



NORTHWESTERN UNIVERSITY

Northwestern University Prosthetics-Orthotics Center
680 North Lake Shore Drive, Suite 1100
Chicago, IL 60611
Telephone 312-503-5700
www.nupoc.northwestern.edu

Archives Index and Summary of Contents for *Capabilities* 1991 – 2013

**** Indicates lacuna in publication**

Capabilities

The free quarterly publication, *Capabilities*, was issued as a mailed, hard copy publication for 22 years from 1991 through 2013 by the [Northwestern University Rehabilitation Engineering Research Center \(NURERC\) for Prosthetics and Orthotics](#). Under the RERC, *Capabilities* was funded by the National Institute on Disability and Rehabilitation Research (NIDRR) of the U. S. Department of Education. NIDRR grants that supported the publication of *Capabilities* were: Grant H133E80013 (1988-1993); Grant H133E30007 (1993 through 1998); Grant H133E980023 (October 1, 1998 through September 30, 2003); Grant H133E030030 (October 1, 2003 through September 30, 2008); and Grant H133E080009 (October 1, 2009 through September 30, 2013). The opinions expressed in these publications are those of the grantee and do not necessarily reflect those of the Department of Education.

From 1991 through 2013, *Capabilities* was available by mail and on the internet to individuals and institutions who are interested in Prosthetics and Orthotics (P&O). From 2014, due to a change in funding, *Capabilities* is available only in PDF format and may be downloaded and printed from the [NUPOC web site](#).

Capabilities provides information about research and education activities conducted at the Northwestern University Prosthetics-Orthotics Center (NUPOC). Clinicians, manufacturers, consumers, and fellow investigators who are involved in P&O can access articles about the research, presentations, publications, and other activities conducted at NUPOC.

To inquire about *Capabilities*, contact the Northwestern University Prosthetics-Orthotics Center, 680 North Lake Shore Drive, Suite 1100, Chicago, IL 60611 or call 312-503-5700. You may also communicate by e-mail: reiu@northwestern.edu.

NOTE: Available *Capabilities* are in the Adobe PDF format. You will need the [Adobe Reader](#), which is available for FREE, to view these documents. Select the *Capabilities* issue from the Archive Index and open the corresponding PDF located online at: <https://northwestern.box.com/s/sdhxk6vop7d3yxdf1ubz>. This link takes you to Northwestern Box where you can access the *Capabilities* PDFs.



NORTHWESTERN
UNIVERSITY

Northwestern University Prosthetics-Orthotics Center
680 North Lake Shore Drive, Suite 1100
Chicago, IL 60611
Telephone 312-503-5700
www.nupoc.northwestern.edu

Archives Index and Summary of Contents for *Capabilities* 1991 – 2013

**** Indicates lacuna in publication**

***Capabilities*: Index and Summaries of Contents**

2013: *Capabilities* 21(4), Autumn 2013 (8 pages)

Featured articles: In this issue of *Capabilities*, Kiki Zissimopoulos, PhD, writes about *Balance and Confidence during Post-Stroke Gait*. We report on the first NUPOC MPO class; and the educational module, *Biotechnology: High Tech, Low Tech, the Right Tech!*, a STEM program developed by R. J. Garrick, PhD, and presented by NUPOC to the National Student Leadership Conference. Other articles examine research and education training seminars presented at NUPOC by visiting scholar Michael Dillon, PhD (LaTrobe University, Australia). Read about NUPOC presentations at the AAOP Midwest Chapter Meeting; the 3rd Musculoskeletal Research Training Day at Northwestern University; the NUPOC dilatancy workshops presented at the Lurie Children's Hospital; and an educational program presented to Rush OT graduates.

(R. J. Garrick, PhD, Editor)

2013: *Capabilities* 21(3), Summer 2013 (8 pages)

Featured articles: Read a new article by Matthew Major, PhD, "Evaluating the Validity and Reliability of the Berg Balance Scale for Use on Individuals with Lower Limb Amputation". Celebrate the successful doctoral defense by Kiki Zissimopoulos, PhD; NU-Invo Prize winner Brian Robillard, BS; and Erin Boutwell, MS, awardee of OPERF and NU Graduate Writing Fellowships; meet 2013 NURERC Scholar Kyle Swensen, BS, and research extern Anne Thurber, BA. Learn about NUPOC research presentations at professional meetings and outreach activities.

(R. J. Garrick, PhD, Editor)

2013: *Capabilities* 21(2), Spring 2013 (8 pages)

Featured articles: This issue of *Capabilities* features "Development of a 3-D Simulation Tool to Investigate the Effects of AFO Joint Misalignments" and information about a web-based, interactive, educational tool that can be used by orthotics students. Learn about "Dilatancy Casting for Prosthetics and Orthotics: A Translational Technology" that offers a better, faster, more economical and ecological alternative to the old plaster-based approach. Dilatancy casting is



NORTHWESTERN
UNIVERSITY

Northwestern University Prosthetics-Orthotics Center
680 North Lake Shore Drive, Suite 1100
Chicago, IL 60611
Telephone 312-503-5700
www.nupoc.northwestern.edu

Archives Index and Summary of Contents for *Capabilities* 1991 – 2013

**** Indicates lacuna in publication**

an appropriate technology for humans and also has been translated to veterinary science. Read about NUPOC researchers' presentations at ISPO 2013 and other forums; the Yeongchi Wu International Educational Award; U.S. Senator Dick Durbin (D-IL) and his proposal to fund P&O research and education; and NUPOC projects assisted by Larissa Conner, CO, and International Scholar Elisah Pietersma, BS.

(R. J. Garrick, PhD, Editor)

2013: Capabilities 21(1), Winter 2013 (8 pages)

Featured articles: This issue of *Capabilities* features an article by R. J. Garrick, PhD, and Stefania Fatone, PhD, *The Marlo Anatomical Socket (MAS®) Studied for Coronal Plane Stability, How the MAS® Provides Comfort and Stability* and a spotlight on collaborative researcher, Robert Tillges, CPO, FAAOP. Learn about *Development of Subischial Prosthetic Sockets with Vacuum Assisted Suspension for Highly Active Persons* (Principal Investigator Stefania Fatone, PhD); collaboration with Center for the Intrepid; and supplemental funding award through the Joint Warfighter Medical Research Program. Read about keynote addresses delivered by Stefania Fatone, PhD; webinar presented by Craig Heckathorne, MS; and the recent NUPOC International Service trip to Guatemala. People in NUPOC news include Sara Koehler, PhD; Brian Robillard, BS; and NUPOC outreach education programs for the FSM Chicago Community Engagement Program, Perspectives Charter High Schools, and Crystal Lake South High School science students.

(R. J. Garrick, PhD, Editor)

2012: Capabilities 20(4), Autumn 2012 (8 pages)

Featured articles: This issue of *Capabilities* features articles by R.J. Garrick, PhD, about Knowledge Translation (KT) in P&O: *Spreading the Word: Promoting Clinically-Relevant Knowledge in P&O*, a synopsis of the 2012 NURERC State of the Science Meeting about KT for P&O; and *NUPOC Educational Tours: A Platform for Knowledge Translation*. Meet NUPOC International Scholar, José Zavaleta; and Dale Yasukawa Scholarship recipient, Jeff Henderson. Read about an Academy webinar presented by Azucena Rodriguez, PhD, and Stefania Fatone, PhD. Follow global and domestic keynote talks by Stefania Fatone, PhD. Learn about NURERC publications, and research



NORTHWESTERN
UNIVERSITY

Northwestern University Prosthetics-Orthotics Center
680 North Lake Shore Drive, Suite 1100
Chicago, IL 60611
Telephone 312-503-5700
www.nupoc.northwestern.edu

Archives Index and Summary of Contents for *Capabilities* 1991 – 2013

**** Indicates lacuna in publication**

presentations at AAOP Midwest Chapter Meeting; Musculoskeletal Research Training Day, RIC Grand Rounds, and 7-Minutes of Science.

