

Eric François Hequet

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Fiber and Biopolymer Research Institute: <http://www.fbri.ttu.edu>

International Cotton Research Center: <http://www.depts.ttu.edu/agriculturalsciences/cotton/index.php>

Plant and Soil Science Department : <http://www.pssc.ttu.edu/>

Applied Vision Lab : <http://appvisw.ee.ttu.edu>

Associate Director, Fiber and Biopolymer Research Institute – Texas Tech University

Associate Director, International Cotton Research Center – Texas Tech University

Professor – Texas Tech University

Joint appointment with the Texas AgriLIFE Research Station

Member of the Graduate Faculty – Texas Tech University

Member of the Graduate Faculty – Texas A&M University

Member of the Graduate Faculty – Haute-Alsace University, France

Dr. Eric Hequet is Professor and Graduate Program Leader in the Department of Plant and Soil Science at Texas Tech University (TTU), Associate Director of the Fiber and Biopolymer Research Institute and Associate Director of the International Cotton Research Center both at TTU. He holds a joint appointment (25%) with the Texas AgriLife Research (Texas A&M system). He holds a Ph.D. from the University of Haute Alsace in France. Before joining TTU, his experience progressed from cotton breeding at experiment stations in Africa, to head of CIRAD's Cotton Technology Laboratory in Montpellier - France, to Director of the international cotton program for CIRAD. Dr. Hequet has generated 66 refereed journal publications (62 published, 2 in press, 2 submitted), 2 books, 7 book chapters, more than 170 conference papers, 3 patents, and 2 provisional patent applications. He has provided international leadership in research on the measurement of cotton fiber properties and contaminants, including the impacts of these on textile processing performance. He is currently focused on collaborative research with the cotton breeding and cotton biotechnology community to develop improved properties in cotton fibers.

Dr. Hequet has been PI or Co-PI on 10 funded projects during the period 1992-1997 in France, totaling \$2,381,897. He joined Texas Tech University in November 1997, since this date he has been PI or Co-PI on more than 180 funded projects totaling \$19,073,359 (\$4,525,671 credited to Dr. Hequet at TTU). Dr. Hequet is teaching the following graduate courses "Advanced Studies in Cotton Fibers" and "Cotton Fiber: Genotype to Phenotype Characterization" Texas Tech

University and Texas A&M University, and “US and Global Cotton Fiber – Textile Industries” Texas Tech University. Dr. Hequet is member of International Committee on Testing Methods, International Textile Manufacturers Federation (ITMF), American Society for Testing and Materials (ASTM), American Association of Textile Chemists and Colorists (AATCC), Society of Photo-Optical Instrumentation Engineers (SPIE), American Association for the Advancement of Science (AAAS), Committee on Cotton Quality Measurements (United States Department of Agriculture), and the Fiber Society. Dr. Hequet is member of the Editorial Board of the Journal of Cotton Science and manuscript reviewer for Textile Research Journal, Transactions of the ASAE (American Society of Agricultural Engineers), Journal of Electronic Imaging, Agronomy Journal, Journal of Engineered Fibers and Fabrics, Journal of the Textile Institute, Journal of Industrial Textiles, and Crop Science.

Education:

- H.D.R. (Habilitation à diriger des recherches, required diploma to be full Professor in Europe) in Engineering Sciences, Université de Haute Alsace (France), December 2004.
- Ph.D. in Engineering Sciences, Université de Haute Alsace (France), October 2003.
- DEA (Diploma of Applied Advanced Studies) in Plants Genetics, Orsay, Paris XI (France), 1982.
- Maîtrise (Master of Sciences) in Genetics, Orsay, Paris XI (France), 1980.
- DEUG G (Diploma of Higher Education) in Chemistry-Physiology, Orsay, Paris XI (France), 1978.

Languages:

- French native language
- English fluent
- Spanish read

Professional Experience:

- Sept. 2011-Present : Professor, Plant and Soil Sciences,
Texas Tech University, Lubbock, TX.
- Sept. 2009-Aug. 2011 : Associate Director International Cotton Research Center,
Texas Tech University, Lubbock, TX
- Sept. 2008-Present : Associate Professor, Plant and Soil Sciences,
Texas Tech University, Lubbock, TX.
- Sept. 2006-Aug. 2008 : Research Associate Professor, Plant and Soil Sciences,
Texas Tech University, Lubbock, TX.

Dec. 2004-Present : Member Graduate Faculty
Haute-Alsace University, France

Dec. 2003-Present : Member Graduate Faculty
Texas A&M University

July 2002-Present : Associate Director, Fiber and Biopolimer Research Institute
(previously known as International Textile Center)
Texas Tech University, Lubbock, TX
(Joint appointment Texas Tech University (75%) –
Texas AgriLife Research (25%) since Sept. 2003).

Sept. 1999-Present : Member Graduate Faculty
Plant and Soil Sciences Department – Texas Tech
University, Lubbock, TX.

Nov. 1997-June 2002 : Assistant Director, International Textile Center
Texas Tech University, Lubbock, TX.

Dec. 1996-Oct. 1997 : Head of the Cotton Program, CIRAD-CA, Montpellier,
France.

Nov. 1992-Nov. 1996 : Head of the Cotton Technology Laboratory,
CIRAD-CA Montpellier, France.

Dec. 1990-Nov. 1992 : Associate Head of the Cotton Technology Laboratory,
IRCT then CIRAD-CA, Montpellier, France.

March 1988-Dec. 1990 : Associate Head of the Cotton Technology Laboratory
IRCT (France) and Head of the Cotton Technology Laboratory,
IRCT, N'Djamena, Chad.

June 1986-March 1988 : Head of the Bebedjia Agronomic Research Station and
Head of Cotton Breeding Program and Head of the Cotton
Technology Laboratory, IRCT, Bebedjia, Chad.

March 1985-June 1986 : Head of Cotton Breeding Program and Head of the Cotton
Technology Laboratory, IRCT, Bebedjia, Chad.

Nov. 1982-March 1985 : Head of Cotton Breeding Program and Head of the Cotton
Technology Laboratory, IRCT, Bebedjia, Chad.

International Experience:

- Many short (1 week-1 month) expert missions in Tropical Africa (Chad, Togo, Madagascar, Ivory Coast, Cameroon, Benin, and Sudan), Asia (Thailand, Uzbekistan,

Turkmenistan, and China), South America (Brazil, Columbia, Ecuador, and Nicaragua) on cotton breeding, cotton technology, and cotton production economics.

Academic Teaching Experience:

- “Superior specialization course on cotton fiber technology”: 16 hours. Taught twice. Sevilla University - Agricultural Research and Development Center «Las Torres-Tomejil» Alcala del rio (Spain). Two book chapters were produced :
 1. Hequet, E. 1998. Determinacion de la calidad del algodón. *In*: Tecnologia de la fibra de algodón. Direccion General de Investigacion y Formacion Agraria Servicio de Publicaciones y Divulgation. Cursos Superiores 3/98. I.S.B.N. 84-89802-39-4. p. 279-330
 2. Hequet, E. 1998. Contaminacion por pegajosidad. *In*: Tecnologia de la fibra de algodón. Direccion General de Investigacion y Formacion Agraria Servicio de Publicaciones y Divulgation. Cursos Superiores 3/98. I.S.B.N. 84-89802-39-4. p. 341-358
- “Advanced Studies in Cotton Fibers” (3 credits). Taught six times at Texas Tech University (PSS 5001 Spring 2000 – PSS 5376 Fall 2002, Fall 2004, Fall 2006, Fall 2008, Spring 2010) and five times at Texas A&M University (AGRO 689 Fall 2002, Fall 2004, Fall 2006, and Fall 2008; SCSC 646 Spring 2010).
- “US and Global Cotton Fiber – Textile Industries” (3 credits – Team taught 33% credit to Hequet). Taught 15 times at Texas Tech University (PSS 5270, then 5370).
- “Cotton Fiber: Genotype to Phenotype Characterization” (3 credits PSS 5377 – Team taught 25% credit to Hequet). Taught once at Texas Tech University (Spring 2007).
- “Graduate Seminar” (1 credit - PSS 5100). Taught twice at Texas Tech University (Fall 2010, Spring 2011).

Professional Teaching Experience:

- Relationship ginning – fiber quality at the Gin School organized by the USDA Gin Lab (once a year)
- Relationship humidification at the gin – fiber quality at the Samuel Jackson School. Class taught 3 times.
- Fiber Properties Seminar for several companies (16 hours per session). Class taught 4 times

Graduate Thesis Committees:

1. Omar Tamine, Etude de la précision et de la répétabilité des mesures du collage du coton sur le thermodétecteur SCT, DEA, July 1997, Haute Alsace University, France.
2. Mourad Krifa, Contribution à l'étude des fragments de coques de graines sur la qualité du fil de coton, DEA, July 1997, Haute Alsace University, France.
3. Yongmei Dai, Automatic Fabric Dimensional Distortion Measurement and Wrinkle Evaluation, Master, May 2002, Texas Tech University, U.S.A.
4. Aijun Zhu, Fabric wrinkle evaluation, Master, May 2002, Texas Tech University, U.S.A.
5. Ajay Pai, X-ray microtomographic image analysis for identification of cotton contaminants, Master, August 2002, Texas Tech University, U.S.A.
6. Christopher N. Turner, Automatic assessment of smoothness grading for fabrics using a laser-based vision system, Master, May 2003, Texas Tech University, U.S.A.
7. Carl Speck, Relative contribution of insect and plant sugars to cotton fiber stickiness, Master, May 2003, Texas Tech University, U.S.A.
8. Leigh Crammer, A Better Understanding of the Number of Fibers per Seed in Cotton, Master, June 2004, Texas Tech University, U.S.A.
9. Mark Shelton Kelley, Field weathering effects on stripper harvested cotton in the Texas High Plains, Ph.D., March 2006, Texas Tech University.
10. Carol Mason Kelly, Evaluation of yield and fiber trait responses across irrigation treatments, Master, June 2006, Texas Tech University.
11. Amara Asma, ENSITM, Contribution à l'étude de l'adhésion des miellats du coton. Ph.D., December 2006. Haute-Alsace University, France.
12. Wan Huapeng, Fiber property characterization by image processing, Master, March, 2007, Texas Tech University.
13. Sridharan Kamalakannan. Energy-based Deformable Contours in Computer Vision: Recent Advances and Customization for Two Applications. Master. June 2007. Texas Tech University.
14. Narjes Rjiba. Fibre de coton: microstructure et propriétés de surface. Ph.D., June 2007, Haute-Alsace University, France.

