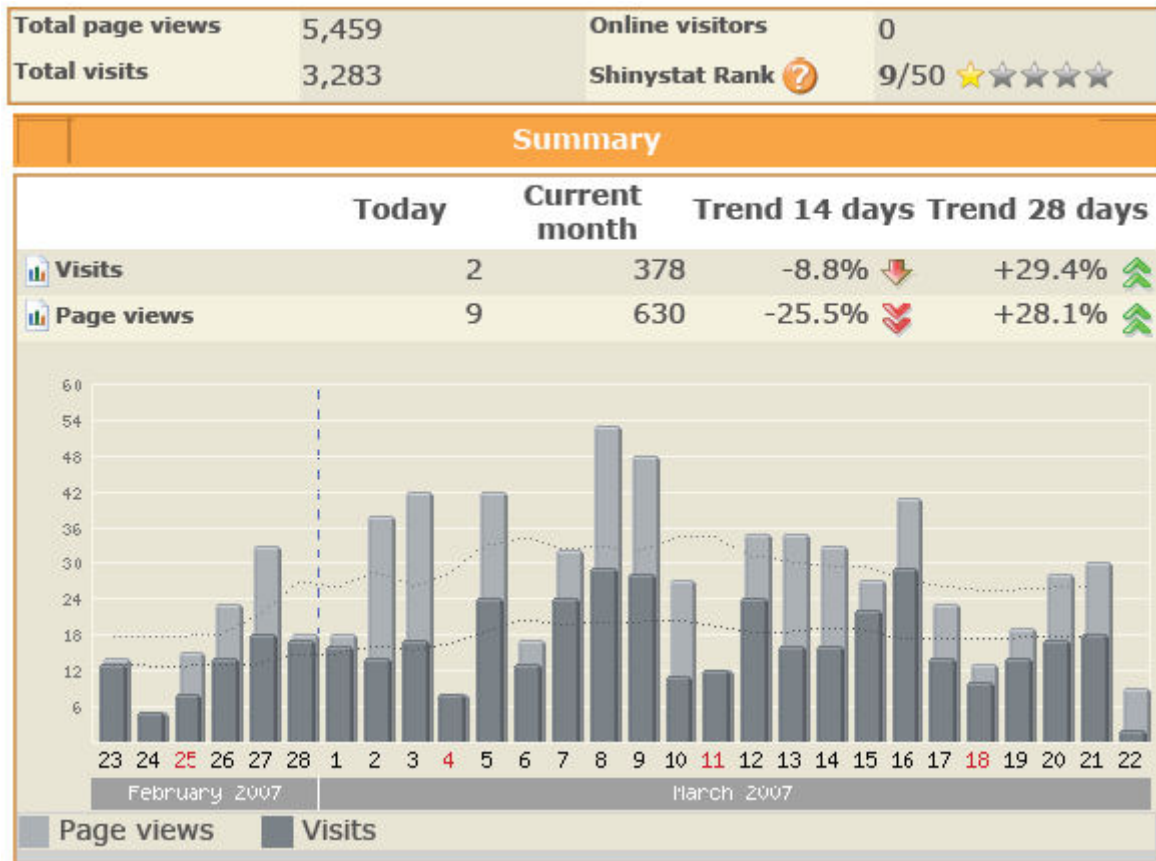


Figure 8. A summary of number of visits and page views



Details					
Month	Visits	Increment	Month	Visits	Increment
April 2006	205		October 2006	252	+6.3%
May 2006	263	+28.3%	November 2006	268	+6.3%
June 2006	286	+8.7%	December 2006	187	-30.2%
July 2006	200	-30.1%	January 2007	203	+8.6%
August 2006	216	+8.0%	February 2007	306	+50.7%
September 2006	237	+9.7%	March 2007	378	

Figure 9. A plot of number of visits during last 12 months and increment percentages for each month

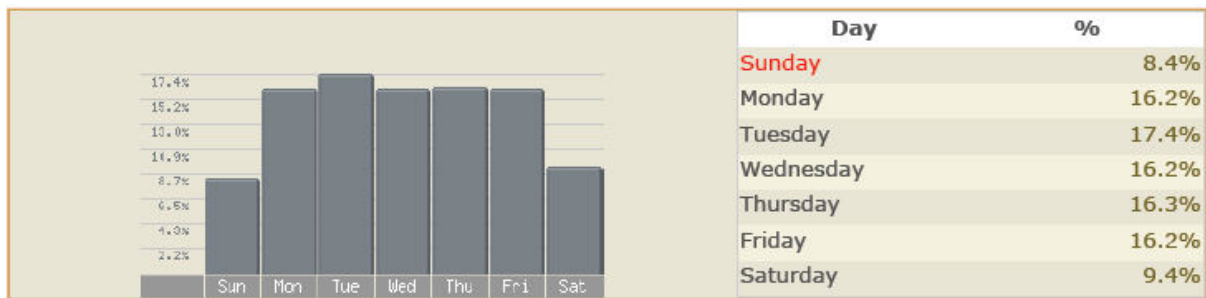


Figure 10. Histogram representing the distribution of visits during a week

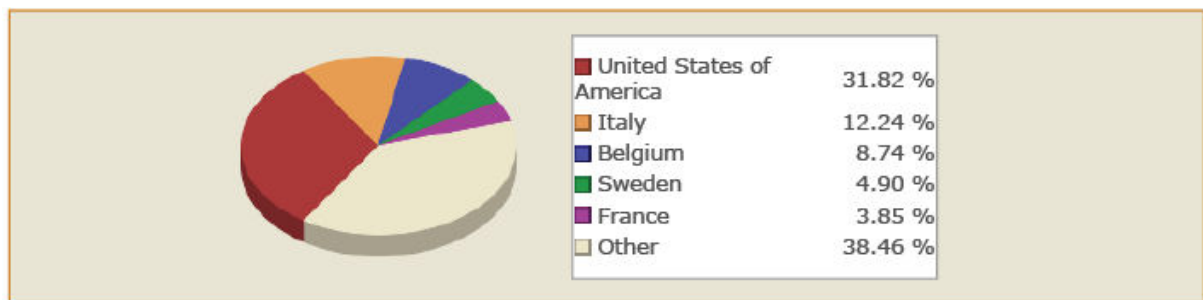


Figure 11. Distribution chart of visits among countries (June 2006)