(R. J. Garrick, PhD, Editor)

2012: *Capabilities* 20(3), Summer 2012 (8 pages)

Featured articles: This issue of *Capabilities* highlights the Results of the 2012 and 2006 NUPOC State of the Science Surveys; and offers a Free CE Opportunity for CPOs about quality improvement that was developed by NUPOC and the Rehabilitation Institute of Chicago (RIC). Meet new faculty John Brinkmann, MA, CPO/L, FAAOP, and Nydia Marzán-Harding, CPO/L; and 2012 NURERC Research Scholar James Schweitzer; and the 2012 Thranhardt Award for NUPOC research authored by Azucena Rodriguez, PhD, *et al.*, "Spinal Motion during Walking in Persons with Transfemoral Amputation with and without Low Back Pain". Also, read about NUPOC publications, presentations, educational outreach, grant proposals and awarded funding.

(R. J. Garrick, PhD, Editor)

2012: *Capabilities* 20(2), Spring 2012 (8 pages)

Featured articles: This issue of *Capabilities* highlights experiences of NUPOC volunteers who provided P&O services in Guatemala; reports on Seminar in Technical Orthopedics with speakers from German-speaking countries and Loyola University; reports on Megan Carroll, Library Information Science Practicum student, who is organizing the NUPOC Special Collection; Freek Verbakel, an extern from Delft, who is analyzing NUPOC's data about center of pressure progression in ankle-foot orthoses (AFOs); Craig Heckathorne, MS, and Erin Boutwell, MS, who presented biomedical engineering opportunities at the 41st Annual Career Day for Girls; and honors the memory of James Russ, former director of the NUPOC Orthotics program.

(R. J. Garrick, PhD, Editor)

2012: *Capabilities* 20(1), Winter 2012 (8 pages)

Featured articles: In this issue of *Capabilities*, William Brett Johnson, PhD, writes about designing portable equipment to measure human movement and collaborating with off-site orthotists to



NORTHWESTERN
UNIVERSITY

Northwestern University Prosthetics-Orthotics Center
680 North Lake Shore Drive, Suite 1100
Chicago, IL 60611
Telephone 312-503-5700
www.nupoc.northwestern.edu

Archives Index and Summary of Contents for *Capabilities* 1991 – 2013

**** Indicates lacuna in publication**

recruit subjects for participation in his doctoral research project. Other articles examine Dr. Johnson's successful dissertation defense about RGO-assisted gait; new instructional team member Shenan Hoppe-Ludwig, CO; a didactic tour of NUPOC for high school science students; NUPOC graduate students and postdoctoral fellows who serve as judges at science fairs; and preparations to launch NUPOC's Master's in Prosthetics and Orthotics (MPO).
(R. J. Garrick, PhD, Editor)

2011: *Capabilities* 19(4), Autumn 2011 (8 pages)

Featured articles: This issue of *Capabilities* features an article by Azucena Rodriguez, PhD, *et al.*, about NIDRR-funded research that investigates spinal motion during walking in persons with transfemoral amputation. NUPOC appreciates sponsorship of a faculty office, generously presented by Judith Rubin in memory of her late father, David Rubin, MD. NUPOC welcomes NIDRR Scholar Shingo Takemoto and research extern Tina Amirtha. Public education activities at NUPOC include presentations to the National Student Leadership Conference, the Rush Occupational Therapy program, and visiting researchers from Japan. NUPOC News reports on research publications, presentations, patents, defenses, and more.
(R. J. Garrick, PhD, Editor)

2011: *Capabilities* 19(3), Summer 2011 (8 pages)

Featured articles: This issue of *Capabilities* offers a tribute to NUPOC Educational Models and Research Subjects. Read about the lifetime contributions of Prosthetics Educational Model George Wedel and Orthotics Educational Model Clarence Coakley. An article by Samuel Kwak and Stefania Fatone, PhD(Hons), evaluates a case study of a bilateral transtibial prosthesis user walking with the NUPOC mechanically adapting prosthetic ankle. As a dissemination activity, NUPOC hosted groups from Northwestern University's Take Your Sons and Daughters to Work. Groups of children interested in science visited NUPOC to learn about upper limb prostheses, motion analysis, and orthoses.
(R. J. Garrick, PhD, Editor)



NORTHWESTERN
UNIVERSITY

Northwestern University Prosthetics-Orthotics Center
680 North Lake Shore Drive, Suite 1100
Chicago, IL 60611
Telephone 312-503-5700
www.nupoc.northwestern.edu

Archives Index and Summary of Contents for *Capabilities* 1991 – 2013

**** Indicates lacuna in publication**

2011: *Capabilities* 19(2), Spring 2011

Featured articles: This issue of *Capabilities* updates the CROR-NURERC collaborative project that helps prosthetists measure outcome and improve quality of care. Eric Nickel, MS, offers a summary of his master's thesis about a prosthetic ankle-foot system that automatically adapts to sloped surfaces. Charles Wang, MS, reflects on his dual training in biomedical engineering and prosthetics. NUPOC welcomes postdoctoral fellow, Oluseeni Komolafe, PhD; congratulates Instrument Maker Dilip Thaker; and appreciates Margaret Parker. Reports about NUPOC outreach activities include participation in health professional recruitment for the U.S. Army and NU Career Day for Girls. NUPOC hosted tours for professional prosthetists and orthotists, and for Bateman School science students. Read about NUPOC publications, presentations, and photographer Scot Wittman, MFA, who focused on NUPOC prosthetists.

(R. J. Garrick, PhD, Editor)

2011: *Capabilities* 19(1), Winter 2011 (8 pages)

Featured articles: *Capabilities* highlights NUPOC's Ribbon Cutting and Open House; donors who made major gifts to NUPOC; the conceptual design for NUPOC's new space; and the dedication of the Childress Commons. We introduce postdoctoral fellow, Azucena Rodriguez, PhD, and consider the importance of collaborative research. NUPOC spearheaded a P&O service trip to Zacapa, Guatemala. Awards and honors went to Stefania Fatone, PhD, who was guest editor of *Prosthetics and Orthotics International*; Christopher Robinson, CPO, who received a 2010 OPERF Educator Award and was recognized Fellow of the American Academy of Orthotists and Prosthetists; Eric Nickel, who successfully defended his master's thesis; and Tom Karolewski, CP, who completed his Master's Degree in Education. NUPOC hosted an educational tour about rehabilitation engineering and P&O for high school science students.

(R. J. Garrick, PhD, Editor)

2010: *Capabilities* 18(4), Autumn 2010 (8 pages)

Featured articles: *Capabilities* features NUPOC's successful move and unification of research and education programs; and announces the honor of having Northwestern University President and Professor Morton O. Schapiro preside at the NUPOC Ribbon Cutting and rededication ceremony.



