#### UDAY SUKHATME

Present Position: Professor, Dyson College of Arts and Sciences, Pace University

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#### **Higher Education:**

Massachusetts Institute of Technology, Cambridge, Massachusetts; Sc.D. Physics, 1971 Massachusetts Institute of Technology, Cambridge, Massachusetts; S.B. Physics, 1966 University of Delhi, India; B.Sc. Mathematics (Honors), 1964

### Academic Administration and Faculty Positions:

Pace University, Professor	2012 - now
Pace University, Provost and Executive Vice President for Academic Affairs	2012 - 2017
IUPUI, Executive Vice Chancellor and Dean of the Faculties	2006 - 2012
SUNY Buffalo, Dean of the College of Arts and Sciences	2002 - 2006
University of Illinois at Chicago (UIC), Interim Vice Provost for Academic Programs	2000 - 2002
UIC Associate Vice Chancellor for Academic Affairs	1998 - 2000
UIC Department of Physics, Head	1991 – 1998
UIC Department of Physics, Assistant Professor, Associate Professor, Professor	1980 - 2002

#### **Postdoctoral and Visiting Positions:**

Iowa State University (1979 – 1980); Université de Paris (1977 – 1979); Cambridge University (1975 – 1977); University of Michigan (1973 – 1975); University of Washington (1971 – 1973)

# ADMINISTRATIVE DUTIES AND ACCOMPLISHMENTS:

### Provost and Executive Vice President, Pace University (May 2012 – June 2017):

- Pace has 13,000 students, 3 campuses, 6 schools and colleges.
- Developed and implemented the *Augmented Pace Action Plan* with focus on maximizing teaching, scholarship, and student-centered activities by optimal use of available and newly generated resources.
- Formulated the 2013 Pace Retirement Option. Along with several new programs, this led to growth as well as a turnover of approximately one third of the Pace full-time faculty over a 4 year period.
- Helped formulate the Pace Path to success, which includes RISE activities, where R = Research, I = International, S = Service, E = Experiential learning. The Pace Path prepares students to be enlightened, successful and engaged citizens in a global society.

• Analyzed the retention and graduation of Pace students in depth. Started the use of predictive analytics tools to improve advising and address the financial, academic, and social aspects of student attrition. Early alerts and late start courses help retention.

### Executive Vice Chancellor and Dean of the Faculties, IUPUI (July 2006 – May 2012):

- Indiana University–Purdue University Indianapolis (IUPUI) is Indiana's premier urban public research university, with 2500 faculty and 31,000 students. Managed all academic issues, including 21 campus schools and deans.
- Created and launched IUPUI's Academic Plan in 2006 with active input from faculty, staff and students. Plan had 4 major initiatives, designed especially to enhance research, teaching, service and campus resources. Played a role in IUPUI's consistent top 10 ranking in the *U.S. News and World Report*'s list of "up and coming universities".
- Designed and implemented the Signature Centers Initiative, to promote interdisciplinary opportunities to raise IUPUI's strong research profile to an even higher level.
- Formulated the Enrollment Shaping Initiative, to dramatically increased the number of out-of-state and international students the additional generated revenue stream is about \$10 million per year.
- Targeted programs led to improved retention and graduation rates. The one-year retention rate went up by approximately 13% in four years.
- Worked with the campus leadership and school deans on all aspects of the last IUPUI fundraising campaign, which exceeded the target goal of \$1.25 billion.
- Improved various aspects of student life and the quality of undergraduate education. Started the campus-wide "RISE to the IUPUI Challenge", These transcriptable experiences make IUPUI graduates more employable.
- Fostered diversity in policies and practices to support a climate of inclusion. Shaped and initiated the highly successful "Support for the Recruitment of Under-Represented Faculty" program, which has led to 50 faculty hires and very substantially improved faculty diversity.
- Helped position IUPUI as a transformative force and a civic partner with the city and state in the continuing economic and cultural development of Indiana. This further builds IUPUI's very strong reputation in community engagement and service learning, and has led to many national awards and recognition: U.S. Presidential Award for Community Service; 2009 Andrew Heiskell Award for innovation in International Partnerships.
- Represented IUPUI at a large number of community functions and meetings in Indianapolis. Serve on the advisory boards of several organizations: Center on Philanthropy; International Center of Indianapolis; Mayor's Office International & Cultural Affairs, City of Indianapolis.

#### Dean, College of Arts and Sciences, SUNY Buffalo (August 2002 – July 2006):

- Responsibility for managing 30 academic departments, the Dean's office, 480 full time tenured/tenure track faculty, 250 staff and an annual budget of approximately \$90 million.
- Helped to produce four successive very strong years of faculty hiring in CAS, resulting in a total growth of about 20% in tenured/tenure track faculty probably the largest increase among all comparable colleges in the United States! This level of growth in difficult economic times resulted from fiscally disciplined management and two carefully designed initiatives: an enrollment growth incentive plan for departments and a college-wide retirement incentive. High quality hiring rejuvenated all departments and enhanced SUNY Buffalo's academic reputation.

- Actively initiated development activities. This young fundraising effort gave excellent results (about \$10 million in 2006), and will do even better in the coming years. Alumni contributions helped several "Signature Centers of Excellence", named chairs, endowed graduate student fellowships, and the Study Abroad program.
- Encouraged and facilitated research opportunities in all CAS disciplines. Annual research expenditures in CAS increased from roughly \$14 million to \$23 million in three years.
- Began a regular departmental assessment scheme, which gave sharper focus to future directions of emphasis. Whenever feasible, suggestions from the external review teams were incorporated into departmental plans.
- Started educational outreach programs in Buffalo: the Cutting Edge Seminar Series and the UB Poetry Contest.