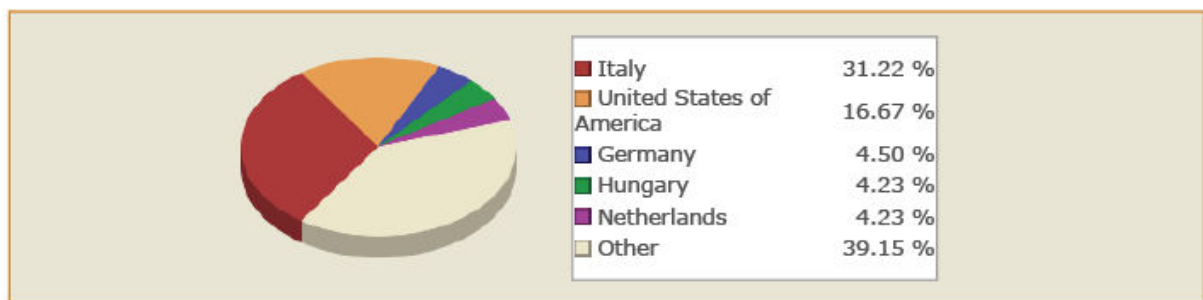
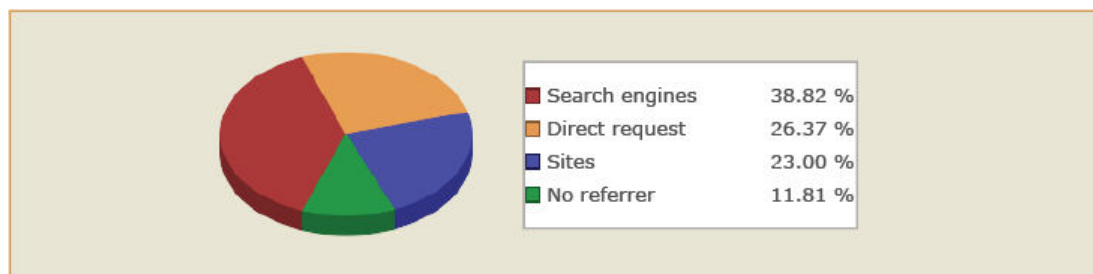


Figure 12. Distribution chart of visits among countries (March 2007)



	Visits	Trend	%
Search engines	184	+93.2%	38.82%
Direct request	125	-1.0%	26.37%
Sites	109	+79.0%	23.00%
No referrer	56	+40.5%	11.81%
Total	474		100.00%

Figure 13. Distribution chart of referrers (March 2007)

Appendix

Alladin Natural Language Based
Decision Support in Neuro-Rehabilitation

Home | Overview | EU Partners | Events | Community | Publications | Work in progress | Moments | Contacts | Restricted

alladin-ehealth.org
Welcome

*The ALLADIN project focuses on the development of a **user-friendly natural language based decision support software** for neuro-rehabilitation, in particular in stroke. ALLADIN, if implemented provides an adequate and fast solution for a client centred practice, for discharge planning and for utilization of rehabilitation resources. This fulfils the social and political expectation of a substantial but honest cost cutting by measuring therapeutic efficiency in terms of mean quality-adjusted duration.*

Budget in Euro

Total cost 4.030.347
EU Contribution 3.300.000

Time table

Start time 1 January 2004
Duration 36 months

Project funded by the European Commission under the 6th Framework Programme,
IST Programme, Priority 2.3.1.11 - eHealth
IST Contract No.: IST-2002-507424

ShinyStat™

Figure 14. Alladin website home page



alladin-ehealth.org

Overview

The ALLADIN project focuses on the development of a **user-friendly natural language based decision support software** for neuro-rehabilitation, in particular in stroke. ALLADIN, if implemented provides an adequate and fast solution for a client centred practice, for discharge planning and for utilization of rehabilitation resources. This fulfils the social and political expectation of a substantial but honest cost cutting by measuring therapeutic efficiency in terms of mean quality-adjusted duration.

Evidence-based practice has advanced slowly in stroke rehabilitation for 20 years because:

- Current clinical techniques for patient assessment routinely rely on subjective and labour intensive techniques involving gross rating scales or the application of motor behavioural tasks using motor proficiency test batteries. Applying current assessment techniques to complex problems encountered during neuro-rehabilitation is impossible.
- Moreover the used scales lack reliability and are unable to provide the healthcare professional with a good prediction of possible impairments and disabilities nor the healthcare provider with an estimate of the cost and outcome of the treatment.
- Complex measurements such as motion analysis or brain image technologies (CT, MRI, fMRI, SPECT..) are reliable but very expensive and also time consuming. Using them on a regular base for the evaluation of patients and steering neuro-rehabilitation is impossible.