NORTHWESTERN UNIVERSITY

Northwestern University Prosthetics-Orthotics Center
680 North Lake Shore Drive, Suite 1100
Chicago, IL 60611
Telephone 312-503-5700
www.nupoc.northwestern.edu

Archives Index and Summary of Contents for *Capabilities* 1991 – 2013

**** Indicates lacuna in publication**

Learn about a major Department of Defense (DoD) research grant awarded to Principal Investigator Stefania Fatone and Co-Investigator Steven A. Gard for the development of a subischial prosthetic socket. Kudos to NURERC Advisory Panel recognizes consumers, clinicians, and researchers who serve on the Panel. Spotlighted are Stefania Fatone, an Impresa Award recipient; Tom Karolewski, CP, a member of the Feinberg Academy of Medical Educators (FAME); Matthew J. Major, PhD, a Postdoctoral Fellow; Sam Kwak, a student mentee in P&O; and recent visitors to NUPOC. Read summaries of recent publications, presentations, and defenses.
(R. J. Garrick, PhD, Editor)

2010: *Capabilities* 18(3), Summer 2010 (8 pages)

Featured articles: This issue of *Capabilities* publicizes the historic merger between NUPRL and NUPOC. Going forward, the Northwestern University Prosthetics-Orthotics Center (NUPOC) will represent the dual missions of P&O education and research. From September, the Center will move into custom-designed facilities adjacent to the NU campus at 680 North Lake Shore Drive. Read *Practice Makes Perfect* to learn about the experiences of P&O clinicians who have used the Orthotics and Prosthetics User Survey (OPUS) in their practice. Other articles detail NURERC presentations at the ISPO Conference, patent applications, and awards. Read about VA-associated activities that support amputee surfing and the fabrication of a surf leg. The article, *Brian Ruhe: Bioengineer, Prosthetist, Hockey Champ...Gnarly Surfer!*, identifies a confluence among prosthetics, biomechanics and surfing. Finally, this issue marks the departure of Joshua Rolock, PhD, and welcomes summer intern, Colleen Farrell.
(R. J. Garrick, PhD, Editor)

2010: *Capabilities* 18(2), Spring 2010 (8 pages)

Featured articles: This issue of *Capabilities* announces the merger between NUPRL and NUPOC and the entity's planned relocation to a new research center. Articles feature awards to NURERC personnel, Stefania Fatone, PhD, Dudley S. Childress, PhD, and John Michael, CPO. Also, read about NURERC presentations at the 36th American Academy of Orthotists and Prosthetists Scientific Symposium. We welcome new personnel Jared Howell, CPO, and Pranitha Gottipati, PhD. Read about collaborative projects in spine research and the first meeting of the NURERC Advisory



NORTHWESTERN
UNIVERSITY

Northwestern University Prosthetics-Orthotics Center
680 North Lake Shore Drive, Suite 1100
Chicago, IL 60611
Telephone 312-503-5700
www.nupoc.northwestern.edu

Archives Index and Summary of Contents for *Capabilities* 1991 – 2013

**** Indicates lacuna in publication**

Panel. Recent NURERC visitors include Ms. Yasmin Othman (University of Jordan); orthopedic surgeons from German-speaking countries sponsored by Initiative '93; and the Science Club of the McCormick Boys and Girls Club. Finally, Eric Nickel, BSc, demonstrates the importance of science mentorship and role modeling for Science Club students.

(R. J. Garrick, PhD, Editor)

2010: *Capabilities* 18(1), Winter 2010 (8 pages)

Featured articles: This issue of *Capabilities* introduces Felix Starker as Visiting Scholar at NURERC. His article, "Remaking the Mauch Hydraulic Ankle," examines the hydraulic mechanism that allows the prosthetic ankle to adapt passively to different terrain. Other articles welcome John W. Michael, MEd, CPO, as Associate Director of NUPOC; bid farewell to Andrew Hansen, PhD, who has transferred to the Minneapolis VA Medical Center; summarize the collaboration of NUPOC graduates with the Range of Motion Project (ROMP) to provide P&O services to Guatemalans; and review NURERC's outreach and dissemination activities educating high school science students about career opportunities in rehabilitation engineering and P&O.

(R. J. Garrick, PhD, Editor)

2009: *Capabilities* 17(4), Autumn 2009 (12 pages)

Featured articles: In this issue, *Capabilities* Editor R. J. Garrick examines education and outreach by NURERC staff. Sara Koehler, MS, Lexyne Jackson, MS, and Angelika (Kiki) Zissimopoulos, MS, discuss their educational experiences and the benefits of mentorship in Northwestern University's Graduate Teaching Certificate Program. Articles by R. J. Garrick, PhD, review NURERC outreach presentations to the National Youth Leadership Forum Medical Group, the Chicago Museum of Science and Industry Science Minors, and the Rush University School of Nursing. R. J. Garrick, PhD, reports on NURERC interactions with international researchers in Asia and Europe. Articles about student achievements include successful doctoral dissertation defense by Brian L. Ruhe, PhD; and the selection of Sara Koehler, MS, to receive a 2009 OPERF award. See NURERC News for updates about meetings, promotions, and final patent applications.

(R. J. Garrick, PhD, Editor)



NORTHWESTERN
UNIVERSITY

Northwestern University Prosthetics-Orthotics Center
680 North Lake Shore Drive, Suite 1100
Chicago, IL 60611
Telephone 312-503-5700
www.nupoc.northwestern.edu

Archives Index and Summary of Contents for *Capabilities* 1991 – 2013

**** Indicates lacuna in publication**

2009: *Capabilities* 17(3), Summer 2009 (8 pages)

Featured articles: This issue of *Capabilities* reviews a keynote address delivered by Andrew Hansen, PhD, in Amsterdam; workshops about lower limb orthotics presented by Stefania Fatone, PhD, BPO(Hons) and Bryan Malas, MHPE, CO, CPed at RIC; and presentations by Steven A. Gard, PhD, Stefania Fatone, PhD and other NURERC researchers at the Midwest AAOP meeting. Articles by R. J. Garrick, PhD, discuss Dr. Hansen's visit to The Center for the Intrepid and visits to NURERC by LTC Rachel Evans from The Center for the Intrepid to NURERC and Troy Turner from the Telemedicine and Advanced Technology Research Center (TATRC). News from the VA includes a report on upgrades to software used in VACMARL research; and the value of VA adaptive sports programs to holistic rehabilitation and their connection with the Paralympics. Erin Boutwell, MS, and Charles C. Wang, MS, reprise their recent thesis defenses.
(R. J. Garrick, PhD, Editor)

2009: *Capabilities* 17(2), Spring 2009 (8 pages)

Featured articles: *Capabilities* Editor R. J. Garrick, PhD, reviews outcomes research and evidence-based practice to use objective, measureable, standardized data in medical and P&O treatment. Allen Heinemann, PhD, *et al.*, of the Center for Rehabilitation Outcomes Research (CROR), offers insights into improving P&O patient care; Stefania Fatone, PhD, discusses the initiation and development of Evidence Notes for P&O; R. J. Garrick, PhD, recaps the use of Clinical Practice Guidelines at VA/DoD. William B. Johnson, MS, reprises his Thranhardt Lecture about reciprocating gait orthoses. Also, read articles about James L. Del Bianco who, under the guidance of Stefania Fatone, PhD, conducted award-winning research about orthoses for Charcot-Marie-Tooth; NURERC participation in the 38th annual Career Day for Women; and others.
(R. J. Garrick, PhD, Editor)

2009: *Capabilities* 17(1), Winter 2009 (8 pages)

Featured articles: This issue of *Capabilities* features articles about new equipment awarded to laboratory researchers by VA Research and Development. Three instruments will augment ongoing modeling projects and promote new knowledge about human balance. Joshua Rolock, PhD,



NORTHWESTERN UNIVERSITY

Northwestern University Prosthetics-Orthotics Center
680 North Lake Shore Drive, Suite 1100
Chicago, IL 60611
Telephone 312-503-5700
www.nupoc.northwestern.edu

Archives Index and Summary of Contents for *Capabilities* 1991 – 2013

**** Indicates lacuna in publication**

introduces the Stratasys Fused Deposition Modeling (FDM)TM 400mc Rapid Prototyping Machine and the Inspeck Dual Field 3-D Optical Digitizer. Andrew Hansen, PhD, and R. J. Garrick, PhD, introduce the NeuroCom[®] Balance Manager[®] SMART EquiTest[®] Clinical Research SystemTM and the VA Chicago Laboratory for the Assessment of Balance (VACLAB). R. J. Garrick, PhD, examines "Accidental Falls," their risk assessment and prevention through balance studies. Other articles highlight Thomas Karolewski, CP, FAAOP, Director of Prosthetics Education at NUPOC; recent student defenses; and public education activities.