15. Neha Kothari. Multi-Disciplinary Approach to Study Cotton Fiber Development. Master. December 2007. Interdisciplinary Studies. Texas Tech University.
16. Shahram Nowrouzieh. Etude des phénomènes de cohésion et de friction inter fibres : cas du coton. Ph.D., December 2007, Haute-Alsace University, France.
17. Brock Faulkner. Comparison of picker and stripper harvesters on irrigated cotton on the High Plains of Texas. Ph.D., May 2008. Texas A&M University.
18. Lu Feng. Variability of fiber quality within a plant. Master. October 2008. Texas Tech University.
19. Houda Benzina, Micro structure du coton. Ph.D., December 2008. Haute-Alsace University, France.
20. Erik Everett, Stability of cotton varieties over eighteen environments. Master, May 2009. Texas Tech University.
21. Raina King, Structural analysis and basic inheritance characterization of the caducous bract trait of *Gossypium*, Master. May 2009. Texas Tech University.
22. Margaret Shields, The evaluation and inheritance of several traits associated with lint percent in cotton, Ph.D., December 2010, Texas Tech University.
23. Jason Sneed, Irrigation Termination to Improve Fiber Maturity on the Texas High Plains, M.S. June 2010, Texas Tech University.

M.S. and Ph. D. supervisions completed (Chair or Co-Chair)

1. Richard Frydrych, Contribution à l'étude du collage du coton au moyen de méthodes mécaniques et thermomécaniques, Ph.D., December 1996, Haute Alsace University, Mulhouse, France. (J.Y. Dréan and E. Hequet)
2. Chongrak Kaewprasit, Contribution à l'estimation de la surface spécifique des fibres de coton: Relations entre surface et propriétés physiques, Ph.D., July 1997, Montpellier II University, France. (Lindheimer and E. Hequet)
3. Sri Kaushik Pavani, Segmentation and classification of four common cotton contaminants in X-ray microtomographic images, Master, October 2003, Texas Tech University, U.S.A. (H. Sari-Sarraf and E. Hequet)
4. Mehmet S. Dogan, Assessment of Trash Content of Cotton using 2D X-ray Imagery, Master, July 2004, Texas Tech University, U.S.A. (H. Sari-Sarraf and E. Hequet)

5. Sarangoo Ukhnaa, Etude des propriétés physiques et mécaniques de la fibre de cachemire, limite de filabilité, Ph.D., January 2005. Haute Alsace University, Mulhouse, France, and Science and Technology University, Oulan Bator, Mongolia. (Dréan, Enkhuya, and Hequet)
6. Christopher Braden, Inheritance of cotton fiber length and distribution, Ph.D., June 2005. Plant and Soil Sciences, Texas A&M University, U.S.A. (W. C. Smith and E.Hequet)
7. Chaitanya Raju, Segmentation of radiographs of cervical spine using level sets, Master, May 2006, Texas Tech University, U.S.A. (H. Sari-Sarraf and E. Hequet)
8. Mao Cui, Unsupervised segmentation of two-texture images using Gabor filters with optimized coefficients, Master, October 2006, Texas Tech University, U.S.A. (H. Sari-Sarraf and E. Hequet)
9. Gene Maulding, Yield components of new germplasm, Master, March 2007, Texas Tech University, U.S.A., (E. Hequet and D. Albers)
10. Muneem Shariar, Machine vision system for the quantification of cotton fiber length and maturity, Master, June 2008, Texas Tech University, U.S.A., (H. Sari-Sarraf and E. Hequet)
11. Arunkumar Gururajan, Generalized schemes for automatic and interactive texture segmentation, Ph.D., October 2008. Texas Tech University, U.S.A. (H. Sari-Sarraf and E. Hequet)
12. Carol Mason, Improving Cotton (*Gossypium hirsutum* L.) for Fiber and Yarn Quality, Ph.D., December 2009. Texas Tech university, U.S.A. (E. Hequet and J. Dever)
13. Matthew Hill, Machine Vision System for Simultaneous Measurement of Dimensional Changes and Soil Release in Printed Fabric, Master, June 2010, Texas Tech University. (H. Sari-Sarraf and E. Hequet)

Habilitation à diriger des recherches (Chair)

1. Nouredine Abidi. Habilitation à Diriger des Recherches (Université de Haute-Alsace, France). Caractérisation de la structure et modification de la surface de macromolécules inorganiques et biologiques : Synthèse des travaux. December 2007.

Ph.D. and M.S. supervisions underway (Chair or Co-Chair):

1. Muneem Shahriar, Ph.D. student Electrical Engineering, Texas Tech University
2. Kolbyn Seth Joy, Ph.D., Soil and Crop Sciences, Texas A&M University
3. Kendra Gregory, M.S. student, Plant and Soil sciences, Texas A&M University

4. Farzad Hosseinali, M.S. student, Plant and Soil Science, Texas Tech University
5. Roji Manandhar, Ph.D. student, Plant and Soil Science, Texas Tech University
6. Brendan Kelly, Ph.D. student, Plant and Soil Science, Texas Tech University
7. Dev Paudel, M.S. student, Plant and Soil Science, Texas Tech University
8. Holli Elaine Myers, M.S. student Plant and Soil Science (Distance), Texas Tech University
9. James Hodgson, M.S. student Plant and Soil Science (Distance), Texas Tech University

Graduate Thesis Committees underway

1. Sridharan Kamalakannan, Ph.D. student Electrical Engineering, Texas Tech University
2. Juliana Osorio, Ph.D. student, Plant and Soil sciences, Texas A&M University
3. Fulvio Simao, Ph.D. student, Plant and Soil Sciences, Texas Tech University
4. Matthew Stroud, M.S. student, Plant and Soil Sciences, Texas Tech University
10. Eng Hwa, M.S. student, Plant and Soil Sciences, Texas A&M University
11. Neha Khotari, Ph.D. student, Plant and Soil Sciences, Texas A&M University
12. Benjamin Michael Beyer, Ph.D. student, Plant and Soil Sciences, Texas A&M University
13. Heath Reeves, M.S. student, Plant and Soil Sciences, Texas Tech University
14. Melissa Muharam, Ph.D. student, Plant and Soil Sciences, Texas Tech University
15. Nicholas Sanford, Ph.D. student, Plant and Soil Sciences, Texas Tech University
16. Bralie Hendon, M.S. student, Plant and Soil Sciences, Texas Tech University
17. Luis Cabrales, Ph.D. student, Plant and Soil Sciences, Texas Tech University
18. Payam Aminayi, M.S. student, Plant and Soil Sciences, Texas Tech University
19. Sanjit Acharya, M.S. student, Plant and Soil Sciences, Texas Tech University
20. Rajeev Rajbhandari, Ph.D. student, Plant and Soil Sciences, Texas Tech University

Chairmanships and Memberships extramural:

- Chairman Cotton Quality Measurement Conference, Beltwide Cotton Conferences (2004, 2005, and 2006).
- International Committee on Testing Methods, International Textile Manufacturers Federation (ITMF).
- American Society for Testing and Materials (ASTM).
- American Association of Textile Chemists and Colorists (AATCC).
- Society of Photo-Optical Instrumentation Engineers (SPIE).
- Committee on Cotton Quality Measurements (United States Department of Agriculture).
- Fiber Society
- American Association for the Advancement of Science (AAAS)

Chairmanships and Memberships intramural (Texas Tech University):

- Member of the CASNR (College of Agriculture and Natural Resources) Marketing Task Force (2003-2005).
- Chair of the CASNR International Activities Committee (2004-08).
- Chair of the Plant and Soil Science website improvement committee (2006-07).
- Member of the Plant and Soil Science strategic planning committee (2006-07).
- Chair of the Genetics and Fibers teaching group (2008).
- Member of the Bioproducts committee (2008).
- Member of the Plant and Soil Science Leadership Team (2010).

Honorary:

1. Gamma Sigma Delta; 2010 to present

Editorial duties:

- Assistant Editor for Textile Technology, Journal of Cotton Science (2001-2002)

- Associate Editor for Textile Technology, Journal of Cotton Science (2002-2007)
- Editor-in-Chief, Journal of Cotton Science (01/01/2008 – 03/31/2009)
- Member of the Editorial Board, Journal of Cotton Science (since 03/31/09)

Manuscript reviewer for:

- Journal of Cotton Science
- Textile Research Journal
- Transactions of the ASAE (American Society of Agricultural Engineers)
- Journal of Electrical imaging
- Agronomy Journal
- Journal of the Textile Institute
- Journal of Engineered Fibers and Fabrics
- Journal of Industrial Textiles
- Crop Science

H.D.R. Thesis

H1. E.F.Hequet. 2004. La fibre de coton du champ aux étoffes : Synthèse des travaux (Cotton fibers: From field to fabric). ENSITM – Haute-Alsace University.

Ph.D. Thesis

T1. E.F. Hequet. 2003. Implication of the Origin of Honeydew Contamination on Stickiness Measurements and Fiber Processing. 03MULH0722. ENSITM - Haute-Alsace University, France.

Patents

P1. E. Hequet, N. Abidi. Cotton Stickiness Evaluation by Means of Multi-Temperature Testing. US 6,520,007 B2. February 18, 2003.

P2. H. Sari-Sarraf, E. F. Hequet, A. Pai. Identification of Cotton Contaminants with X-Ray Microtomographic Image Analysis. US 6,870,897 B2. March 22, 2005.

- P3. H. Sari-Sarraf, E. F. Hequet, C. Turner, A. Zhu. Fabric Wrinkle Evaluation. US 7,601,978. October 13, 2009.
- P4. N. Abidi, E. Hequet. Detection and Mapping of Stickiness Contamination in Cotton by Means of Mid-Infrared Spectroscopy. TTU D-0456. Provisional Patent Application
- P5. S. Kamalakannan, M. Hill, A. Gururajan, M. Shahriar, H. Sari-Sarraf, and E. F. Hequet. GPU-Based Machine Vision System for Simultaneous Measurement of Shrinkage and Soil Release in Fabrics. Provisional patent application 61/359,607, June 2010.