Motivations

The changes occurring today in patient care and chart review demand dynamic, innovative changes in medical record keeping.

The concept of 'Problem-oriented Medical Record', which started several years ago, was the first revolutionary onset of a more organised medical record keeping.

Complex problems encountered in neuro-rehabilitation however ask for a second revolution. Therefore ALLADIN will be developed.

ALLADIN offers a new and the first reliable standard for calculating and predicting the functional recovery of stroke patients, which is a crucial factor in client centred evidence based practice, discharge planning and utilization of rehabilitation resources.

ALLADIN creates labels for conformity in the communication and understanding of neuro-rehabilitation data. This is a prerequisite for taking prompt and right decisions in stroke rehabilitation.

ALLADIN makes clinical assessments and quantitative measurements exchangeable and fulfils in this way the wishes of therapists for user friendly, fast but reliable evaluation methods.

ALLADIN outputs a numerical code attached to an operational definition of a milestone or marker for functional recovery analogous with ICD-9-10 codes. It has at the same time a trend-setting function for the further elaboration of the International Classification of Functioning and disabilities (ICF) with the objective to facilitate multidisciplinary responsibility and coordination of interventions.

A **list of keywords** follows:

- Stroke
- Patient assessment in neuro-rehabilitation
- Force mapping of movement planning
- Whole-body isometric force measurements

Figure 15. Overview section



The screenshot shows the top navigation bar of the Alladin website. The logo 'Alladin' is on the left, and the title 'Natural Language Based Decision Support in Neuro-Rehabilitation' is on the right. Below the navigation bar is a yellow bar with the text 'alladin-ehealth.org' and 'EU Partners'. The main content area lists several partners with their names and country codes in parentheses, each preceded by a blue underlined link. The partners listed are: Arteveldehogeschool (B), Language and Computing NV (B), Budapest University of Technology and Economics (HU), Faculty of Electrical Engineering, University of Ljubljana (SI), Zenon SA, Robotics and Informatics (EL), University of Wales Cardiff (UK), Multitel ASBL (B), Trinity College Dublin (IRL), Országos Orvosi Rehabilitációs Intézet (National Institute for Medical Rehabilitation) (HU), Scuola Superiore Sant'Anna (I), and Università Campus Bio-Medico (I). At the bottom, there is a horizontal line followed by the text: 'Project funded by the European Commission under the 6th Framework Programme, IST Programme, Priority 2.3.1.11 - eHealth, IST Contract No.: IST-2002-507424'.

[Home](#) | [Overview](#) | [EU Partners](#) | [Events](#) | [Community](#) | [Publications](#) | [Work In progress](#) | [Moments](#) | [Contacts](#) | [Restricted](#)

[alladin-ehealth.org](#)
EU Partners

[Arteveldehogeschool](#) (B)

[Language and Computing NV](#) (B)

[Budapest University of Technology and Economics](#) (HU)

[Faculty of Electrical Engineering, University of Ljubljana](#) (SI)

[Zenon SA, Robotics and Informatics](#) (EL)

[University of Wales Cardiff](#) (UK)

[Multitel ASBL](#) (B)

[Trinity College Dublin](#) (IRL)

[Országos Orvosi Rehabilitációs Intézet \(National Institute for Medical Rehabilitation\)](#) (HU)

[Scuola Superiore Sant'Anna](#) (I)

[Università Campus Bio-Medico](#) (I)

Project funded by the European Commission under the 6th Framework Programme,
IST Programme, Priority 2.3.1.11 - eHealth
IST Contract No.: IST-2002-507424

Figure 16. Partners section



Natural Language Based
Decision Support in Neuro-Rehabilitation

Home | Overview | EU Partners | Events | Community | Publications | Work in progress | Members | Contacts | Restricted

alladin-ehealth.org
Events

Date	Title	Place and Web	Type	Partner
2007				
March 19-20	International Workshop on Motor Learning in Stroke Recovery	Rome, Italy http://www.unicampus.it/alladin/	Workshop	Alladin consortium
February 12-15	Personal Health Systems 2007: Deployment opportunities and ICT research challenges	Brussels, Belgium http://europe.eu.int/information_society/istevent2006/index_en.htm	Conference	AHS
2006				
November 21-23	IST 2006 - Strategies for leadership - FP7 European Research 2007-2013	Helsinki, Finland http://europe.eu.int/information_society/istevent2006/index_en.htm	IST Event	AHS
October 18-21	8th Mediterranean Congress of Physical and Rehabilitation Medicine	Vilamoura, Portugal http://www.medcongress.pt/mc06.org	Conference	NMR
August 30-September 3	28th Annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC 2006)	New York City, New York http://www.embc2006.nyu.edu/	Conference	AHS
June 29-30	ICT for Bio-Medical Sciences 2006	Brussels, Belgium http://europe.eu.int/information_society/istevent/ict_bio_2006/index_en.htm	Conference	AHS
May 15-19	2006 IEEE International Conference on Robotics and Automation (ICRA 2006)	Orlando, Florida, USA http://www.icra2006.org/	Conference	SSSA
May 3-5	IST-Africa 2006	Pretoria, South Africa http://www.ist-africa.org/Conference2006/	Conference and Exhibition	
February 20-22	IEEE/IRAS/EMBS 1st Conference on Robotics and Biomechanics (BioRob 2006)	Pisa, Italy http://www.biorob2006.org/	Conference	SSSA AHS ULFE
2005				
March 16-19	2nd International IEEE/EMBS Conference on Neural Engineering	Arlington, Virginia, USA http://www.dartmouth.edu/~ne2005/	Conference	SSSA
April 10-15	3rd World Congress of the International Society of Physical and Rehabilitation Medicine (ISPRM 2005)	Sao Paulo, Brazil http://www.isprm.org/	Conference	NMR
April 6-8	The International Trade Event and Conference for eHealth, Telemedicine and Health ICT (MEDeTEL Conference)	Luxembourg, Luxembourg http://www.medeitel.lu	IST Event	MULTITEL
April 18-22	2005 IEEE International Conference on Robotics and Automation (ICRA 2005)	Barcelona, Spain http://www.icra2005.org	Conference	SSSA