(R. J. Garrick, PhD, Editor)

2008 *Capabilities* 16(4), Autumn 2008 (8 pages)

Featured articles: *Capabilities* editor R. J. Garrick, PhD, notes the importance of renewed NIDRR funding for the laboratory as a Rehabilitation Engineering Research Center (RERC) for Prosthetics and Orthotics (P&O). NURERC's new collaboration with AgrAbility examines prosthetic durability among farmers with an amputation. "Overcoming Adversity" chronicles successful farming with an amputation. Other articles underscore NURERC's international dissemination and educational activities. Read about prosthetic challenges for a Vietnamese child in "Where People Seek to Do Good;" the global work of Julien Pasquier and Handicap International in "Standing Tall;" and a translational engineering design process used at Fraunhofer Technologie-Entwicklungsgruppe in "Design Process."

(R. J. Garrick, PhD, Editor)

2008: *Capabilities* 16(3), Summer 2008 (8 pages)

Featured articles: In this issue of *Capabilities*, Lexyne McNealy Jackson, MS, reviews ways to evaluate balance and stability. We commemorate Mrs. Tatjana Mauch and remember her philanthropic work supporting prosthetics engineering research at the Northwestern University Prosthetics Research Laboratory. R. J. Garrick, PhD, spotlights new opportunities in biomedical engineering research through the role of John H. Linehan, PhD, Director of the Center for Translational Innovation at Northwestern University Clinical and Translational Sciences (NUCATS). Read other articles that focus on the U.S. Army Wounded Warrior Program (AW2) and Joann Williams, who is a Soldier Family Management Specialist; the departure of NUPOC's Mark L.



NORTHWESTERN
UNIVERSITY

Northwestern University Prosthetics-Orthotics Center
680 North Lake Shore Drive, Suite 1100
Chicago, IL 60611
Telephone 312-503-5700
www.nupoc.northwestern.edu

Archives Index and Summary of Contents for *Capabilities* 1991 – 2013

**** Indicates lacuna in publication**

Edwards, CPO, to accept a position with Otto Bock Healthcare; the experiences of prosthetists in training at NUPOC, and NURERC graduate student, Charles Wang.

(R. J. Garrick, PhD, Editor)

2008: *Capabilities* 16(2), Spring 2008 (8 pages)

Featured articles: This issue of *Capabilities* features “Model Simulations of Partial Foot Amputation Gait While Wearing Shoes” by Andrew Hansen, PhD, and Stefania Fatone, PhD, and Michael Dillon, PhD. Discover how marker placement on the shoe may result in exaggerated range of motion measurements at the ankle during dorsiflexion at three levels of partial foot amputation. “Where Education and Engineering Meet” by R. J. Garrick, PhD, reports on NURERC graduate students who participated in Get-a-Grip, the educational outreach program that teaches prosthetics engineering concepts to eighth graders. Other articles chronicle an exchange of research interests between NURERC and visitors from the Nacional Autónoma Universidad de México (UNAM), University of Illinois, and MIT-Harvard.

(R. J. Garrick, PhD, Editor)

2008: *Capabilities* 16(1), Winter 2008 (12 pages)

Featured articles: This issue of *Capabilities* features “Bionic Arms and Human Performance,” written by NURERC research engineer, Craig Heckathorne, MS, who compares the performance of physiologic and prosthetic hands and elbows. The next article, “Step Length Modulation in Able-Bodied Persons”, is written by biomedical engineering doctoral student, Pinata Sessoms, MS, and NURERC director Steven A. Gard, PhD, who discuss ways able-bodied walkers alter their step length and speed. R. J. Garrick, PhD, editor of *Capabilities*, offers a ten year retrospective in memory of Margaret C. Pfrommer. Read other articles about outreach and educational activities conducted by NURERC researchers.

(R. J. Garrick, PhD, Editor)

2007: *Capabilities* 15(4), Autumn 2007 (8 pages)

Featured articles: This issue of *Capabilities* features “Models and Measurements of Spinal Motion



NORTHWESTERN
UNIVERSITY

Northwestern University Prosthetics-Orthotics Center
680 North Lake Shore Drive, Suite 1100
Chicago, IL 60611
Telephone 312-503-5700
www.nupoc.northwestern.edu

Archives Index and Summary of Contents for *Capabilities* 1991 – 2013

**** Indicates lacuna in publication**

during Ambulation," written by biomedical engineering graduate, Regina J. Konz, P.D. Additional articles examine vascular insufficiency, advanced diabetes and partial foot amputation. Stefania Fatone, PhD, reviews "Studies of the Biomechanics of Gait of Persons with Partial Foot Amputation," and an associated article emphasizes VA programs that prevent diabetic limb loss. Also, read about visits to NUPRL & RERP by distinguished scientists such as NSF's Robert Jaeger, PhD, and La Trobe University's Michael Dillon, PhD, BPO(Hons).
(R. J. Garrick, PhD, Editor)

2007: *Capabilities* 15(3), Summer 2007 (8 pages)

Featured articles: This issue of *Capabilities* features articles by two NUPRL & RERP graduate students. The first article is "Investigating the Effects of Surface Inclination and Prosthetic Alignment on the Biomechanics of Standing" by Brian Ruhe, MS. The second article is "Prosthetic Foot and Ankle with Mechanical Adaptation for Inclined Surfaces" by Ryan Williams, BS. Learn more about Mr. Ruhe and his work in "Brian Ruhe: Mind, Body, Spirit" and "Eager Students Attend NURERC's Outreach Program."
(R. J. Garrick, PhD, Editor)

2007: *Capabilities* 15(2), Spring 2007 (8 pages)

Featured articles: This issue of *Capabilities* features articles by two NUPRL & RERP graduate students. The first article is "Stance-Control Knee Ankle Foot Orthoses" by Angelika Zissimopoulos, MS, and the second is "Preliminary Findings for a Study of the Dynamics of RGO Gait" by William Brett Johnson, B.E.
(R. J. Garrick, PhD, Editor)

2007: *Capabilities* 15(1), Winter 2007 (8 pages)

Featured article: This issue of *Capabilities* covers the *Festschrift* celebration and the Dudley S. Childress Scientific Symposium in honor of Dudley S. Childress, PhD, and his productive 40-year career.
(R. J. Garrick, PhD, Editor)



NORTHWESTERN
UNIVERSITY

Northwestern University Prosthetics-Orthotics Center
680 North Lake Shore Drive, Suite 1100
Chicago, IL 60611
Telephone 312-503-5700
www.nupoc.northwestern.edu

Archives Index and Summary of Contents for *Capabilities* 1991 – 2013

**** Indicates lacuna in publication**

2007: *Capabilities* 15(1), Winter 2007 (Extra) (4 pages)

Featured article: This supplemental issue of *Capabilities* emphasizes the Northwestern University Prosthetics-Orthotics Center's (NUPOC) continued commitment to hands-on training as an important component in the new blended learning curriculum for training future prosthetists and orthotists.

(R. J. Garrick, PhD, Editor)

2006: *Capabilities* 14(4), Autumn 2006 (16 pages)

Featured articles: This issue of *Capabilities* focuses on the new blended learning curriculum for prosthetics and orthotics education at the Northwestern University Prosthetics-Orthotics Center (NUPOC).

(R. J. Garrick, PhD, Editor)

2006: *Capabilities* 14(3), Summer 2006 (12 pages)

Featured articles: This issue of *Capabilities* covers a recent visit by Edward Pennington-Ridge, President of *Elegant Design and Solutions Ltd.*, located in Wales, UK. The article discusses his work on new prosthetic technologies and landmine removal. Also, another article summarizes the results of our online survey and forum about the state of prosthetics and orthotics research.

(R. J. Garrick, PhD, Editor)

2006: *Capabilities* 14(2), Spring 2006 (12 pages)

Featured articles: This issue of *Capabilities* provides an overview of NUPRL & RERP's State of the Science Meeting in Prosthetics and Orthotics Research, which was held on February 28, 2006. This issue also features a memorial article about the life and career of Ken Akashi, MD, who was instrumental in developing and promoting clinical rehabilitation medicine in Japan.