Refereed journal articles

- R1. Guibordeau P., E. **Hequet**. 1985. Study of F1 hybrids derived from interspecific crosses between two varieties of *Gossypium hirsutum* and one variety of *G. barbadense*. Analysis of some fiber traits, *Coton et Fibres Tropicales*, 40(4) 169-186.
- R2. Girardot B., E. **Hequet**, M.T. Yehouessi, P. Guibordeau. 1986. Finding a variety of *Gossypium hirsutum* L. resistant to strains of *Xanthomonas campestris* pv. *malvacearum* (Smith) Dye virulent on associations of major genes (B2-B3 or B9L-B10L), *Coton et Fibres Tropicales*, 41(1) 67-69.
- R3. Bachelier B., E. **Hequet**, E. Ousmane. 1992. Study of a diallel cross for resistance to bacterial blight (*X. campestris* pv. *malvacearum* [Smith] Dow.) in cotton (*G. hirsutum* L.), *Coton et Fibres Tropicales*, 47(3) 173-182.
- R4. Frydrych R., E. Gozé, E. **Hequet**. 1993. Effect of relative humidity on the results obtained with the thermodetector, *Coton et Fibres Tropicales*, 48(4) 305-311.
- R5. Frydrych R., E. **Hequet**, M. Vialle. 1993. Effect of storage on cotton stickiness potential - Incidence du stockage sur l'évolution du potentiel de collage des cotons, *Coton et Fibres Tropicales*, 48(3) 207-212.
- R6. Kaewprasit C, E. **Hequet**, N. Abidi, J.P. Gourlot. 1998. Application of methylene blue adsorption to cotton fiber specific area measurement: part I. Methodology, *Journal of Cotton Science*, 2(4) 164-173.
- R7. Auld D.L., E. Bechere, M.D. Ethridge, W. D. Becker, E. **Hequet**, R. G. Cantrell. 2000. Registration of TTU 202-1107-B and TTU 271-2155-C. Mutant germplasm lines of Upland cotton with improved fiber quality, *Crop Sci.*, 40:1835-1836.
- R8. **Hequet** E., N. Abidi. 2002. High-speed stickiness detector measurement: Effect of temperature settings and relative humidity, *The Journal of Cotton Science*, 6 (1) 68-76.
- R9. **Hequet** E., N. Abidi. 2002. Processing sticky cotton: Implication of trehalulose in residue build-up, *The Journal of Cotton Science*, 6 (1) 77-90.

- R10. Sari-Sarraf H., E. F. **Hequet**, N. Abidi, Y. Dai, H. Y. Chan. 2002. Automatic measurement of fabric shrinkage, *AATCC review*, 2(10) 20-23.
- R11. Turner C.N., H. Sari-Sarraf, E.F. **Hequet**, N. Abidi and S.H. Lee. 2004. Preliminary validation of a fabric smoothness assessment system, *Journal of Electronic Imaging*, 13(3) 418-427.
- R12. Pai A., H. Sari-Sarraf, E.F. **Hequet**. 2004. Recognition of cotton contaminants via X-ray microtomographic image analysis, *IEEE Trans. On industry Applications*, 40(1) 77-85.
- R13. Abidi N. and E. **Hequet**. 2004. Cotton Fabric Graft Copolymerization using Microwave Plasma. Part I: UATR-FTIR Study, *J. Appl. Polym. Sci.*, 93(1) 145-154.
- R14. Herring A.D., D. L. Auld, M. D. Ethridge, E. F. **Hequet**, E. Bechere, C. J. Green and R. G. Cantrell. 2004. Inheritance of fiber quality and lint yield in a chemically mutated population of cotton, *Euphytica*, 136: 333-339.
- R15. Abidi N., C.N. Turner, E.F. **Hequet**, H. Sari-Sarraf. 2005. Objective evaluation of durable press treatment and fabric smoothness rating, *Textile Research Journal*, 75(1) 19-29.
- R16. Abidi N., E. **Hequet**, C. Turner, and H. Sari-Sarraf. 2005. FTIR Analysis of Crosslinked Cotton Using a ZnSe-Universal Attenuated Total Reflectance, *J. Appl. Polym. Sci.*, 96(2) 392-399.
- R17. Abidi N., and E. **Hequet**. 2005. HPLC of insect honeydew deposits collected from the high speed stickiness detector. *Textile Research Journal*, 75(4), 362-370.
- R18. Abidi N. and E. **Hequet**. 2005. Cotton fabric graft copolymerization using microwave Plasma. II. Physical Properties, *J. Appl. Polym. Sci.*, 98, 896-902.
- R19. **Hequet** E., N. Abidi, and D. Ethridge. 2005. Processing Sticky Cotton: Effect of Stickiness on Yarn Quality, *Textile Research Journal*, 75(5) 402-410.
- R20. **Hequet** E., N. Abidi. 2005. Effects of the Origin of the Honeydew Contamination on Cotton Spinning Performances, *Textile Research Journal*, 75(10) 699-709.
- R21. Abidi N., E. **Hequet**. 2005. Fourier Transform Infrared analysis of trehalulose and sticky cotton yarn defects using ZnSe-Diamond UATR, *Textile Research Journal*, 75(9) 645-652.
- R22. Barton F.E., J.D. Bargeron, G.R. Gamble. D.L. McAlister, E.F. **Hequet**. 2005. Analysis of sticky cotton by near-infrared spectroscopy. *Applied spectroscopy*, 59(11) 1388-1392.
- R23. Tarimala S., N. Kothari, N. Abidi, E. **Hequet**, J. Fralick, L. Dai. 2006. New Approach to Antibacterial Treatment of Cotton Fabric with Silver Nanoparticles-doped Silica Using Sol-gel Process. *Journal of Applied Polymer Science*, 101(5) 2938 – 2943.

- R24. **Hequet** E., B. Wyatt, N. Abidi, D.P. Thibodeaux. 2006. Creation of a set of reference material for cotton fiber maturity measurements. *Textile Research Journal*, 76(7) 576-586.
- R25. N. Abidi, E. **Hequet**, and D. Ethridge. 2006. Thermogravimetric Analysis of Cotton Fibers: Relationships with Maturity and Fineness. *Journal of Applied Polymer Science*, 103(6), 3476-3482.
- R26. Abidi N., E. **Hequet**, S. Tarimala, L. Dai. 2007. Cotton Fabric Surface Modification for Improved UV-radiation Protection Using Sol-Gel Process. *Journal of Applied Polymer Science*. 104(1) 111-117.
- R27. Abidi N., E. **Hequet**. 2007. Thermogravimetric Analysis of Cotton fibers and Relationships with their Physical Properties. *Journal of Applied Polymer Science*, 103 (6), 3476-3482.
- R28. Abidi N., E. **Hequet**. 2007. FTIR Analysis of Cotton Contamination. *Textile Research Journal*, 77(2) 77-84.
- R29. Bechere E., D. Auld, R. Cantrell, E. **Hequet**, M. Krifa, S. Misra, W. Smith. 2007. Registration of TTU 0774-3-3 and TTU 0808-1-6-1 Upland Cotton Germplasm Lines with Improved Fiber Length and Strength, *Journal of Plant Registration*, 1(1):58-59.
- R30. D. Auld, Bechere E., M. Krifa, H. Kebede, E. **Hequet**, E. Wright, S. Misra. 2007. Registration of "Raider 276" (Holland 338-276-1-3-4), a High Yielding, Improved Quality Upland Mutant Cotton Cultivar, *Journal of Plant Registration*, 1(2): 115-116.
- R31. Haigler C. H., B. Singh, D. Zhang, S. Hwang, C. Wu, X. Cai, M. Hozain, W. Kang, B. Kiedaisch, R. Strauss, E. **Hequet**, B. Wyatt, G. Jividen, S. Holaday. 2007. Transgenic cotton over-producing spinach phosphate synthase showed enhanced leaf sucrose synthesis and improved fiber quality under controlled environmental conditions. *Plant Molecular Biology*, 63:815-832.
- R32. Abidi N., E. **Hequet**, S. Tarimala. 2007. Functionalization of cotton fabric with vinyltrimethoxysilane. *Textile Research Journal*. 77(9): 668-674.
- R33. Benzina H., E. **Hequet**, N. Abidi, J-Y. Drean, O. Harzallah. 2007. Using Fiber Elongation to Improve Genetic Screening in Cotton Breeding Programs. *Textile Research Journal*, 77(10): 770-778.
- R34. Gururajan A., H. Sari-Sarraf, E. F. **Hequet**. 2008. Statistical Approach to Unsupervised Defect Detection and Multi-Scale Localization in Two-Texture Images. *Optical Engineering* 47(2), 027202-1-10.
- R35. Abidi N., E. **Hequet**, L. Cabrales, J. Gannaway, T. Wilkins, L.W. Wells (2008). Evaluating Cell Wall Structure and Composition of Developing Cotton Fibers using Fourier Transform Infrared Spectroscopy and Thermogravimetric Analysis. *Journal of Applied Polymer Science*, 107(1): 476-486.

- R36. Gururajan A., E. F. **Hequet**, and H. Sari-Sarraf. 2008. Objective Evaluation of Soil Release in Fabrics. *Textile Research Journal*, 78(9): 782-795.
- R37. Wang H., C. Mao, H. Sari-Sarraf, and E. F. **Hequet**. 2008. Accurate Length Measurement of Multiple Cotton Fibers. *Journal of Electronic Imaging*, (17), 031110, DOI:10.1117/1.2952846.
- R38. Gardunia B.W., C. Braden, E. **Hequet**, C.W. Smith. 2008. Applying quantile regression to analysis of AFIS cotton fiber distribution. *Crop Science*, (48) 1328-1336.
- R39. Smith C.W., S. Hague, E. **Hequet**, P.S. Thaxton, and N. Brown. 2008. Development of Extra-Long Staple Upland Cotton. *Crop Science*,(48) 1823-1831.
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- C68. Xu B., W. Yu, P. Bel, E. **Hequet**, B. Wyatt. 2007. A customized microscopic system for high volume measurements of cotton maturity. World Cotton Research Conference-4, Sept. 10-14, 2007, Lubbock, TX, USA.
- C69. Kelly C.M., E. **Hequet**, J. Gannaway. 2007. Improving the efficiency of the breeding programs for fiber and yarn quality. World Cotton Research Conference-4, Sept. 10-14, 2007, Lubbock, TX, USA.
- C70. Lowery C.C., D. L. Auld, E. Bechere, R.J. Wright, E. **Hequet**, N. Abidi, C.W. Smith. 2007. Use of Chemical Mutagenesis in Improving Upland Cotton. World Cotton Research Conference-4, Sept. 10-14, 2007, Lubbock, TX, USA.
- C71. Kamalakannan. S., Gururajan. A., Shahriar. M., Hill. M., Anderson. J., Sari-Sarraf. H., and **Hequet**. E., "Assessing Fabric Stain Release Using a GPU-based Implementation of Statistical Snakes," Proc. SPIE (Electronic Imag.), San Jose, CA, Jan. 2009.
- C72. Gururajan A., H. Sari-Sarraf, and E.F. Hequet. 2010. Interactive Texture Segmentation Via IT-SNAPS, IEEE Southwest Symposium on Image Analysis and Interpretation- SSIAT 2010 - May 23-25, 2010 Austin, Texas, USA.