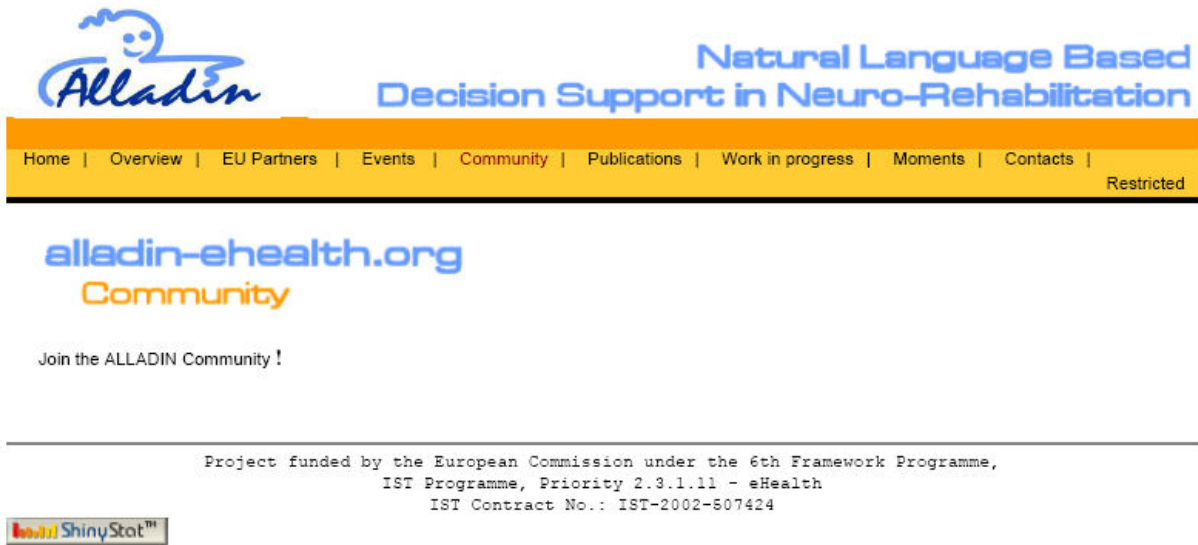
Figure 17. Events section (page 1)

June 14-15	2nd Hungarian Conference on Biomechanics	Debrecen, Hungary	Conference	BUTE
June 28-July 1	IEEE 9th International Conference on Rehabilitation Robotics (ICORR 2005)	Chicago, Illinois, USA http://www.smpg.net/western.edu/ICORR2005/	Conference	AHS BUTE ULFE NMR
July 18-20	12nd International Conference on Advanced Robotics (ICAR 2005)	Seattle, Washington, USA http://www.icar2005.org	Conference	SSSA
August 2-6	2005 IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS 2005)	Edmonton, Alberta, Canada http://www.cs.ualberta.ca/~robotics/robocup/iros2005/	Conference	SSSA
September 1-4	27th Annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC 2005)	Shanghai, China http://www.ee.cuhk.edu.tw/EMBC05shanghai/	Conference	UCBM
September 12-15	10th IFIP TC13 International Conference on Human-Computer Interaction (INTERACT 2005)	Rome, Italy http://www.interact2005.org	Conference	MULTITEL
November 14-16	Communicating European Research 2005 International Conference (CER 2005)	Brussels, Belgium http://europe.eu.int/comresearch/conferences/2005/cer2005/	Conference	MULTITEL
2004				
July 31-August 8	Medicon and Health Telematics 2004	Ischia, Naples, Italy http://www.medicon2004.unina.it/	Conference	ULFE
September 1-5	26th Annual Meeting of the IEEE Engineering in Medicine and Biology Society (EMBS)	San Francisco, California, USA http://www.ucsfresno.edu/emb2004/	Conference	SSSA ULFE
September 6-9	8th Annual Conference of the International Functional Electrical Society (IFESS)	Bournemouth, UK http://www.ifess2004.bv	Conference	AHS ULFE
September 7-11	Biomedical Informatics for enhancing health care, research and education (MedInfo 2004)	San Francisco, California, USA http://www.medinfo2004.org/	Conference	L&C
September 10-13	8th International Workshop on Functional Electrical Stimulation (FES)	Department of Biomedical Engineering and Physics, University of Vienna, Medical School, Austria http://www.fesworkshop.org/2004/home.html	Workshop	SSSA ULFE AHS
September 13-15	Mechatronics & Robotics	Aachen, Germany http://www.mechrob.de/	Conference	ULFE
September 16-18	Yearly Meeting of the Hungarian Society for PMR	Szigetvar, Hungary	Conference	NMR
September 20-22	13th IEEE International Workshop on Robot and Human Interactive Communication (RO-MAN 2004)	Kurashiki, Okayama Japan http://mint.cse.oka-pu.ac.jp/ro-man2004/	Workshop	SSSA
September 28-October 1	2004 IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS 2004)	Senda, Japan http://www.is.mech.tohoku.ac.jp/iros2004/	Conference	SSSA ULFE
September 30-October 2	3rd Joint Congress of the Swiss Society of Neurorehabilitation, Austrian Society of Neurorehabilitation, German Society of Neurorehabilitation	Zurich, Switzerland http://www.neurospasticity.ch/wfnr/	Conference	SSSA
October 9-14	Health records problems and their solutions (AHMA)	Washington, US http://www.ahma.org/center/2004/index.asp	Conference	L&C
October 31-November 3	IEEE International Symposium on Micromechanics and Human Science (MHS)	Nagoya, Japan http://www.nem.nagoya-u.ac.jp/mhs/MHS2004-Top.html	Conference	SSSA
November 4-5	European Congress on Physiotherapy education	Estoril, Portugal http://www.apfrio.pt/cepe/home.html	Conference	L&C
November 4-6	International Conference on Formal Ontology in Information Systems	Turin, Italy http://fois2004.d.unito.it/	Conference	AHS TCD
November 15	IST Event 2004, Networking session, "Integrated biomedical information for better health"	The Hague, The Netherlands http://europe.eu.int/information_society/event2004/	IST Event	AHS
November 22-23	Description Logics and reasoning about Patient Data	Saarbruecken, Germany	Symposium	L&C
November 25	Satellite Conference on Ontology: Interoperability of Patient Records and Biomedical Informatics	Brussels, Belgium http://www.econ.up-saarland.de/announcements/euroreontologyworkshop.html	Conference	L&C
November 26	EURCREC 2004 Conference "Implementation Guidelines, Quality Labeling and Certification for Electronic Health Records (EHRs)"	Brussels, Belgium http://www.porc.be/events/eurorec2004/	Conference	AHS