(R. J. Garrick, PhD, Editor)



NORTHWESTERN
UNIVERSITY

Northwestern University Prosthetics-Orthotics Center
680 North Lake Shore Drive, Suite 1100
Chicago, IL 60611
Telephone 312-503-5700
www.nupoc.northwestern.edu

Archives Index and Summary of Contents for *Capabilities* 1991 – 2013

**** Indicates lacuna in publication**

2006: *Capabilities* 14(1), Winter 2006 (28 pages)

Featured articles: This issue of *Capabilities* highlights the research being conducted at NUPRL & RERP by graduate students.

(R. J. Garrick, PhD, Editor)

2005: *Capabilities* 13(4), Autumn 2005 (12 pages)

Featured article: This issue of *Capabilities* features an article on the recent IEEE 9th International Congress on Rehabilitation Robotics (ICORR): Frontiers of the Human-Machine Interface (June 28 - July 1, 2005) held in Chicago, IL. Richard Weir, PhD, was a co-chair for the international conference. In this article, Dr. Weir reports on the conference goals and highlights many innovations presented at the conference.

(R. J. Garrick, PhD, Editor)

2005: *Capabilities* 13(3), Summer 2005 (12 pages)

Featured articles: This issue of *Capabilities* features an article by Andrew Hansen, PhD, "A Learning Experience in India." This article describes Dr. Hansen's trip to India where he learned about the technologies available for fabricating lower-limb prostheses. Also, Michael Yoshida, MD, PhD, and R. J. Garrick, PhD, have written an article, "Long Term Care in Japan", detailing efforts in Japan to provide long-term treatment to the severely disabled.

(R. J. Garrick, PhD, Editor)

2005: *Capabilities* 13(2), Spring 2005 (16 pages)

Featured articles: This issue of *Capabilities* spotlights the work of two individuals, Jonathon W. Sensinger, MS, and Po-Fu Su, MS, both of whom recently defended their Master's theses in the Department of Biomedical Engineering at Northwestern University. Jon Sensinger's work focuses on nonbackdrivable impedance control for use as a control paradigm in prostheses. Po-Fu Su's work focuses on prosthetic ankle motion and its effects on bilateral transtibial amputees.

(R. J. Garrick, PhD, Editor)



NORTHWESTERN
UNIVERSITY

Northwestern University Prosthetics-Orthotics Center
680 North Lake Shore Drive, Suite 1100
Chicago, IL 60611
Telephone 312-503-5700
www.nupoc.northwestern.edu

Archives Index and Summary of Contents for *Capabilities* 1991 – 2013

**** Indicates lacuna in publication**

2005: *Capabilities* 13(1), Winter 2005 (24 pages)

Featured articles: Articles are dedicated to the memory of Jan Little and her life spent breaking new ground, promoting assistive technology, and opening new horizons for people with disabilities. Also, featured is an article by Stefania Fatone, PhD entitled, "AFO Study Draws to a Close: An Investigation of the Effect on Gait of Ankle Alignment and Foot-plate Length".
(R. J. Garrick, PhD, Editor)

****2004: *Capabilities*: No issues were published in 2004. Publication resumed in 2005.**

****2003: *Capabilities*, 12(4): No publication. This issue does not exist.**

****2003: *Capabilities*, 12(3): No publication. This issue does not exist.**

****2003: *Capabilities*, 12(2): No publication. This issue does not exist.**

2003: *Capabilities*, 12(1), Summer 2003 (12 pages)

Featured articles: "Development of a Multifunctional Hand Prosthesis," by Richard F. ff. Weir; and "Development and Measurement Properties of the Orthotics and Prosthetics Users' Survey (OPUS): A Comprehensive Set of Clinical Outcome Instruments," by Camille O'Reilly, RN, BSN.
(Jan Little, Editor)

2003: *Capabilities*, 11(4), Winter/Spring 2003 (24 pages)

Featured articles: Articles by graduate students and postdoctoral fellows highlight the research



NORTHWESTERN
UNIVERSITY

Northwestern University Prosthetics-Orthotics Center
680 North Lake Shore Drive, Suite 1100
Chicago, IL 60611
Telephone 312-503-5700
www.nupoc.northwestern.edu

Archives Index and Summary of Contents for *Capabilities* 1991 – 2013

**** Indicates lacuna in publication**

they conduct at NUPRL-RERP: Human Walking and Ambulation, Orthotics, Upper Limb Prostheses, Clinical Collaboration, and Computer Aided Engineering.

2002: *Capabilities*, 11(3), Autumn 2002 (16 pages)

Featured articles: "Design and Development of Appropriate Technology for Low-Income Countries: Preliminary Field Investigation of the Shape&Roll Prosthetic Foot in El Salvador, Central America," by Margrit R. Meier, PhD; and "Reflections of the 2002 NIDRR Scholar: Applying Research in Clinical Practice," by Allison Boynton, CP.
(Jan Little, Editor)

2002: *Capabilities*, 11(2), Summer 2002 (12 pages)

Featured articles: "Gait Biomechanics and Prosthetic Management of Children with Proximal Femoral Focal Deficiency (PFFD)," by Stefania Fatone, PhD; and an article about the "State of the Science Meeting in Prosthetics and Orthotics" held here on May 17-18, 2002.
(Jan Little, Editor)

2002: *Capabilities*, 11(1), Spring 2002 (16 pages)

Featured article: "Scoring the Most Important Goal" by Jan Little. This article highlights the 2002 Paralympics and the Gold Medal-winning United States Sledge Hockey Team. Paralympian Brian Ruhe, a graduate student at NUPRL-RERP, was a member of the winning U.S. sledge hockey team.
(Jan Little, Editor)

2001: *Capabilities*, 10(4), Autumn 2001 (12 pages)

Featured article: "NUPRL & RERP Launches New Orthotic Research" by Stefania Fatone, Bryan Malas, and Steven Gard. The article focuses on the lower-limb orthotics research taking place at NUPRL & RERP. Using quantitative gait analysis, the researchers investigated how ankle-foot alignment and foot-plate length in Ankle-Foot Orthoses (AFOs) affected the gait of subjects with hemiplegia following Cerebral Vascular Accident (CVA).



Northwestern University Prosthetics-Orthotics Center
680 North Lake Shore Drive, Suite 1100
Chicago, IL 60611
Telephone 312-503-5700
www.nupoc.northwestern.edu

Archives Index and Summary of Contents for *Capabilities* 1991 – 2013

**** Indicates lacuna in publication**

(Jan Little, Editor)

2001: *Capabilities*, 10(3), Summer 2001 (12 pages)

Featured articles: "The Use of Nerve-Muscle Grafts to Improve Myoelectric Prosthesis Control" by Todd Kuiken, MD/PhD. The article discusses the use of EMG signals from nerve-muscle grafts as additional myoelectric control signals for an externally powered prosthesis. Also, an article by Jan Little describes NUPRL & RERP's development of a low-cost fatigue testing apparatus for prosthetic feet.

(Jan Little, Editor)

2001: *Capabilities* 10(2), Spring 2001 (12 pages)

Featured article: "The Development of a New Partial Hand Prosthesis" by Richard F. ff. Weir, PhD. This article discusses the development of a new transmetacarpal partial hand prosthesis that is myoelectrically controlled and uses two independent electric-powered fingers and an electric-powered thumb.

(Jan Little, Editor)

2001: *Capabilities* 10(1), Winter 2001 (12 pages)

Featured articles: An article by Dudley Childress, PhD discusses the contributions of the late Dr Eugene F. Murphy (1913-2000) to the prosthetics field. Another article by Jan Little describes the research of graduate students here at NUPRL & RERP.