- C73. Abbott A.M., G.J. Higginson, S.R. Lucas, G.R.S. Naylor, E.F. **Hequet**, D.P. Thibodeaux. 2010. An inter-laboratory trial of upgraded CottonScan instruments for rapid determination of average fiber linear density (fiber fineness). Beltwide Cotton Conferences, January 4-7 2010, New Orleans, LA.
- C74. Schielack V. III, J.A. Thomasson, R. Sui, C. Morgan, E.F. **Hequet**. 2010. Improvement of a harvester based multispectral, seed cotton fiber quality sensor. Beltwide Cotton Conferences, January 4-7 2010, New Orleans, LA.

Conference proceedings (abstracts)

- A1. Chanselme J.L., E. Gozé, E. **Hequet**. 1997. Characterization of individual cotton fibers: precision of AFIS L and F&M measurements, Advances in Fiber and Textile Sciences and Technology, International Conference of the Fiber Society; April 21-24; Mulhouse, France.
- A2. Kaewprasit C., J.M. Douillard, E. **Hequet**, J.P. Gourlot, C. Marquié, M. Lindheimer. 1997. Estimation of cotton fiber specific surface area by adsorption of methylene blue, In Advances in Fiber and Textile Science and Technology; International Conference of the Fiber Society; April 21-24; Mulhouse, France.
- A3. **Hequet** E., D. Ethridge, R. Zhu. 1998. Evaluation of alternative instrument measurements for selected cotton fiber properties, Proc. Beltwide Cotton Conference, National Cotton Council of America, San Diego, U.S.A., January 5-9.
- A4. Armstrong J.S., D.L. Auld, E. Bechere, M.D. Ethridge, E.F. **Hequet**. 1999. Effect of boll weevil on the yield and fiber quality on the South Plains of Texas, Proc. Beltwide Cotton Conference, National Cotton Council of America, Orlando, U.S.A., January 4-8.
- A5. Haigler C. H., E. F. **Hequet**, D. R. Krieg, R. E. Strauss, B. G. Wyatt, W. Cai, T. Jaradat, K. Keating, N. G. Srinivas, C. Wu., A. S. Holaday. 2000. Transgenic cotton with improved fiber micronaire, strength and length and increased fiber weight, Proc. of the Beltwide Cotton Conference, National Cotton Council of America, San Antonio, TX, U.S.A., 483-483.
- A6. **Hequet** E. F., D. Ethridge, A. Vuilleumard. 2000. Effect of cotton stickiness on the spinning process, Proc. of the Beltwide Cotton Conference, National Cotton Council of America, San Antonio, TX, U.S.A., 1527-1527.
- A7. Speck C.T., D.R. Krieg, J.F. Leser, D. Ethridge, E.F. **Hequet**, R.L. Nichols. 2000. Changes in the biochemical composition of cotton leaves as related to cotton aphid population dynamics, Proc. of the Beltwide Cotton Conference, National Cotton Council of America, San Antonio, TX, U.S.A., 636-637.
- A8. Abidi N., E. **Hequet**. 2001. New evidence on cotton stickiness: Part I. Thermal and hygroscopic properties of individual sugars present on sticky cotton, Proc. Beltwide Cotton Conferences, National Cotton Council, January 9-13, Anaheim, CA, U.S.A., 1313-1313.

- A9. Dai Y., A. Zhu, H. Sari-Sarraf, E. **Hequet**. 2001. Vision system to quantify the geometric distortions of fabrics after repeated laundering, Proc. of the Beltwide Cotton Conference, National Cotton Council, January 9-13, Anaheim, CA, U.S.A., 1307.
- A10. Haigler C.H., E. **Hequet**, A.S. Holaday, D.R. Kriegg, R.E. Strauss, B.G. Wyatt. 2001. Update on the performance of transgenic cotton over-expressing sucrose phosphate synthase, Proc. of the Beltwide Cotton Conference, National Cotton Council, January 9-13, Anaheim, CA, U.S.A., 1416.
- A11. **Hequet** E., N. Abidi. 2001. New evidence on cotton stickiness: Part II. Effect of temperature and relative humidity on cotton stickiness, Proc. Beltwide Cotton Conferences, National Cotton Council, January 9-13 Anaheim CA U.S.A., 1313-1313.
- A12. **Hequet** E., N. Abidi, M. Watson. 2001. Relationship between sugar properties and stickiness measurements, Fiber Society – general Conference, Oct. 30 – Nov. 1, Lake Tahoe, 43.
- A13. Singh Mehta N., H. Sari-Sarraf, E. **Hequet**. 2001. X-ray microtomographic image analysis for cotton contaminants identification, Proc. Beltwide Cotton Conference, National Cotton Council, January 9-13, Anaheim, CA, U.S.A., 1303.
- A14. Thibodeaux D., J. Montalvo, T. Von Hoven, S. Faight, E. **Hequet**. 2001. Update on cotton fiber reference standards for maturity, Proc. Beltwide Cotton Conference, National Cotton Council, January 9-13, Anaheim, CA, U.S.A., 1255.
- A15. Abidi N., E. **Hequet**. 2002. Effect of Instrument Settings on H2SD Readings, Proc. Beltwide Cotton Conferences, National Cotton Council, January 8-12, Atlanta, GA, U.S.A.
- A16. **Hequet** E., N. Abidi. 2002. Impact of Stickiness on Yarn Quality, Proc. Beltwide Cotton Conferences, National Cotton Council, January 8-12, Atlanta GA, U.S.A.
- A17. Brashears A.D., Boman R., Kelley M., **Hequet** E. 2002. Field cleaner effects on efficiency, seed cotton loss and fiber quality during harvest season, Proc. Beltwide Cotton Conferences, National Cotton Council, January 8-12, Atlanta GA, U.S.A.
- A18. Braden C., C.W. Smith, P. Thaxton, E. **Hequet**. 2003. Combining ability for near extra long fibers in upland cotton, Beltwide Cotton Conferences, National Cotton Council, January 6-10, Nashville TN, U.S.A.
- A19. Abidi N., E.F. **Hequet**. 2003. Fourier Transform Infrared (FT-IR) Micro-spectroscopy Analysis of Sticky Cotton Yarns. Proc. Beltwide Cotton Conferences, National Cotton Council, January 6-10, Nashville TN, U.S.A.

- A20. **Hequet** E.F., B. Wyatt. 2003. Image analysis of the cross-sections of cotton fibers on a reference set of cottons, Proc. Beltwide Cotton Conferences, National Cotton Council, January 6-10, Nashville TN, U.S.A.
- A21. **Hequet** E.F., N. Abidi. 2003. High Performance liquid chromatography (HPLC) Analysis of High speed stickiness detector (H2SD) sticky deposits, Proc. Beltwide Cotton Conferences, National Cotton Council, January 6-10, Nashville TN, U.S.A.
- A22. **Hequet** E.F., R. Boman, M. Kelley, A. Brashears. 2003. Harvest timing, bur extracting and weathering effects on cotton fiber and yarn quality, Beltwide Cotton Conferences, National Cotton Council, January 6-10, Nashville TN, U.S.A.
- A23. Krifa M., E. **Hequet**. 2003. Interaction between cotton fiber characteristics and spinning process: conventional vs. compact ring spinning, Proc. Beltwide Cotton Conferences, National Cotton Council, January 6-10, Nashville TN, U.S.A.
- A24. Pavani S. K., M.S. Dogan, H. Sari-Sarraf, E.F. **Hequet**. 2004. Segmentation and classification of four common cotton contaminants in X-ray microtomographic image, Proc. SPIE, San Jose, CA, U.S.A.
- A25. Abidi N., E. **Hequet**. 2004. UATR-FTIR and HPLC Analysis of Sticky Deposits, Proc. Beltwide Cotton Conferences, National Cotton Council, January 5-9, San Antonio, Texas, U.S.A.
- A26. **Hequet** E., B. Wyatt. 2004. Update on the image analysis of cotton fiber cross-sections, Proc. Beltwide Cotton Conferences, National Cotton Council, January 5-9, San Antonio, Texas, U.S.A.
- A27. **Hequet** E. 2004. Effect of fiber entanglements on AFIS readings, Beltwide Cotton Conferences, National Cotton Council, January 5-9, San Antonio, Texas, U.S.A.
- A28. **Hequet** E. 2004. Preliminary evaluation of an image based length measurement, Beltwide Cotton Conferences, National Cotton Council, January 5-9, San Antonio, Texas, U.S.A.
- A29. Abidi N., E. **Hequet**. 2004. FTIR Analysis of Cross-linked Cotton Fabric using a ZnSe-Universal Attenuated Total Reflectance, 60th Southwest Regional Meeting of the American Chemical Society, Sept. 29, 2004, Fort Worth, Texas, U.S.A.
- A30. Abidi N., E. **Hequet**. 2004. Microwave Plasma-Induced Graft Copolymerization of Cotton Fabric, 60th Southwest Regional Meeting of the American Chemical Society, Sept. 29, 2004, Fort Worth, Texas, U.S.A.
- A31. Kelley M., R. Boman, E.F. **Hequet**, A. Brashears. 2005. Field Weathering Effects on Selected Cotton Fiber Quality Parameters in the Texas High Plains. Proc. Beltwide Cotton Conferences, National Cotton Council, January 4-7, 2005, New Orleans LA, USA.