Project funded by the European Commission under the 6th Framework Programme, IST Programme, Priority 2.3.1.11 - eHealth
IST Contract No.: IST-2002-507424

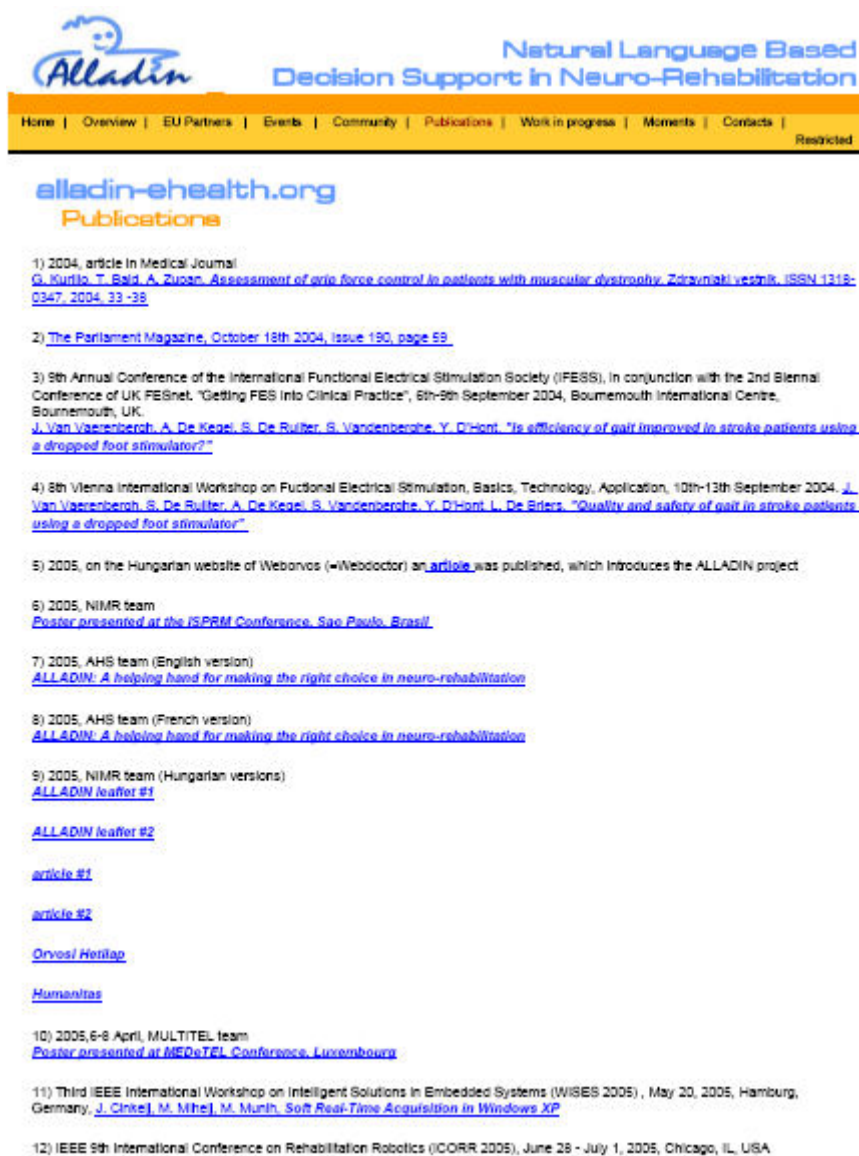


Figure 18. Events section (page 2)



The screenshot shows the top part of the ALLADIN website. At the top left is the ALLADIN logo, which consists of a stylized blue figure with a smiling face above the word "Alladin" in a blue script font. To the right of the logo, the text "Natural Language Based Decision Support in Neuro-Rehabilitation" is displayed in a blue sans-serif font. Below this is a yellow navigation bar with a black border containing the following links: Home | Overview | EU Partners | Events | Community | Publications | Work in progress | Moments | Contacts |. The word "Restricted" is written in small black text at the bottom right of the navigation bar. Below the navigation bar, the text "alladin-ehealth.org" is shown in a blue sans-serif font, with "Community" underneath it in an orange sans-serif font. Below this, the text "Join the ALLADIN Community !" is displayed in a small black font. A horizontal line separates this section from the footer. The footer contains the following text: "Project funded by the European Commission under the 6th Framework Programme, IST Programme, Priority 2.3.1.11 - eHealth" and "IST Contract No.: IST-2002-507424". At the bottom left of the footer is a small logo for "ShinyStat™".