(Jan Little, Editor)

2000: *Capabilities* 9(4), Autumn 2000 (12 pages)

Featured article: "A Comparison of Prosthetic/Orthotic Practices in the U.S. and Switzerland" by Margrit Meier, PhD.

(Jan Little, Editor)



NORTHWESTERN
UNIVERSITY

Northwestern University Prosthetics-Orthotics Center
680 North Lake Shore Drive, Suite 1100
Chicago, IL 60611
Telephone 312-503-5700
www.nupoc.northwestern.edu

Archives Index and Summary of Contents for *Capabilities* 1991 – 2013

**** Indicates lacuna in publication**

2000: *Capabilities* 9(3), Summer 2000 (12 pages)

Featured articles: "Research on Roll-Over Shape Alignment of Transtibial Prostheses Is Directed at Development of a Clinical Aid" by Andrew Hansen, PhD; "Kellie Lim: NIDRR Scholar for the Year 2000" by Kellie Lim.

(Jan Little, Editor)

2000: *Capabilities* 9(2), Spring 2000 (12 pages)

Featured articles: "A Computer-Based Simulation Tool for Assessing and Communicating the Design of Upper-Limb Prostheses" by Craig Heckathorne, MS; "Development of Outcome Measures for Prosthetics and Orthotics Users" by Camille O'Reilly; "Keeping Current in the Coulees: Bob Lotz, CPO, and John Morrissey, MD" by Jan Little; "Margrit Meier Joins as Postdoctoral Fellow"; "Chuck Chevillon: A Pioneer in Rehab" by Jan Little; "Cranial Molding Helmets: Reshaping Infants' Heads" by Jennifer Richards; "Amputee Coalition of America 10th Annuals Meeting & Exposition"; "Lower Extremity Complications" by Robert Baum.

(Jan Little, Editor)

2000: *Capabilities* 9(1), Winter 2000 (12 pages)

Featured articles: "Clinical Experience Using Real-Time Measurement of Instantaneous Gait Velocity as an Outcome Measure" by Richard F. ff. Weir, PhD; "Got Grit? The Breaking New Ground Program at Purdue University Enables Farmers to Continue after Disabling Accidents" by Ned Stoller; "Did You Step on a Mine?" by Steven Kurzman; "Center for International Rehabilitation Establishes New Programs in Central America"; "The Barr Foundation Works in the Third World"; "Jack and Elaine Uellendahl Move on from RIC and NU"; "Gard, Rolock and Weir Appointed to PM&R Faculty"; "Brian Frasure Sets New World Record in Track"; "Beyond 2000: Where Will P&O Education Take Us" by Mark Edwards, CP; "Federal Benefits for Veterans" by Robert Baum; "Tim Nugent Wins the Betts Award for 1999" by Jan Little.

(Jan Little, Editor)



NORTHWESTERN
UNIVERSITY

Northwestern University Prosthetics-Orthotics Center
680 North Lake Shore Drive, Suite 1100
Chicago, IL 60611
Telephone 312-503-5700
www.nupoc.northwestern.edu

Archives Index and Summary of Contents for *Capabilities* 1991 – 2013

**** Indicates lacuna in publication**

1999: *Capabilities* 8(4), Autumn 1999 (12 pages)

Featured article: "VA Chicago Motion Analysis Research Laboratory: Potential to Advance the Study of Human Movement"; "Cowboy Dreams and Hippotherapy: Everyone Is About Ten Feet Tall on a Horse"; NU Study Is Examining What Factors Contribute to the Effectiveness of Prosthetic Components"; "Addition of a New Paradigm: The Special Study Module" by Bryan Malas, CO; "Regina Konz Joins as Manager of Motion Laboratory"; "Michel Sam Join Research Staff"; "The National Prosthetic Patient Database" by Robert Baum.

(Jan Little, Editor)

1999: *Capabilities* 8(3), Summer 1999 (12 pages) [Margaret Pfrommer (1937-1998): CHEST Foundation and Friends Honor Margaret Pfrommer]

Featured article: "Craig Heckathorne: RERP/PRL Engineer Teaches as Visiting Scholar at Hong Kong Polytechnic University"; "Karen Gardner, RPT, and Carol Sheredos, RPT: These Therapists Are Experts in Prosthetic Gait from Personal Experience" by Jan Little; "Current Climate in Orthotic-Prosthetic Practice Requires New Professional Skills" by Mark Edwards, CP; "NUPOC Helps Create a Purple Cow"; "Amputee Coalition of America Celebrates the Dream at the 9th Annual Education Meeting and Exhibition" by Nancy Carroll; "Margaret Pfrommer: Her Friends Share Their Memories"; "The CHEST Foundation Establishes The Margaret Pfrommer Memorial Lecture"; "Edward Grahn Honored by Northwestern University"; "Home Based Primary Care in the VA" by Robert Baum.

(Jan Little, Editor)

1999: *Capabilities* 8(2), Spring 1999 (12 pages)

Featured article: "Experimental Research and Modeling in Lower Limb Prostheses" by Dudley Childress, PhD; "Brenda Besse: Golf Was an Immediate Fix"; "PALM: The Need for Prosthetic Services in Low-Income Countries" by William K. Smith, MD; "NUPOC Instructors Teach in Columbia, South America during Summer Break" by Desmond Masterton, CO; "Dr. Childress Featured in North Shore Magazine"; "Traveling Orthopaedic Fellows Visit NU from Germany, Switzerland and Austria"; "Department of Veterans Affairs Visual Impairment Service Teams" by Ray Leber.



NORTHWESTERN
UNIVERSITY

Northwestern University Prosthetics-Orthotics Center
680 North Lake Shore Drive, Suite 1100
Chicago, IL 60611
Telephone 312-503-5700
www.nupoc.northwestern.edu

Archives Index and Summary of Contents for *Capabilities* 1991 – 2013

**** Indicates lacuna in publication**

(Jan Little, Editor)

1999: *Capabilities* 8(1), Winter 1999 (12 pages) [Margaret Pfrommer (1937-1998) Memorial Issue]

Featured article: "Margaret Pfrommer, Leader of Angels" by Dudley Childress; "From Back Room to Congress, Margaret Pfrommer Built a New World for People with Disabilities" by Jan Little; "Professional Patients Add Reality to Teaching of Patient Management" by Anthony Squicciarini, CO; "Northwestern Receives NIDRR Grant for RERP in P&O"; Dr. Seelman Dedicates New RERC to Focus on the Needs of Land Mine Survivors"; Cultural Anthropologist, Steve Kurzman, Moves On"; "PALM: Leading the Fight Against Land Mines" by Erin Kuhn.

(Jan Little, Editor)

1998: *Capabilities* 7(4), Autumn 1998 (12 pages)

Featured article: "A Century of the Sauerbruch-Lebsche-Vanghetti Muscle Cineplasty: The United States Experience" by Richard F. ff. Weir, PhD; "Research in Prosthetics and Orthotics: The Role of Consumers"; "40 Years of Using Cineplasty"; and "Two Brians: Amputations Led Them to Study for Professional Careers in Prosthetics" by Jan Little; "Sandy Fletchall: Using Professional Experience to Lead People with Recent Amputations to Success" by Sandy Fletchall, OTR; "NUPOC Hosts 40th Anniversary and Tour of NUPOC, NUPRL & RERP, Thranhardt Challenge"; "VA and State-of-the-Art Technology, Automated Fabrication of Mobility Aids" by Wanda Hattaway.

(Jan Little, Editor)

1998: *Capabilities* 7(3), Summer 1998 (8 pages)

Featured article: "Report on the 9th World Congress of the International Society for Prosthetics and Orthotics (ISPO)" by Dudley S. Childress, PhD; "NUPOC's Summer Is Busy"; "VA Chicago Is Reducing the Risk of Amputation: Part II Diabetes Education" by Robert Baum.