- A32. Gannaway J.R., R. Boman, M. Kelley, E.F. **Hequet**, R. Nichols. 2005. Boll Samples, Grab Samples and Commercially Ginned Bales: a Texas High Plains Comparison. Proc. Beltwide Cotton Conferences, National Cotton Council, January 4-7, 2005, New Orleans LA, USA.
- A33. Braden C., C. W. Smith, P. Thaxton, E.F. **Hequet**. 2005. Gene Action of Afis Fiber Length in Upland Cotton. Proc. Beltwide Cotton Conferences, National Cotton Council, January 4-7, 2005, New Orleans LA, USA.
- A34. Hans C. S., Gardunia B. W., E. F. **Hequet**, D. Stelly, Chen Z. J. 2005. Correlation study of fiber density in cotton between wildtype and the N1 naked-seed mutant. Proc. Beltwide Cotton Conferences, National Cotton Council, January 4-7, 2005, New Orleans LA, USA.
- A35. Wilkins, T.A., Arpat, A.B., Sickler, B.A., Abidi, N., **Hequet**, E. 2005. Single-Cell genomics: Developing cotton fibers as a model for studying cell wall biogenesis. Biogenesis of Plant Cell Walls, Asilomar, CA, (abstract 57).
- A36. **Hequet**, E.F. 2006. Calibration of the AFIS Maturity Measurement. Proc. Beltwide Cotton Conferences, National Cotton Council, January 3-6, 2006, San Antonio TX, USA.
- A37. Abidi, N., E.F. **Hequet**. 2006. FTIR Analysis of Cotton Contamination. Proc. Beltwide Cotton Conferences, National Cotton Council, January 3-6, 2006, San Antonio TX, USA.
- A38. Gururajan A., H. Sari-Sarraf, E. F. **Hequet**. 2007. Automatic Measurement of Soil Release through Image Analysis, Proc. Beltwide Cotton Conferences, National Cotton Council, January 9-12, New Orleans, LA, U.S.A.
- A39. Wang H., C. Mao, H. Sari-Sarraf, E. F. **Hequet**. 2007. Accurate Length Measurement of Multiple Cotton Fibers, Proc. 8th QCAV, Le Creusot, France, May 2007. Vol. 6356, 3560-3560.
- A40. Gururajan A., H. Sari-Sarraf, E. F. **Hequet**. 2007. Statistical Modeling, Detection and Segmentation of Stains in Digitized Fabric Images,” Proc. SPIE, San Jose, CA, January 2007. Vol. 6503, 50304.
- A41. Wang H., H. Sari-Sarraf, E. F. **Hequet**. 2007. A Reference Method for Automatic and Accurate Measurement of Cotton Fiber Length, Proc. Beltwide Cotton Conferences, National Cotton Council, January 9-12, New Orleans, LA, U.S.A.
- A42. **Hequet** E., N. Abidi. 2007. Importance of Sample Preparation in AFIS Testing. Proc. Beltwide Cotton Conferences, National Cotton Council, January 9-12, New Orleans, LA, U.S.A.
- A43. Allen R., Y. Sun, M. Fokar, S. Veerabomma, N. Abidi, E. **Hequet**. 2007. Brassinosteroid Signaling Promotes Secondary Cell Wall Development in Cotton Fibers. Proc. Beltwide Cotton Conferences, National Cotton Council, January 9-12, New Orleans, LA, U.S.A.

- A44. Smith C.W., P. Thaxton, C. Souder, S. Hague, E.F. **Hequet**. 2007. Progress in developing ELS Upland. Proc. Beltwide Cotton Conferences, National Cotton Council, January 9-12, New Orleans, LA, U.S.A.
- A45. Mason Kelly C., J.R. Gannaway, R. Wright, E.F. **Hequet**. 2007. Evaluation of yield and fiber traits responses across irrigation treatments. Proc. Beltwide Cotton Conferences, National Cotton Council, January 9-12, New Orleans, LA, U.S.A.
- A46. Faulkner W.B., J. D Wanjura, B.W. Shaw, E.F. **Hequet**. 2007. Effects of harvesting methods on foreign matter content, fiber quality, and yarn quality from irrigated cotton on the High Plains. July, ASABE Annual Meeting 07113.
- A47. Smith C.W., S. Hague, E.F. **Hequet**. 2007. Developing extra long staple Upland cotton. ASA-CSSA-SSSA. 2007 International Annual Meetings. November 4-8. New Orleans, LA.
- A48. **Hequet** E.F., N. Abidi. 2008. Importance of producing mature fibers. Proc. Beltwide Cotton Conferences, National Cotton Council, January 8-11, Nashville, TN, U.S.A.
- A49. **Hequet** E.F., N. Abidi, J. Gannaway. 2008. Relationships between fiber and yarn tensile properties. Proc. Beltwide Cotton Conferences, National Cotton Council, January 8-11, Nashville, TN, U.S.A.
- A50. Kothari N., N. Abidi, E.F. **Hequet**. 2008. Multi-disciplinary approach to study cotton fiber quality variability within a plant. Proc. Beltwide Cotton Conferences, National Cotton Council, January 8-11, Nashville, TN, U.S.A.
- A51. Shahriar M., H. Wang, H. Sari-Sarraf, E.F. **Hequet**. 2008. High resolution cotton fiber length and maturity measurements using image analysis. Proc. Beltwide Cotton Conferences, National Cotton Council, January 8-11, Nashville, TN, U.S.A.
- A52. Turner C., H. Sari-Sarraf, E.F. **Hequet**. 2008. Data mining of cotton fiber quality measurements. Proc. Beltwide Cotton Conferences, National Cotton Council, January 8-11, Nashville, TN, U.S.A.
- A53. Gururajan A., H. Sari-Sarraf, E.F. **Hequet**. 2008. Developing an automated machine vision system for objective soil release evaluation. Proc. Beltwide Cotton Conferences, National Cotton Council, January 8-11, Nashville, TN, U.S.A.
- A54. Joy K.S., C.W. Smith, S. Hague, E. F. **Hequet**. 2008. Spinning performances of extra long staple upland cotton. Proc. Beltwide Cotton Conferences, National Cotton Council, January 8-11, Nashville, TN, U.S.A.

- A55. Faulkner W.B., B.W. Shaw, E.F. **Hequet**. 2008. Effects of harvesting method on foreign matter content, fiber quality, and yarn quality from irrigated cotton on the High Plains. Proc. Beltwide Cotton Conferences, National Cotton Council, January 8-11, Nashville, TN, U.S.A.
- A56. Mason Kelly C., E.F. **Hequet**, J. Gannaway. 2008. Improving the efficiency of the breeding programs for fiber and yarn quality. Proc. Beltwide Cotton Conferences, National Cotton Council, January 8-11, Nashville, TN, U.S.A.
- A57. Abidi N., E.F. **Hequet**, L. Cabrales, J. Gannaway, T. Wilkins. 2008. Structure and composition of developing cotton fibers. Proc. Beltwide Cotton Conferences, National Cotton Council, January 8-11, Nashville, TN, U.S.A.
- A58. Smith C.W., S. Hague, and E.F. **Hequet**. 2009. Extra long staple Upland cotton. Proc. Beltwide Cotton Conferences, National Cotton Council, January 5-8, San Antonio, TX, TN, U.S.A.
- A59. **Hequet** E.F., and N. Abidi. 2009. Spinning performances of West Texas Upland cotton. Proc. Beltwide Cotton Conferences, National Cotton Council, January 5-8, San Antonio, TX, TN, U.S.A.
- A60. Mason Kelly C., E.F. **Hequet**, J.R. Gannaway, J. Dever. 2009. Improving the efficiency of the breeding programs for fiber and yarn quality. Proc. Beltwide Cotton Conferences, National Cotton Council, January 5-8, San Antonio, TX, TN, U.S.A.
- A61. Abidi N., and E.F. **Hequet**. 2009. FTIR investigation of secondary cell wall development in cotton fibers. Proc. Beltwide Cotton Conferences, National Cotton Council, January 5-8, San Antonio, TX, TN, U.S.A.
- A62. Schielack III V., A. Thomasson, C. Morgan, and E.F. **Hequet**. 2009. Evaluation of multispectral fiber quality sensor. Proc. Beltwide Cotton Conferences, National Cotton Council, January 5-8, San Antonio, TX, TN, U.S.A.
- A63. Abidi N., E.F. **Hequet**, and L. Cabrales. 2009. Imparting multi-functional properties to cotton fabric by means of sol gel process. Proc. Beltwide Cotton Conferences, National Cotton Council, January 5-8, San Antonio, TX, TN, U.S.A.
- A64. Joy K.S., C.W. Smith, E.F. **Hequet**, E. Hughs, and S. Hague. 2009. Ring-spinning performance of extra long staple upland cotton. Proc. Beltwide Cotton Conferences, National Cotton Council, January 5-8, San Antonio, TX, TN, U.S.A.
- A65. Kothari N., N. Abidi, E.F. **Hequet**, T. Wilkins, and S. Hague. 2009. Phenotypic characterization of im fibers. Proc. Beltwide Cotton Conferences, National Cotton Council, January 5-8, San Antonio, TX, TN, U.S.A.

- A66. **Hequet** E.F., N. Abidi, and C. Mason Kelly. 2009. Optimizing the use of the AFIS for breeders: Effect of sample preparation. Proc. Beltwide Cotton Conferences, National Cotton Council, January 5-8, San Antonio, TX, TN, U.S.A.
- A67. Faulkner B., B.W. Shaw, and E. **Hequet**. 2009. Effect of harvesting on fiber and yarn quality from irrigated cotton in the High Plains. Proc. Beltwide Cotton Conferences, National Cotton Council, January 5-8, San Antonio, TX, TN, U.S.A.
- A68. N. Abidi, E. **Hequet**, L. Cabrales. 2009. Thermogravimetric Analysis as a Tool to Study the Secondary Cell Wall Biogenesis in Cotton Fibers. 37th Annual Conference on Thermal Analysis and Applications. North American Thermal Analysis Society. September 20 – 23rd, Lubbock TX U.S.A.
- A69. N. Abidi, E. **Hequet**, L. Cabrales. 2009. Relationships between Thermal Properties and Maturity-Fineness of Cotton Fibers and Estimation of the Primary Cell Wall Thickness. 37th Annual Conference on Thermal Analysis and Applications. North American Thermal Analysis Society. September 20 – 23rd, Lubbock TX U.S.A.
- A70. L. Cabrales, N. Abidi, E. **Hequet**. 2009. On the Thermal Degradation of Cellulose in Cotton Fibers Compared to Microcrystalline Cellulose (Avicel). 37th Annual Conference on Thermal Analysis and Applications. North American Thermal Analysis Society. September 20 – 23rd, Lubbock TX U.S.A
- A71. **Hequet** E.F., N. Abidi. 2010. Examination of the relationships between individual fibers tensile properties and bundle tensile properties. Beltwide Cotton Conferences, January 4-7 2010, New Orleans, LA.
- A72. **Hequet** E.F., N. Abidi. 2010. Relationships between fiber length distribution and fiber maturity. Beltwide Cotton Conferences, January 4-7 2010, New Orleans, LA.
- A73. Stanislav S., C.L.S. Morgan, A.J. Thomasson, R. Sui, J.T. Cothren, E.F. **Hequet**. 2010. The effect of soil specific seeding rates on water stress and cotton yield. Beltwide Cotton Conferences, January 4-7 2010, New Orleans, LA.
- A74. Abidi N., L. Cabrales, E.F. **Hequet**. 2010. HPLC and TGA investigations of the secondary cell wall development in cotton fibers. Beltwide Cotton Conferences, January 4-7 2010, New Orleans, LA.
- A75. Mason Kelly C., E.F. **Hequet**, J.K. Dever. 2010. Improving cotton (*Gossypium hirsutum* L.) for fiber and yarn quality. Beltwide Cotton Conferences, January 4-7 2010, New Orleans, LA.
- A76. N. Abidi, L. Cabrales, E. **Hequet**. 2010. Secondary cell wall development in cotton fibers: FTIR, HPLC, and TGA investigations. American Chemical Society, March 21-25, 2010, San Francisco, CA, U.S.A.