Figure 19. Community section



Alladin Natural Language Based
Decision Support in Neuro-Rehabilitation

Home | Overview | EU Partners | Events | Community | Publications | Work in progress | Moments | Contacts | **Restricted**

alladin-ehealth.org
Publications

- 1) 2004, article In Medical Journal
[G. Kurlilo, T. Bald, A. Zupan. Assessment of grip force control in patients with muscular dystrophy. Zdravniški vestnik, ISSN 1318-0347, 2004, 33-38](#)
- 2) [The Parliament Magazine, October 18th 2004, Issue 180, page 59](#)
- 3) 9th Annual Conference of the International Functional Electrical Stimulation Society (IFESS), in conjunction with the 2nd Biennial Conference of UK FESnet, "Getting FES into Clinical Practice", 6th-9th September 2004, Bournemouth International Centre, Bournemouth, UK.
[J. Van Vaerenbergh, A. De Kegel, S. De Rudder, S. Vandenbergh, Y. D'Hont. "Is efficiency of gait improved in stroke patients using a dropped foot stimulator?"](#)
- 4) 8th Vienna International Workshop on Functional Electrical Stimulation, Basics, Technology, Application, 10th-13th September 2004. [J. Van Vaerenbergh, S. De Rudder, A. De Kegel, S. Vandenbergh, Y. D'Hont, L. De Ridder. "Quality and safety of gait in stroke patients using a dropped foot stimulator"](#)
- 5) 2005, on the Hungarian website of Weborvos (=Webdoctor) an [article](#) was published, which introduces the ALLADIN project.
- 6) 2005, NIMR team
[Poster presented at the ISPRM Conference, Sao Paulo, Brazil](#)
- 7) 2005, AHS team (English version)
[ALLADIN: A helping hand for making the right choice in neuro-rehabilitation](#)
- 8) 2005, AHS team (French version)
[ALLADIN: A helping hand for making the right choice in neuro-rehabilitation](#)
- 9) 2005, NIMR team (Hungarian versions)
[ALLADIN leaflet #1](#)
[ALLADIN leaflet #2](#)
[article #1](#)
[article #2](#)
[Orvosi Hetilap](#)
[Humanitas](#)
- 10) 2005, 6-8 April, MULTITEL team
[Poster presented at MEDoTEL Conference, Luxembourg](#)
- 11) Third IEEE International Workshop on Intelligent Solutions in Embedded Systems (WISES 2005), May 20, 2005, Hamburg, Germany. [J. Clinke, M. Mihel, M. Münch. Soft Real-Time Acquisition in Windows XP](#)
- 12) IEEE 9th International Conference on Rehabilitation Robotics (ICORR 2005), June 28 - July 1, 2005, Chicago, IL, USA

Figure 20. Publications section (page 1)