(Jan Little, Editor)



NORTHWESTERN
UNIVERSITY

Northwestern University Prosthetics-Orthotics Center
680 North Lake Shore Drive, Suite 1100
Chicago, IL 60611
Telephone 312-503-5700
www.nupoc.northwestern.edu

Archives Index and Summary of Contents for *Capabilities* 1991 – 2013

**** Indicates lacuna in publication**

1998: *Capabilities* 7(2), Spring 1998 (12 pages)

Featured article: "Engineering Research and Clinical Collaboration in Upper-limb Prosthetics" by Craig Heckathorne, MSEE; "When There Is No Funding: Alternate Means of Paying for Prostheses" by Jan Little; "The Amputee Coalition of America Annual Meeting in Chicago"; "Educational Avenues and Credentialing Criteria for Prosthetists and Orthotists" by Elaine Uellendahl, CP; "Master Shoemaking-A Good Fit with Vets" by Gary Roberts.

(Jan Little, Editor)

1998: *Capabilities* 7(1), Winter 1998 (12 pages)

Featured article: "Squirt Shape: Development, Evaluation, and Use of a Computer-Aided Manufacturing Technique Based on 'Rapid Prototyping' Principles" by Joshua Rolock, PhD, and Kerice Tucker; "Promoting Active Learning in Prosthetic and Orthotic Education" by Mark Edwards, CP; "Childress Presents Lecture at UK Society, Dedicates Library in Scotland"; Steven A. Gard, PhD, Conducts Grand Rounds at RIC"; "Current Prostheses Incorporate State-of-the Art Technology— But Can John Get One?" by Jan Little; "Improving Patient Outcomes: VA Chicago Uses Orthotic Automation Technology" by Daniel Gnatz, MA.

(Jan Little, Editor)

1997: *Capabilities* 6(4) [3 sic, this issue is incorrectly numbered], Autumn 1997 (12 pages)

Featured article: "Getting Back to Life: First You Make a Plan" by Jan Little; "Cultural Attitudes toward Prostheses: An Anthropological Approach" by Steve Kurzman; "Adolescent Idiopathic Scoliosis: The Boston Approach to Orthotic Management" by Desmond Masterton, CO; "NU Prosthetic and Orthotic Programs Move to PM&R"; "Heckathorne Presents Keynote Address"; "In Memory: Robert D. Keagy, MD"; "In Memory: Colin A. McLaurin, ScD"; "VA Chicago Is Reducing the Risk of Amputation: Targeting Diabetes" by Robert Baum.

(Jan Little, Editor)

1997: *Capabilities* 6(3), Summer 1997 (12 pages)



NORTHWESTERN
UNIVERSITY

Northwestern University Prosthetics-Orthotics Center
680 North Lake Shore Drive, Suite 1100
Chicago, IL 60611
Telephone 312-503-5700
www.nupoc.northwestern.edu

Archives Index and Summary of Contents for *Capabilities* 1991 – 2013

**** Indicates lacuna in publication**

Featured article: "Studying Ambulation: NUPRL & RERP Tests the Hypotheses" by Steven A. Gard, PhD; "Five Decades of Education and Research: Recollections of Fred Hampton, CP, Edward Grahn, BSME, Charles Fryer, MPT, Jack Arnold, PhD, H. Blair Hanger, Gunter Gehl, Jim Russ, May Cotterman, Dudley S. Childress, PhD, Mark Edwards, CP, and Bryan Malas, CO" by Jan Little; "Instructor Exchange between P&O Schools in the US and Other Countries Promises Benefits" by Thomas Karolewski, CP.
(Jan Little, Editor)

1997: *Capabilities* 6(2), Spring 1997 (12 pages)

Featured article: "Exploring a Direct Ultrasound Ranging System to Make Gait Analysis Faster and More Economical" by Richard F. ff. Weir, PhD; "Northwestern University Prosthetic and Orthotic Programs Celebrate Anniversaries: Dr. Clinton L. Compere, Hildegard Myers, RN, RPT, Robert G. Thompson, MD, Colin A. McLaurin, ScD" by Jan Little; "Orthotic Management of the Development Forefoot" by Bryan Malas, CO.
(Jan Little, Editor)

1997: *Capabilities* 6(1), Winter 1997 (12 pages)

Featured article: "The Internet: What Is It?" by Jan Little; "Ken Fenstermacher: Using What I've Got to Do What I Want to Do" by Jan Little; "The Internet Affects Life at NURERP Now"; "Glimpsing into the Future, or Stand Closer to the Camera So We Can Adjust Your Knee".
(Jan Little, Editor)

1996: *Capabilities* 5(4), Autumn 1996 (12 pages)

Featured articles: "1996 Paralympics: Changing the Image of People with Disabilities" by Jan Little; "Making a Splash" by Linda Ratto; "The Life of a Paralympic Volunteer Started Early, Ended Late" by Laura Miller; "University Prof. Dr. med. René Baumgartner Honored at Festschrift at Northwestern University"; and "Technological Advances in Orthotic Designs and Materials" by Bryan Malas, CO; "Childress Named Recipient of Russe Award for Excellence"; "Gard and Weir Join



NORTHWESTERN
UNIVERSITY

Northwestern University Prosthetics-Orthotics Center
680 North Lake Shore Drive, Suite 1100
Chicago, IL 60611
Telephone 312-503-5700
www.nupoc.northwestern.edu

Archives Index and Summary of Contents for *Capabilities* 1991 – 2013

**** Indicates lacuna in publication**

NUPORL and RERP Staff"; "Jan Little, NUPRL and RERP Staff Member Was a Paralympian" by Dudley S. Childress, PhD.
(Jan Little, Editor)

1996: *Capabilities* 5(3), Summer 1996 (8 pages)

Featured articles: "How Northwestern University RERP Research Affects the Man and Woman on the Street" by Jan Little; "For Many Amputees, Getting to the Paralympics Is a Victory"; "Sanchez-Urrutia and Oslakovic Earn Advanced Degrees".
(Jan Little, Editor)

1996: *Capabilities* 5(2), Spring 1996 (12 pages)

Featured articles: "Postoperative and Preprosthetic Management for Lower Extremity Amputations" by Yeongchi Wu, MD; "NURERP Study Investigates Hand Functions in Common Tasks"; "Education in Orthotics and Prosthetics: NAPOE Offers a Detailed Guide"; Margaret Pfrommer Named to Joint Commission's PTAC"; "AAOP Names Mark Edwards Educator of the Year"; "John Steege Moves Up at Northwestern"; Michael Quigley Aids Victims of Landmines"; "Childress Keynote Speaker at National Rural Rehab Meeting"; John Billock Named President of AAOP"; "Visiting Surgeons Present Technical Orthopaedics".
(Jan Little, Editor)

1996: *Capabilities* 5(1), Winter 1996 (12 pages)

Featured articles: "Computer Aided Design and Computer Aided Engineering Promises New Methods of Suiting Prostheses to Users" by John Steege and Keith Oslakovic; "Dudley Childress, PhD, Elected to the Institute of Medicine of the National Academy of Sciences"; "NUPOC Plays Vital Role in Assuring the Quality of Delivery of Prosthetics and Orthotics" by Mark Edwards, CP; "Information Round-up from Disability Interest Organizations" and "Will Managed Care Affect Your Future Choice of Orthosis or Prosthesis?" by Jan Little.
(Jan Little, Editor)



NORTHWESTERN
UNIVERSITY

Northwestern University Prosthetics-Orthotics Center
680 North Lake Shore Drive, Suite 1100
Chicago, IL 60611
Telephone 312-503-5700
www.nupoc.northwestern.edu

Archives Index and Summary of Contents for *Capabilities* 1991 – 2013

**** Indicates lacuna in publication**

****1995: *Capabilities* 4(4), Winter 1995: No publication. This issue does not exist due to a change in the *Capabilities* issue numbering system.**

1995: *Capabilities* 4(3), Autumn 1995 (8 pages)