- A77. N. Abidi, L. Cabrales, E. **Hequet**. 2010. Surface Modification of cellulosic substrate to impart multifunctional properties. American Chemical Society, March 21-25, 2010, San Francisco, CA, U.S.A.
- A78. Abidi N., L. Cabrales, E.F. **Hequet**. 2011. On Cellulose Development in cotton fibers. Beltwide Cotton Conferences, Atlanta, Georgia, January 4-7, 2011. p 1330.
- A79. Boman R., M. Kelley, C. Ashbrook, J.D. Wanjura, E.F. **Hequet**. 2011. Picker vs. Stripper harvesting in the Texas High Plains: Agronomic Implications. Beltwide Cotton Conferences, Atlanta, Georgia, January 4-7, 2011. pp507-509.
- A80. Kelly C.M., J.K. Dever, E.F. **Hequet**. 2011. Length Distributions as a Breeding Tool to Improve Multiple Fiber Properties. Beltwide Cotton Conferences, Atlanta, Georgia, January 4-7, 2011. p 722.
- A81. **Hequet** E.F., N. Abid, R. Boman, J.D. Wanjura,. 2011. Effect of Cotton fiber Maturity on Yarn Quality. Beltwide Cotton Conferences, Atlanta, Georgia, January 4-7, 2011. pp507-509.

Conference proceedings – Invited papers and presentations

- I1. **Hequet** E., R. Frydrych. 1994. The problem of cotton stickiness: CIRAD work on controlling stickiness, Proceedings of the 53rd Plenary Meeting of the International Cotton Advisory Committee, Recife, Pernambuco, Brazil, September, 45-48.
- I2. Ethridge D., E. **Hequet**. 1998. The ITC project on stickiness measurement, 11th Engineered Fiber Selection System Conference Proceedings. Memphis, TN, U.S.A., June 8-10.
- I3. **Hequet** E. M. Ethridge. 1999. Progress on practical stickiness measurement, Cotton Incorporated Twelfth Annual Engineered Fiber Selection System Conference, May 17-19, Greenville, SC, U.S.A., 6 pages
- I4. **Hequet** E.F., D. Ethridge, W. Cole, B. Wyatt. 2000. How cotton stickiness relate to spinning efficiency, Proceedings EFS Conference, April 17-19, Memphis, TN, U.S.A., 99-121.
- I5. **Hequet** E., N. Abidi, M. Watson. 2001. Relationship between sugar properties and stickiness measurements, ICAC & Common Fund for Commodities workshop on cotton stickiness, July 2-4 – Lille, France, 118-131.
- I6. **Hequet** E. and D. Ethridge. 2002. Cotton quality evaluation for cotton breeders and biotechnologists, 15th Annual EFS System Conference Proceedings, 95-112. June 10-12, 2002. Memphis, TN, USA.

- I7. Turner C.N., H. Sari-Sarraf, A. Zhu, E. F. **Hequet**, and S. H. Lee. 2002. Automatic Assessment of Fabric Smoothness, Proc. IEEE 45th MWSCAS, Vol. 2, p. 379-382, Tulsa, OK, USA.
- I8. **Hequet** E.F. and D. Ethridge. 2005. Impacts of Fiber Length Distribution on Market Value and Yarn Quality: Implications for U.S. Cotton. 18th Annual 2005 EFS System Conference. Memphis, Tennessee, June 6-8.
- I9. Ethridge M.D., E.F. **Hequet**. 2005. Harmonization of Rapid Machine Testing of Fiber Quality. International Cotton Advisory Committee. 64th Plenary Meeting. Liverpool, United Kingdom. 25-29 September.
- I10. **Hequet** E.F., 2006. Multidisciplinary Approach to Fiber Testing for Biotechnologists. 19th EFS System Conference, Greenville SC. June 5-7.
- I11. **Hequet** F., 2007. Vision systems and cotton quality. 20th EFS System Conference, Greenville SC. June 4-7.
- I12. **Hequet** F., 2008. The next generation of HVI: What could it be? 21st EFS System Conference, Memphis TN, June 10-11.
- I13. **Hequet** E.F., and N. Abidi. 2009. Update on spinning research. Proc. Beltwide Cotton Conferences, National Cotton Council, January 5-8, San Antonio, TX, TN, U.S.A.

Grants received as PI or Co-PI

1992-1997 with CIRAD (Centre de coopération internationale en recherche agronomique pour le développement), France.

Total funded: \$2,381,896

1992 (Total = \$114,428)

1. Research on international sticky cottons. Zellweger Uster, \$18,000, **100%** (PI).
2. Neutralisation du collage de la fibre de coton (Neutralization of cotton stickiness). Ministère de l'industrie (French Ministry of Industry), \$96,428. **100%** (PI).

1993 (Total = \$77,750)

3. Seed coat neps classification on AFIS. Validation of algorithm. Zellweger Uster, \$4,740, **100%** (PI).
4. Mise au point d'un appareillage de détection rapide du collage des fibres de coton (Development of the High Speed Stickiness Detector). Agence nationale de valorisation de la recherche (ANVAR), \$73,010, **100%** (PI).

1994 (Total = \$71,720)

5. Validation of the High Speed Stickiness Detector prototype. Cotton Incorporated, \$62,000, **100%** (PI).
6. Seed coat neps classification on AFIS. Ring spinning validation. Zellweger Uster, \$4,740, **100%** (PI).
7. Seed coat neps classification on AFIS. Seed coat fragment counting on card web. Z200ellweger Uster, \$4,980, **100%** (PI).

1995 (Total = \$25,010)

8. Seed coat neps classification on AFIS. Rotor spinning validation. Zellweger Uster, \$25,010. **100%** (PI).

1997 (Total = \$2,092,988)

9. Improvement of the marketability of the cotton produced in zones affected by stickiness. Common funds for commodities (CFC) – International Cotton Advisory Committee (ICAC), \$2,059,988, **100%** (PI).
10. Software development for High Speed Stickiness Detector. Cotton Incorporated, \$33,000, **100%** (PI).

1997 – Present with Texas Tech University, U.S.A.

Total funded: \$19,073,359 (\$4,525,671 credited to Hequet)

1999 (Total = \$477,459 – Amount credited = \$277,343)

1. A quantitative study of the relative impacts of aphid versus plant sugars on stickiness of cotton in textile processing. Cotton Incorporated TSSC, \$48,000, **3%** (Co-PI).
2. Creation of cotton standards for the AFIS and determination of the procedures allowing the control of the instrument stability. Cotton Incorporated, \$14,950, **100%** (PI).
3. Development and evaluation of measurements of properties and contaminants for fibers, yarns, and fabrics. TFFC, \$55,000, **34%** (Co-PI).
4. Distribution of length and strength of cotton fibers and its influence on yarn mechanical properties. USDA/TDA, \$77,000, **100%** (PI).
5. Evaluation of fiber properties for Texas Extension agents' demonstration plots. TFFC, \$18,000, **100%** (PI).

6. Evaluation of fiber properties for Texas State Cotton breeders. TFFC, \$56,634, **100%** (PI).
7. Fiber and spinning performance tests on Texas commercial cotton crop. TFFC, \$25,000, **100%** (PI).
8. Investigation of relationships among harvesting, ginning, and textile processes. TFFC, \$17,000, **34%** (PI).
9. Investigation of the measurement and treatment of stickiness and other cotton contaminants. TFFC, \$30,000, **50%** (Co-PI).
10. Molecular genetic optimization of fiber quality. TxCOT, \$135,875, **33%** (Co-PI).

2000 (Total = \$211,625 – Amount credited = \$101,249)

11. Creation of cotton standards for maturity. Cotton Incorporated, \$4,500, **100%** (PI).
12. Creation of cotton standards for the AFIS and determination of the procedures allowing the control of the instrument stability. Cotton Incorporated, \$14,950, **100%** (PI).
13. Distribution of length and strength of cotton fibers and its influence on yarn mechanical properties. USDA/TDA, \$2,350, **100%** (PI).
14. Establish reliable measurement for stickiness and enable improved management of stickiness in cotton fibers. Cotton Incorporated, \$96,646, **34%** (PI).
15. Evaluation of sensing devices for fabric shrinkage and fabric smoothness measurements. Cotton Incorporated, \$29,179, **50%** (PI).
16. X-ray microtomographic image analysis for identification and measurement of cotton. THECB ATP, \$64,000, **50%**. (Co-PI).

2001 (Total = \$870,653 – Amount credited = \$366,321)

17. Application of new mechanical processing technology to optimize performance of Texas commercial cotton crop. TFFC, \$47,500, **10%** (Co-PI).
18. Creation of cotton standards for the AFIS and determination of the procedures allowing the control of the instrument stability. Cotton Incorporated, \$15,525, **100%** (PI).
19. Customized X-Ray microtomographic image analysis for measurement in cotton-based industries. THECB ATP, \$149,987, **40%** (Co-PI).
20. Development and evaluation of measurements of properties and contaminants for fibers, yarns, and fabrics. TFFC, \$52,500, **25%** (Co-PI).

21. Development and evaluation of measurements of properties and contaminants for fibers, yarns, and fabrics. TFFC, \$30,000, **34%** (Co-PI).
22. Establish reliable measurement for stickiness and enable improved management of stickiness in cotton fibers. Cotton Incorporated, \$95,887, **60%** (PI).
23. Evaluation of fiber properties for Texas Extension agents' demonstration plots. TFFC, \$36,000, **50%** (PI).
24. Evaluation of fiber properties for Texas State Cotton breeders. TFFC, \$116,634, **50%** (PI).
25. Evaluation of micro-spinning technology as a tool for guiding improvements in cotton fiber properties. TFFC, \$15,000, **33%** (Co-PI).
26. Evaluation of sensing devices for fabric shrinkage and fabric smoothness measurements. Cotton Incorporated, \$48,835, **50%** (PI).
27. Fiber and spinning performance tests on Texas commercial cotton crop. TFFC, \$55,000, **50%** (Co-PI).
28. Investigation of cotton processing to remove neps, immature fibers and short fibers. TFFC, \$25,000, **34%** (Co-PI).
29. Investigation of relationships among harvesting, ginning, and textile processes. TFFC, \$17,000, **50%** (PI).
30. Investigation of the measurement and treatment of stickiness and other cotton contaminants. TFFC, \$30,000, **34%** (PI).
31. Molecular genetic optimization of fiber quality. TxCOT, \$135,875, **33%** (Co-PI).