- [S. Mazzoleni, J. Van Vaerenbergh, A. Toth, M. Munih, E. Guglielmelli, P. Dario, ALLADIN: A novel mechatronic platform for assessing post-stroke functional recovery](#)
- 13) IEEE 8th International Conference on Rehabilitation Robotics (ICORR 2005), June 28 - July 1, 2005, Chicago, IL, USA
[G. Kurtic, M. Mihelj, M. Munih, T. Bojic, Grasping and Manipulation in Virtual Environment using 3by6 Finger Device](#)
- 14) Tenth IFIP TC13 International Conference on Human-Computer Interaction, 12-16 September 2005, Rome, Italy
[X. Ricco, S. Deketelaere, J. De Lafontaine, A. Girardi, Visual Error Resolution Strategy for highly-structured text entry using Speech Recognition in FPS-ALLADIN project](#)
- 15) 3rd European Medical and Biological Engineering Conference (EMBEc 2005), November 20 - 25, 2005, Prague, Czech Republic
[J. Van Vaerenbergh, S. Mazzoleni, A. Toth, E. Guglielmelli, M. Munih, E. Stokes, G. Fazekas, S. De Rudder, Assessment of recovery of stroke patients by whole-body isometric force-torque measurements of functional tasks I: mechanical design of the device](#)
- 16) 3rd European Medical and Biological Engineering Conference (EMBEc 2005), November 20 - 25, 2005, Prague, Czech Republic
[J. Cinkelj, M. Mihelj, D. Bacchi, M. Jurak, E. Guglielmelli, A. Toth, J. De Lafontaine, J. L. Verscheide, S. Mazzoleni, J. Van Vaerenbergh, S. De Rudder, M. Munih, Assessment of stroke patients by whole-body isometric force-torque measurements II: software design of the ALLADIN Diagnostic Device](#)
- 17) November 2005, AHS team
[The ALLADIN project](#)
- 18) Irish Society of Chartered Physiotherapists (ISCP) Annual Conference, November 10-11, 2005, Dublin, Ireland
[C. O'Connell, B. Galvin, A.C. Varghese, J. Lamson, E. Stokes, Analysis of the inter-rater reliability of the Motor Assessment Scale and the Fugl-Meyer Scale](#)
- 19) [Trocsanyi, M., Fazekas, G., Horvath, M., Herczeg, E., Toth, A., Jurak, M. \(2006\) Parallel clinical and biomechanical assessment of status and follow-up in patients with hemiparesis: where are the corresponding points? The ALLADIN project, Rehabilitáció, 16\(1\):22-27](#)
- 20) IEEE/RAS-EMBS 1st Conference on Robotics and Biomechanics (BioRob 2006), February 20-22, 2006, Pisa, Italy
[S. Mazzoleni, S. Mizera, F. Romagnolo, P. Dario, E. Guglielmelli, An ergonomic dynamometric foot platform for functional assessment in rehabilitation](#)
- 21) IEEE/EMBS 28th Annual International Conference, August 30-September 3, 2006, New York City, USA
[G. Van Dieck, M. Van Hulle, J. Van Vaerenbergh, Statistically rigorous human movement onset detection with the maximal information redundancy criterion](#)
- 22) IEEE/EMBS 28th Annual International Conference, August 30-September 3, 2006, New York City, USA
[G. Van Dieck, M. Van Hulle, J. Van Vaerenbergh, Hybrid feature subset selection for the quantitative assessment of skills of stroke patients in Activity of Daily Living tasks](#)
- 23) 25th Annual Conference of the Hungarian Society of Rehabilitation and Physical Medicine, September 21-23, 2006, Galyateto, Hungary
[M. Horvath, M. Trocsanyi, G. Fazekas, A. Hering, K. Jeney, E. Herczeg, Application of biomechanical approach in rehabilitation of patients with hemiparesis \(in Hungarian language\)](#)
- 24) 6th Mediterranean Congress of Physical and Rehabilitation Medicine, October 18-21, 2006, Vilamoura, Portugal
[G. Fazekas, M. Horvath, M. Trocsanyi, A. Foltovsich, Z. Dienes, I. Szel, E. Herczeg, Biomechanical aspects in rehabilitation of patients with hemiparesis](#)
- 25) [O'Connell, C., Varghese, A.C., Stokes, E.K. \(2006\) Report on research in progress, Physiotherapy Ireland, 7\(1\): 23-26](#)

Project funded by the European Commission under the 6th Framework Programme,
 IST Programme, Priority 2.3.1.11 - eHealth
 IST Contract No.: IST-2002-507424



Figure 21. Publications section (page 2)



**Natural Language Based
Decision Support in Neuro-Rehabilitation**

Home | Overview | EU Partners | Events | Community | Publications | Work in progress | Moments | Contacts | Restricted

alladin-ehealth.org
Work in progress

Public documents from the ALLADIN Project

Presentations and other dissemination tools

- Project Leaflet - 151 KB - pdf - [download](#)
- Project Brochure - 313 KB - pdf - [download](#)

Public Project Deliverables

- D8.1 - Project presentation
 - Full document - 150 KB - pdf - [download](#)
 - Table Of Contents only - 49 KB - pdf - [download](#)
- D1.1 - Methodology for multi-centre trial
 - Full document - 7,36 MB - pdf - [download](#)
 - Table Of Contents only - 146 KB - pdf - [download](#)
- D2.1 - Diagnostic Device and Method for Force-Torque Measurement Based Therapy Assessment
 - Full document - 8,08 MB - pdf - [download](#)
 - Table Of Contents only - 201 KB - pdf - [download](#)
- D4.1 - Data definition for patients, Tools for elimination of noisy data and Software for data pre-processing, and description of data mining algorithms
 - Full document - 498 KB - pdf - [download](#)
 - Table Of Contents only - 147 KB - pdf - [download](#)

Video

- Presented at Medetel Conference (April 8-8, 2006)
 - Full video- 84,3 MB - wmv - [download](#)

Project funded by the European Commission under the 6th Framework Programme,
IST Programme, Priority 2.3.1.11 - eHealth
IST Contract No.: IST-2002-507424