Featured articles: "Prosthetic Arm Design and Simulation System (PADSS) for Assessing Alternative Fitting of Upper-limb Prostheses" by Craig Heckathorne, MS; "Dole Foundation/NIDRR Young Scholar Tries Out Biomedical Engineering in a Northwestern University Internship" by Jaime Hardt; "Northwestern University PRL & RERP Welcomes Visitors from Both Sides of the Globe"; "Two Leaders Retire: Yeongchi Wu, MD, and Heinrich Prommer, CO"; "Dr. Med. Rene Baumgartner Retires in Germany"; "Courtney Ratto Works toward the Gold in Atlanta '96"; "Saying Good-bye: Allowing the Pain of Loss" by Carol Scholar, MS.
(Jan Little, Editor)

1995: *Capabilities* 4(2), Summer 1995 (8 pages)

Featured articles: "How Do Dynamic Response Feet Affect Ambulation: The NURERC Research Project"; "NURERC Consumer and Technical Advisory Panels"; "Myoelectric Control: Brief History, Signal Origins, and Signal Processing".
(Jan Little, Editor)

1995: *Capabilities* 4(1), Spring 1995 (8 pages)

Featured articles: "From Craft to Science: 50 Years of Prosthetics/Orthotics Research Started with a Meeting at Northwestern University" contributions by A Bennett Wilson, Jr. and Eugene Murphy, PhD; "NUPRL & RERP Staff Presented Research at 8th Annual ISPO World Congress in Melbourne, Australia"; "In Memorium: John S. Strydik".

****1994: No publications. Publication resumed in 1995.**



NORTHWESTERN
UNIVERSITY

Northwestern University Prosthetics-Orthotics Center
680 North Lake Shore Drive, Suite 1100
Chicago, IL 60611
Telephone 312-503-5700
www.nupoc.northwestern.edu

Archives Index and Summary of Contents for *Capabilities* 1991 – 2013

**** Indicates lacuna in publication**

****1993: *Capabilities* 3(4), Winter 1993: No publication. This issue does not exist.**

1993: *Capabilities* 3(3), Autumn 1993 (4 pages)

Featured article: “The Human Mechanics Measurement Laboratory” by Robert Van Vorhis, Dudley S. Childress, PhD, Piy Peng and Chorng Teh Lee.
(Newsletter Design by The Blue Nautilus Press)

1993: *Capabilities* 3(2), Summer 1993 (6 pages)

Featured articles: “Ken Fenstermacher: An Exemplary User of Bilateral Arm Prostheses” by Craig Heckathorne, MS; “You’re Worth Five Minutes” by James MacLaren; and “What Are Neuromas, and How Can They Be Treated?”.
(Newsletter Design by The Blue Nautilus Press)

1993: *Capabilities* 3(1), Spring 1993 (16 pages)

Featured articles: “Pediatric Myoelectric Fittings” by Jack Uellendahl; “A Young Adult from Atlanta Speaks about Disability” by Lisa Wetsel; “Alternative Pediatric Prosthetic Fittings” by Yoshio Setoguchi; and “What Users Want, Part 2: User Opinions” by Else Tennessen, MS.
(Newsletter Design by Tennessen Associates)

1993: *Capabilities* 2(4), Winter 1993 (8 pages)

Featured articles: “What Users Want, Part 1: Audience and Priorities” by Else Tennessen, MS; “In the Eye of the Beholder” by Lorna Renooy; and “Accessibility and the Amputee” by Bill Lintz.
(Newsletter Design by Tennessen Associates)

1992: *Capabilities* 2(3), Autumn 1992 (12 pages)



NORTHWESTERN
UNIVERSITY

Northwestern University Prosthetics-Orthotics Center
680 North Lake Shore Drive, Suite 1100
Chicago, IL 60611
Telephone 312-503-5700
www.nupoc.northwestern.edu

Archives Index and Summary of Contents for *Capabilities* 1991 – 2013

**** Indicates lacuna in publication**

Featured articles: "Director's Thoughts: On the Value of Research and Development" by Dudley S. Childress, PhD; "Report on the 7th World Congress of ISPO" by Dudley S. Childress, PhD; "Annual Consumer Advisory Panel Meeting"; "Parent Perspectives: Child Amputees, the Healthcare Team" and "Coping with a Physically Challenged Brother or Sister" by Linda Ratto; "Images of ISPO 7th World Congress 1992"; "Comments on Orthotics Research" and "Leonardo Da Vinci: First Medical Engineer" by Dudley S. Childress, PhD; "Northwestern University's Prosthetic-Orthotic Center: Certificate Programs".

(Newsletter Design by Tennesen Associates)

1992: *Capabilities* 2(2), Summer 1992 (8 pages)

Featured articles: "A New Synergetic Hand Prototype" by Dudley S. Childress, PhD; "My Dual Role as Consumer and Research Reviewer" by Johnnie Pearson; "Cable-Actuated Position Control of Children's Electric Elbows: A Joint US-Sweden Evaluation" by Craig Heckathorne, MS, and Lennart Philipson, PhD; and "Benefits of Early Upper Extremity Prosthetic Training" by Sandra Fletchall, OTR and Hector Torres, OTA; Amputation as a New Challenge.

(Newsletter Design by Tennesen Associates)

1992: *Capabilities* 2(1), Spring 1992 (4 pages)

Featured article: "A Crystal Moment on an Autumn Day" by Carol Young Scholar, RN, MS, CNC; "You're Not Alone" by J Sabolich, CPO; Resource Unit.

(Newsletter Design by Tennesen Associates)

1992: *Capabilities* 1(4), Winter 1992 (6 pages)

Featured articles: "Prosthesis Control by Way of Direct Muscle Attachment" by Richard Weir, MS; "Usage of Golf Prostheses" by Wayne Vercellotti; "On the Importance of Measuring Instruments to Prosthetics-Orthotics Advancement" by Dudley S. Childress, PhD; review "Coping with Being Physically Challenged" by LL Ratto, MEd; ISPO Update; Resource Unit, Manufacturers' Databases Available, Communication about Disability.

(Newsletter Design by Tennesen Associates)



Northwestern University Prosthetics-Orthotics Center
680 North Lake Shore Drive, Suite 1100
Chicago, IL 60611
Telephone 312-503-5700
www.nupoc.northwestern.edu

Archives Index and Summary of Contents for *Capabilities* 1991 – 2013

**** Indicates lacuna in publication**

1991: *Capabilities* 1(3), Autumn 1991 (4 pages)

Featured article: “Rapid Prototyping and the Future of Prosthetics and Orthotics” by Joshua Rovick, MS; Resource Unit Presents Poster at NSIT; Consumer Advisory Panel (CAP) Welcomes New Members; *Team Approach Provides Rehabilitation and Support*, by H. Torres; ISPO Update. (Newsletter Design by Tennesen Associates)

1991: *Capabilities* 1(2), Summer 1991 (4 pages)

Featured articles: “Powered Prostheses with ‘Boosted’ Cable Activation” and “In Memory of Clinton Compere” by Dudley S. Childress, PhD; Clinton C. Compere (1911-1991); Resource Unit, Donna Lynn Hall; ISPO Update: Exhibitor's Information; What Is EPP? (Newsletter Design by Tennesen Associates)

1991: *Capabilities* 1(1), Spring 1991 (6 pages)

Featured article: “Prosthetics/Orthotics Advancement and Development: Unlimited but Bounded” by Dudley S. Childress, PhD; ISPO Update; Resource Unit, Consumer Advisory Panel (CAP) Provides Input; Computer Aided Manufacturing (CAM) of Prostheses Using Stereolithography and Computer Numerical Control (CNC) Milling; Empowering People: A Rehabilitation Goal, by C.Y. Scholar, MS, RN; Review: The Children with Limb Loss Booklet Series. (Newsletter Design by Tennesen Associates)