2002 (Total = \$319,227 – Amount credited = \$222,746)

32. Creation of cotton standards for maturity. Cotton Incorporated, \$60,083, **100%** (PI).
33. Creation of cotton standards for maturity. Cotton Incorporated, \$3,600, **100%** (PI).
34. Creation of cotton standards for the AFIS and determination of the procedures allowing the control of the instrument stability. Cotton Incorporated, \$17,538, **100%** (PI).
35. Development and implementation of fiber and yarn testing protocols for cotton breeders and biotechnologists. Cotton Incorporated, \$30,000, **80%** (PI).
36. Establish reliable measurement for stickiness and enable improved management of stickiness in cotton fibers. Cotton Incorporated, \$80,075, **50%** (PI).

37. Evaluation of sensing devices for fabric shrinkage and fabric smoothness measurements. Cotton Incorporated, \$39,974, **50%** (PI).
38. Heritability of fiber length distribution. USDA-ICRC, \$42,500, **100%** (PI).
39. Manipulation of cotton fiber cellulose synthesis. USDA-ICRC, \$45,457, **33%** (Co-PI).

2003 (Total = \$646,179 – Amount credited = \$317,417)

40. Application of new mechanical processing technology to optimize performance of Texas commercial cotton crop. TFFC, \$47,500, **10%** (Co-PI).
41. Creation of cotton standards for maturity. Cotton Incorporated, \$39,993, **100%** (PI).
42. Creation of cotton standards for the AFIS and determination of the procedures allowing the control of the instrument stability. Cotton Incorporated, \$20,299, **100%** (PI).
43. Development and evaluation of measurements of properties and contaminants for fibers, yarns, and fabrics. TFFC, \$52,500, **70%** (PI).
44. Development and implementation of fiber and yarn testing protocols for cotton breeders and biotechnologists. Cotton Incorporated, \$30,000, **80%** (PI).
45. Establish reliable measurement for stickiness and enable improved management of stickiness in cotton fibers. Cotton Incorporated, \$35,112, **50%** (PI).
46. Evaluation of fiber properties for Texas Extension agents' demonstration plots. TFFC, \$18,000, **100%** (PI).
47. Evaluation of fiber properties for Texas State Cotton breeders. TFFC, \$60,000, **100%** (PI).
48. Evaluation of sensing devices for fabric shrinkage and fabric smoothness measurements. Cotton Incorporated, \$60,000, **50%** (PI).
49. Heritability of fiber length distribution. USDA-ICRC, \$42,500, **100%** (PI).
50. Investigation of cotton processing to remove neps, immature fibers and short fibers. TFFC, \$25,000, **34%** (Co-PI).
51. TAES-TCE joint appointment. TAES-TCE, \$215,275, **7%** (co-PI)

2004 (Total = \$597,012 – Amount credited = \$335,229)

52. Application of new mechanical processing technology to optimize performance of Texas commercial cotton crop. TFFC, \$46,000, **10%** (Co-PI).
53. Creation of cotton standards for the AFIS and determination of the procedures allowing the control of the instrument stability. Cotton Incorporated, \$23,184, **100%** (PI).
54. Development and evaluation of measurements of properties and contaminants for fibers, yarns, and fabrics. TFFC, \$45,000, **70%** (PI).
55. Development and implementation of fiber and yarn testing protocols for cotton breeders and biotechnologists. TFFC, \$20,000, **80%** (PI).
56. Effect of alternative crop termination treatments on fiber and yarn quality. Cotton Incorporated TSSC, \$14,000, **100%** (PI).
57. Establish reliable measurement for stickiness and enable improved management of stickiness in cotton fibers. Cotton Incorporated, \$36,081, **50%** (PI).
58. Evaluation of fiber properties for Texas Extension agents' demonstration plots. TFFC, \$18,000, **100%** (PI).
59. Evaluation of fiber properties for Texas State Cotton breeders. TFFC, \$60,000, **100%** (PI).
60. Evaluation of sensing devices for fabric shrinkage and fabric smoothness measurements. Cotton Incorporated, \$60,180, **40%** (PI).
61. Evaluation of testing methods for cotton breeders and biotechnologists with special emphasis on cotton fiber maturity. Cotton Incorporated, \$76,253, **100%** (PI).
62. Incorporation of Acala and Pima quality into cotton varieties adapted to the Texas South Plains. USDA-ICRC, \$74,676, **20%** (Co-PI).
63. Texas Plains cotton performance in high value added-ring spinning applications. Cotton Incorporated TSSC, \$30,000, **30%** (Co-PI).
64. Using fiber elongation to improve genetic screening in cotton breeding programs. USDA-ICRC, \$52,938, **10%** (PI).
65. Utilization of wild cottons' for fiber property enhancement. USDA-ICRC, \$40,700, **50%** (Co-PI).

2005 (Total = \$1,051,256 – Amount credited = \$501,419)

66. Acquisition of a Cryo Ultramicrotome. TFFC, \$28,806, **50%** (Co-PI).
67. Application of new mechanical processing technology to optimize performance of Texas commercial cotton crop. TFFC, \$46,000, **10%** (Co-PI).
68. Cotton fabric functionalisation using plasma and sol-gel technologies. TFFC, \$50,000, **20%** (Co-PI).
69. Creation of cotton standards for the AFIS and determination of the procedures allowing the control of the instrument stability. Cotton Incorporated, \$23,136, **100%** (PI).
70. Development and evaluation of measurements of properties and contaminants for fibers, yarns, and fabrics. TFFC, \$45,000, **70%** (PI).
71. Development and implementation of fiber and yarn testing protocols for cotton breeders and biotechnologists. TFFC, \$20,000, **80%** (PI).
72. Effect of alternative crop termination treatments on fiber and yarn quality. Cotton Incorporated TSSC, \$14,000, **100%** (PI).
73. Establish reliable measurement for stickiness and enable improved management of stickiness in cotton fibers. Cotton Incorporated, \$31,292, **40%** (PI).
74. Evaluation of fiber properties for Texas Extension agents' demonstration plots. TFFC, \$18,000, **75%** (PI).
75. Evaluation of fiber properties for Texas State Cotton breeders. TFFC, \$60,000, **75%** (PI).
76. Evaluation of nep formation from mechanical processing of cotton. TFFC, \$40,000, **10%** (Co-PI).
77. Evaluation of sensing devices for fabric shrinkage and fabric smoothness measurements. Cotton Incorporated, \$78,973, **40%** (PI).
78. Evaluation of testing methods for cotton breeders and biotechnologists. TFFC, \$20,000, **80%** (PI).
79. Evaluation of testing methods for cotton breeders and biotechnologists with special emphasis on cotton fiber maturity. Cotton Incorporated, \$31,039, **100%** (PI).
80. Improving the efficiency of the breeding programs for fiber and yarn quality. Cotton Incorporated, \$81,900, **100%** (PI).

81. Incorporation of Acala and Pima quality into cotton varieties adapted to the Texas South Plains. USDA-ICRC, \$79,503, **5%** (Co-PI).
82. Predicting the performance in downstream processes of yarn spun from Texas cotton. TFFC, \$30,000, **10%** (Co-PI).
83. Real-time cotton fiber characterization. Cotton Incorporated. \$70,171, **50%**, (PI).
84. Texas Plains cotton performance in high value added-ring spinning applications. Cotton Incorporated TSSC, \$30,000, **20%** (Co-PI).
85. Textile performance evaluation of selected California cotton varieties. UC Davis, \$118,745, **50%** (Co-PI).
86. Textile performance evaluation of selected High Plains cotton varieties. PCG/PCIC, \$35,000, **50%** (Co-PI).
87. Using fiber elongation to improve genetic screening in cotton breeding programs. USDA-ICRC, \$56,360, **10%**, (Co-PI).
88. Utilization of wild cottons' for fiber property enhancement. USDA-ICRC, \$43,331, **50%** (Co-PI).

2006 (Total = \$4,978,481 – Amount credited = \$478,908)

89. Acquisition of a Cryo Ultramicrotome. TFFC, \$6,168, **50%** (Co-PI).
90. Acquisition of a Cryo Ultramicrotome. TFFC, \$5,800, **50%** (Co-PI).
91. Creation of cotton standards for the AFIS and determination of the procedures allowing the control of the instrument stability. Cotton Incorporated, \$23,482, **100%** (PI).
92. Effect of alternative crop termination treatments on fiber and yarn quality. TFFR, \$12,000, **100%** (PI).
93. Effect of alternative crop termination treatments on fiber and yarn quality. Cotton Incorporated TSSC, \$12,000, **100%** (PI).
94. Establish reliable measurement for stickiness and enable improved management of stickiness in cotton fibers. Cotton Incorporated, \$30,333, **50%** (PI).
95. Evaluation of fiber properties for Texas Extension agents' demonstration plots. TFFC, \$18,000, **50%** (Co-PI).

96. Evaluation of fiber properties for Texas State Cotton breeders. TFFC, \$60,000, **50%** (Co-PI).
97. Evaluation of nep formation from mechanical processing of cotton. TFFC, \$30,000, **10%** (Co-PI).
98. Evaluation of sensing devices for fabric shrinkage and fabric smoothness measurements. Cotton Incorporated, \$87,484, **40%** (PI).
99. Evaluation of testing methods for cotton breeders and biotechnologists with special emphasis on cotton fiber maturity. Cotton Incorporated, \$35,658, **100%** (PI).
100. Functionalization of cotton fabric surface. TDA/FFR, \$35,000, **40%** (Co-PI).
101. ICRC 2006 - International Cotton Research Center Program. USDA-ICRC, \$2,316,600, **3%** (PI).
102. Incorporating fiber elongation in cotton breeding programs. TDA/FFR, \$30,389, **34%** (PI).
103. International center of excellence in agricultural genomics and biotechnology. Emerging technology fund, \$1,949,000, **3%** (Co-PI).
104. Multidisciplinary approach to study cotton fiber maturity. TDA/FFR, \$35,000, **30%** (Co-PI).
105. Predicting the performance in downstream processes of yarn spun from Texas cotton. TDA/FFR, \$27,400, **10%** (Co-PI).
106. Real-time cotton fiber characterization. Cotton Incorporated, \$75,532, **50%** (PI).
107. Textile performance evaluation of selected California cotton varieties. UC Davis, \$118,635, **50%** (Co-PI).
108. Textile performance evaluation of selected High Plains cotton varieties. PCG/PCIC, \$70,000, **50%** (Co-PI).