Figure 22. Work in progress section

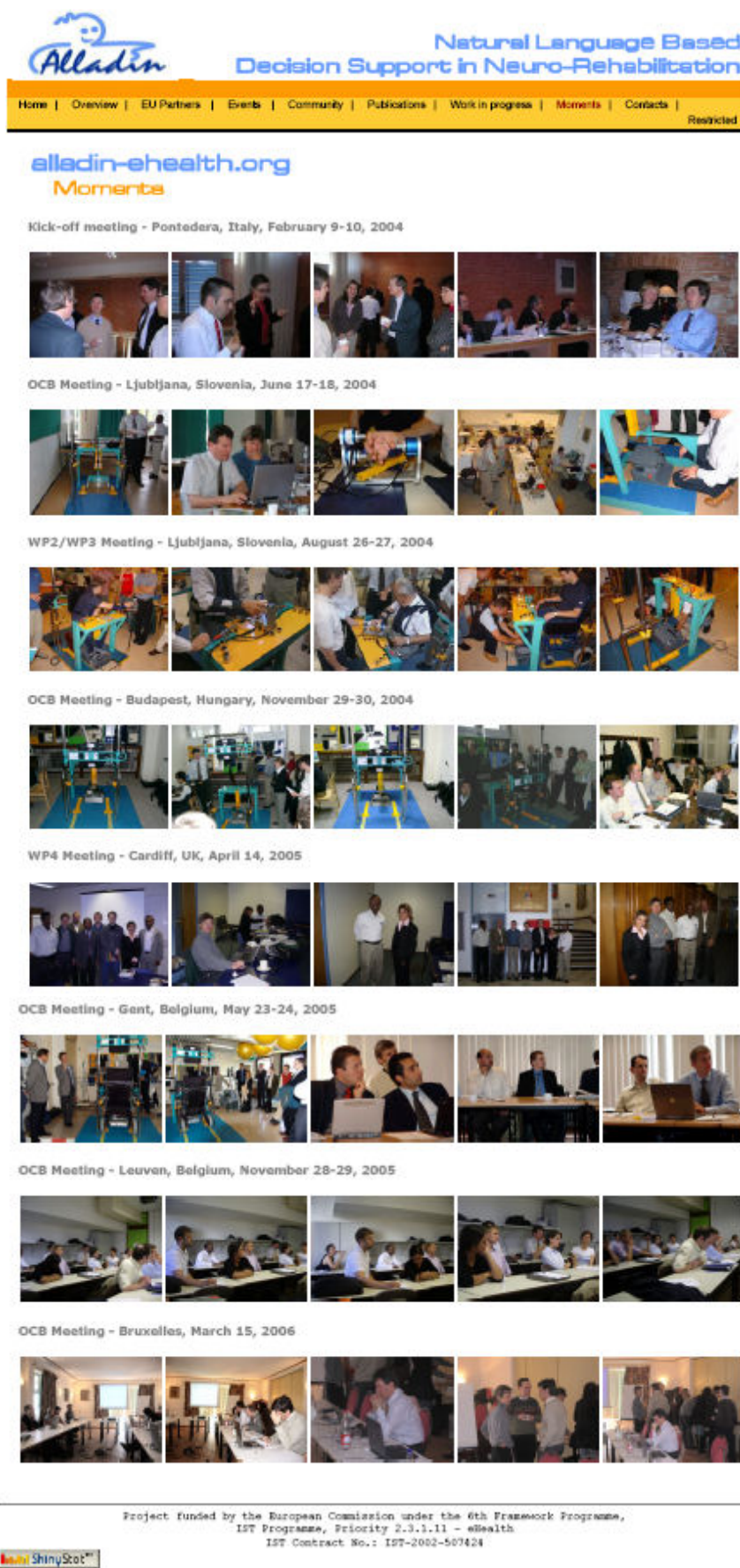


Figure 23. Moments section



The screenshot shows the 'Contacts' page of the Alladin website. At the top left is the Alladin logo, a stylized blue figure with a smiling face. To its right is the text 'Natural Language Based Decision Support in Neuro-Rehabilitation'. Below this is a yellow navigation bar with links: Home | Overview | EU Partners | Events | Community | Publications | Work in progress | Moments | Contacts |. The word 'Restricted' is visible in the bottom right corner of the navigation bar. The main content area features the URL 'alladin-ehealth.org' and the title 'Contacts'. A blue heading reads 'For more information please contact:'. Below this, the contact details for Jo Van Vaerenbergh are listed: Project Co-ordinator, Arteveldehogeschool, St. Lievenspoortstraat 143, B-9000 Gent. Contact information includes Phone: +32(0)24789291, Fax: +32(0)24789291, and email: info@alladin-ehealth.org. A horizontal line separates this from the footer, which contains funding information: 'Project funded by the European Commission under the 6th Framework Programme, IST Programme, Priority 2.3.1.11 - eHealth, IST Contract No.: IST-2002-507424'. A small 'ShinyStat™' logo is located in the bottom left corner of the footer area.

Figure 24. Contacts section

Index of /files

<u>Name</u>	<u>Last modified</u>	<u>Size</u>	<u>Description</u>
 Parent Directory		-	
 ALLADIN_THINK_TANK_CONFERENCE/	21-Feb-2007 16:20	-	
 Adobe_Working_Docs/	16-Sep-2003 10:11	-	
 CONTRACT_AND_ANNEXES/	07-Jan-2004 15:16	-	
 CPFs/	17-Oct-2005 23:40	-	
 Call_documents/	09-Apr-2003 11:45	-	
 Contract_Negotiations/	05-Dec-2003 12:40	-	
 Deliverables/	20-Jan-2006 19:02	-	
 DoW_of_Alladin/	17-Oct-2005 23:37	-	
 INFORMATION.txt	21-Dec-2004 19:46	769	
 MS_Excel_Working_Docs/	27-Sep-2003 23:06	-	
 MS_Project_Working_Docs/	27-Feb-2004 16:23	-	
 MS_Word_Working_Docs/	01-Jul-2004 17:20	-	
 Media/	23-Jun-2005 21:59	-	
 Meetings/	02-Dec-2006 14:23	-	
 Partners/	23-Jul-2003 19:00	-	
 Proposal/	27-Feb-2003 19:35	-	
 README	21-Dec-2004 19:46	769	
 Reports/	19-Jul-2004 14:32	-	
 Workpackages/	04-May-2004 13:22	-	
 bin/	01-Jun-2006 16:27	-	
 dev/	19-Apr-2006 12:32	-	
 incoming/	13-Nov-2006 23:13	-	
 lib/	19-Apr-2006 12:44	-	
 second_review/	11-Apr-2006 19:10	-	
 usr/	13-Feb-2005 14:43	-	

Apache/2.0 Server at alladin.manuf.bme.hu Port 443

Figure 25. Restricted area (sftp server only for the project partners)