2007 (Total = \$2,071,057 – Amount credited = \$617,099)

109. A Texas Tech initiative to sequence the cotton genome. TTU VP for Research, \$999,000, **13%** (Co-PI).
110. Data mining in cotton fiber quality databases. Cotton Incorporated, \$35,232, **40%** (PI).
111. Enhancing profit through technologies for mapping quality, yield, and \$/acre in cotton fields. Texas A&M Cropping Systems, \$150,000, **14%** (Co-PI).

112. Evaluation of fiber properties for Texas Extension agents' demonstration plots. TFFC, \$18,000, **50%** (Co-PI).
113. Evaluation of fiber properties for Texas State Cotton breeders. TFFC, \$60,000, **50%** (Co-PI).
114. Evaluation of sensing devices for fabric shrinkage and fabric smoothness measurements. Cotton Incorporated, \$77,957, **40%** (PI).
115. Evaluation of testing methods for cotton breeders and biotechnologists with special emphasis on cotton fiber maturity. Cotton Incorporated, \$100,426, **70%** (PI).
116. ICRC. Texas A&M, \$37,681, **100%** (PI).
117. Imparting antibacterial property to cotton fabric through functionalization with cyclodextrins. TDA/FFR, \$35,000, **30%** (Co-PI).
118. Improving the efficiency of the breeding programs for fiber and yarn quality. Cotton Incorporated, \$90,083, **50%** (PI).
119. Incorporating fiber elongation in cotton breeding programs. TDA/FFR, \$30,389, **34%** (PI).
120. Investigate non-HVI fiber properties and their relationships with fabric quality. DPL, \$19,096, **50%** (PI).
121. Multidisciplinary approach to study cotton fiber maturity. TDA/FFR, \$35,000, **33%** (Co-PI).
122. Nanocoatings for medical applications, textiles, and micro devices. TTU Research Enrichment Fund, \$35,000, **33%** (Co-PI).
123. Real-time cotton fiber characterization. Cotton Incorporated, \$104,398, **50%** (PI).
124. Single fiber strength, crimp, and linear density measurements using FAVIMAT. TDA/FFR, \$18,133, **50%** (PI).
125. Spinning limits of High Quality Upland Cotton. Cotton Incorporated, \$51,782, **70%** (PI).
126. Texas Plains cotton performance in high value-added ring spinning applications. Cotton Incorporated, \$30,000, **20%** (Co-PI).
127. Textile performance evaluation of selected California cotton varieties. UC Davis, \$98,880, **50%** (Co-PI).

128. Textile performance evaluation of selected High Plains cotton varieties. PCG/PCIC, \$45,000, **50%** (Co-PI).

2008 (Total = \$3,383,683 – Amount credited = \$548,036)

129. Data mining in cotton fiber quality databases. Cotton Incorporated, \$35,313, **40%** (PI).

130. Editor-in-Chief Journal of Cotton Science. National Cotton Council, \$7,500, **100%** (PI).

131. Evaluation of sensing devices for fabric shrinkage and fabric smoothness measurements Cotton Incorporated, \$85,795, **50%** (PI).

132. Evaluation of testing methods for cotton breeders and biotechnologists with special emphasis on cotton fiber maturity. Cotton Incorporated, \$122,218, **70%** (PI).

133. Improving the efficiency of the breeding programs for fiber and yarn quality. Cotton Incorporated, \$110,000, **50%** (PI).

134. Real-time cotton fiber characterization. Cotton Incorporated, \$76,276, **50%** (PI).

135. Spinning limits of High Quality Upland Cotton. Cotton Incorporated, \$81,782, **70%** (PI).

136. Textile performance evaluation of selected California cotton varieties. UC Davis, \$97,104, **50%** (Co-PI).

137. MRI: Acquisition of a Nanocoating system for engineering surfaces. NSF, \$392,857, **10%** (Co-PI).

138. International Cotton research Center Program. USDA-ICRC, \$1,727,556, **4%** (Co-PI).

139. Evaluation of fiber properties for Texas Extension agents' demonstration plots. TDA-FFR, \$18,000, **50%** (Co-PI).

140. Evaluation of fiber properties for Texas State Cotton breeders. TDA-FFR, \$60,000, **50%** (Co-PI).

141. Imparting antibacterial property to cotton fabric through functionalization with cyclodextrins. TDA/FFR, \$35,000, **30%** (Co-PI).

142. Incorporating fiber elongation in cotton breeding programs. TDA/FFR, \$30,389, **34%** (PI).

143. Multidisciplinary approach to study cotton fiber maturity. TDA/FFR, \$35,000, **33%** (Co-PI).

144. Single fiber strength, crimp, and linear density measurements using FAVIMAT. TDA/FFR, \$20,573 **50%** (PI).
145. New water management technologies to sustain rural economies. USDA, \$448,320, **2%** (Co-PI).

2009 (Total = \$2,776,082 – Amount credited = \$706,363)

146. Data mining in cotton fiber quality databases. Cotton Incorporated, \$35,420, **40%** (PI).
147. Evaluation of sensing devices for fabric shrinkage and fabric smoothness measurements Cotton Incorporated, \$90,794, **50%** (PI).
148. Evaluation of testing methods for cotton breeders and biotechnologists with special emphasis on cotton fiber maturity. Cotton Incorporated, \$100,914, **70%** (PI).
149. Improving the efficiency of the breeding programs for fiber and yarn quality. Cotton Incorporated, \$99,820, **50%** (PI).
150. Real-time cotton fiber characterization. Cotton Incorporated, \$75,110, **50%** (PI).
151. Spinning limits of High Quality Upland Cotton. Cotton Incorporated, \$100,050, **70%** (PI).
152. Improving fiber elongation of U.S. germplasm. Cotton Incorporated, \$22,256, **25%** (PI).
153. Editor-in-Chief Journal of Cotton Science. Cotton Foundation, \$5,000, **100%** (PI).
154. Textile Performance Evaluation of Selected High Plains Cotton Varieties. Plains Cotton Growers Association, \$45,000, **50%** (Co-PI).
155. A Rapid Measurement Method for Studying the Cotton Fibers Secondary Cell Wall Development. Cotton foundation, \$8,000, **30%** (Co-PI).
156. Determination of Individual Fibers Tensile Properties: Relationships with Bundle Strength, Maturity, Length Distribution, and Fiber Breakage. TDA-FFR, \$20,000, **70%** (PI).
157. Evaluation of Fiber Properties for Texas Extension Agents' Demonstration Plots. TDA-FFR, \$18,000, **50%** (PI).
158. Evaluation of Fiber Properties for Texas State Cotton Breeders. TDA-FFR, \$60,000, **50%** (PI).

159. International Cotton research Center Program – 2009. USDA, \$1,619,280, **4%** (Co-PI).
160. Multidisciplinary approach to study cotton fiber maturity. TDA-FFR, \$35,000, **20%** (Co-PI).
161. New Approach to Impart Super-Oleophobic/Hydrophobic Properties for Self-cleaning Cotton Fabrics. TDA-FFR, \$35,000, **20%** (Co-PI).
162. Optimizing the Use of the Advanced Fiber Information System (AFIS). TDA-FFR, \$30,000, **70%** (PI).
163. Evaluation of sensing devices for fabric shrinkage and fabric smoothness measurements. Cotton Incorporated, \$64,914, **50%** (PI).
164. Evaluation of testing methods for cotton breeders and biotechnologists with special emphasis on cotton fiber maturity. Cotton Incorporated, \$100,971, **70%** (PI).
165. Real-time cotton fiber characterization. Cotton Incorporated, \$100,498, **50%** (PI).
166. Spinning limits of High Quality Upland Cotton. Cotton Incorporated, \$110,055, **70%** (PI).
- 2010** (Total = \$2,744,816 – Amount credited = \$496,533)
167. Determination of individual fiber tensile properties: Relationships with bundle strength, maturity, length distribution, and fiber breakage. TDA-FFR, \$16,431, **70%** (PI).
168. Evaluating the performance of Texas cotton in plied ring-spun yarns. Cotton Incorporated – Texas State Support Committee, \$18,000, **20%** (Co-PI).
169. Evaluation of fiber properties for Texas extension agent's demonstration plots. TDA-FFR, \$14,788, **50%** (PI).
170. Evaluation of fiber properties for Texas state cotton breeders. TDA-FFR, \$49,334, **50%** (PI).
171. International Cotton research Center Program – 2010. USDA, \$1,619,280, **8%** (Co-PI).
167. Multidisciplinary approach to study cotton fiber maturity. TDA-FFR, \$28,754, **20%** (Co-PI).
168. New approach to impart super-oleophobic/hydrophobic properties for self-cleaning cotton fabrics. TDA-FFR, \$28,754, **20%** (Co-PI).
169. Optimizing the use of the AFIS. TDA-FFR, \$24,647, **70%** (PI).

170. Spinning limits of high quality upland cottons. Cotton Incorporated, \$13,000, **70%** (PI).
171. Textile performance evaluation of selected High Plains cotton varieties, \$45,000, **50%** (PI).
172. Irrigation termination for improved fiber maturity on the Texas High Plains. Cotton Incorporated – Texas State Support Committee, \$20,000, **50%** (Co-PI).
173. Bayer Project Revolution. Characterization of chitin fibers with improved reactivity. Bayer Corporation, \$758,359, **20%** (Co-PI).
174. Bayer Project Revolution. Development of a micro-spinning protocol to characterize spinning properties of chitin-containing cotton fibers. Bayer Corporation, \$108,469, **90%** (PI).

2011 (Total = \$505,566 – Amount credited = \$301,921)

175. Analyzing the effect of drought stress on traits contributing to cotton fiber quality. Cotton Incorporated – Texas State Support Committee, 2,000, **20%** (Co-PI).
176. Improving fiber testing methods for cotton breeders. Cotton Incorporated, \$105,202, **70%** (PI).
177. Moisture management measurement via thermal infrared imaging. Cotton Incorporated, \$31,733, **50%** (PI).
178. Partial funding of purchase of the Cottonscope. Plains Cotton Growers Association, \$12,500, **50%**, (PI).
179. Real-time cotton fiber characterization. Cotton Incorporated, \$50,706, **50%** (PI).
180. Spinning limits of high quality upland cottons. Cotton incorporated, \$77,280, **70%** (PI).
181. Textile performance evaluation of selected High Plains cotton varieties, \$22,500, **50%** (PI).