### <u>Interim Vice Provost for Academic Programs, UIC (June 2000 – July 2002):</u>

- Managed many campus units including Data Resources and Institutional Analysis, Academic Programs, External Education, Classroom Services, Human Resources, Latino and African American Cultural Centers.
- Supervised four faculty Associate Vice Chancellors in projects related to faculty development and student activities
  these included, new faculty orientation, new administrator workshops, mentoring program, exit interviews, CIC Academic Leadership Program, Urban Universities Portfolio Project.
- Principal Investigator of the NSF-funded Illinois Alliance for Minority Participation project. This grant resulted in a doubling in 5 years of the number of minority students getting B.S. degrees in STEM fields.
- Handled all aspects of the promotion and tenure process in the Provost's office. This included serving as the liaison with the campus-wide Promotion and Tenure Committee, and advising the Provost on all dossiers.
- Continued my previously developed educational outreach programs including UIContest [General Knowledge Contest for High School Student/Parent Teams], The Cutting Edge Seminar Series, UIC Poetry Contest.
- Gave public addresses on a variety of occasions including one of the Cutting Edge lectures "What Are We Made Of? The Basic Structure of Matter" and the 2001 Honors College convocation address "Potential".
- Designed the Under-Represented Faculty Recruitment Program, which increased faculty diversity.
- Studied the student pipeline and retention problems at UIC in order to increase graduation rates. The analysis is described in "The Indicators of Student Success: Making More Informed Admissions Decisions".

### Associate Vice Chancellor for Academic Affairs, UIC (August 1998 – June 2000):

- Organized a variety of annual workshops and meetings: Promotion and Tenure Workshops for Tenure-Track Faculty; CIC Department Executive Officers Meetings; Workshops for New Administrators.
- Invited talk on "Managing Conflict" at the annual Department Executive Officers Meeting of the CIC consortium of universities, 1997; led session on "Developing a Culture of Teaching and Learning", 1998.
- Served at UIC PI on the NSF Alliance for Minority Participation grant, funded by NSF for \$2.5 million over the period 2001 2006, Substantially increased minority enrollment in STEM disciplines.
- Developed and implemented various educational outreach activities for high school students: UIContest General Knowledge Contest for High School Student/Parent Teams; the Cutting Edge - Provost's Seminar Series; UIC

Poetry Contest; Science and Engineering Open House; Summer Internship Program. Coordinated all UIC activities (25 events) in Project Millennium – Chicago's millennium celebrations program.

• Restructured guidelines for campus excellence in teaching awards.

### Head, Department of Physics, UIC (January 1991 - September 1998):

- Fostered an atmosphere of excellence in both teaching and research, which resulted in Physics Department faculty receiving 5 NSF CAREER Awards, 2 University Scholar Awards, 1 U.S. Professor of the Year Award, 5 UIC Awards for Excellence in Teaching, 4 UIC Teaching Recognition Awards.
- Established five new endowed scholarships and awards in the Physics Department: Paul M. Raccah Award, Ogden Livermore Award, Seymour Margulies Award, Physics 101 Award, James Kouvel Graduate Fellowship.
- Made the first quantitative study in 1992 of the factors influencing UIC's ranking in U.S. News and World Report, identifying the mismatch between the faculty quality rating and the student quality rating.

#### Language Skills:

5 languages: English, Italian, Marathi, Hindi, French

### **Short Articles and Opinion Pieces in News Journals:**

- Channel Million Man Determination into Education for a Better World, UIC News, April 1996
- Students Warm Up to Physics, UIC News, May 1997
- Quantum Mechanics and Supersymmetry, UIC Today, October 2001
- Mike's Story, UIC Today, October 2001
- Trends in the College of Arts and Sciences, Visions UB Student Assoc. Newsletter, November 2003
- CAS Dean Questions and Answers, University at Buffalo Reporter, February 2004
- Profound Effects of Higher Education Transcend Monetary Gain, UB Today, Spring 2004

# Some Recent Presentations:

- "Role of the Provost in Fundraising and Development", AASCU meeting, San Antonio, TX, February 2007.
- "Climbing the Academic Ladder An Asian American Viewpoint", Eli Lilly & Company, Indianapolis, IN, 2007.
- "IUPUI 40 Years on an Upward Trajectory", Carmel Rotary Club, Carmel, IN, March 2009.
- "IUPUI's Enrollment Shaping Initiative", Indiana Commission on Higher Education's Kent Weldon Conference, Indianapolis, IN, April 2009.
- "Building Educational Infrastructure to Facilitate Undergraduate Experiential Learning", CUMU meeting, Philadelphia, PA, September 2009.
- "RISE to the IUPUI Challenge: One Urban University's Model of Leveraging Student/Community Engagement", (with Mary Fisher), CUMU meeting, Philadelphia, PA, September 2009.
- "Urban Public Research Universities are the Future of Higher Education", University at Buffalo, NY, Sept 2009.
- "SRUF Support for the Recruitment of Under-Represented Faculty", Indiana University Strategic Hiring Workshop, Bloomington, IN, October 2009.

- "Dynamic Planning: Development and Implementation of IUPUI's Academic Plan", AASCU meeting, Chicago, IL, July 2010.
- "Innovative Degree Programs Matched to City Priorities and Strengths", CUMU meeting, Fresno, CA, October 2010.
- "Performance Improvement at Pace University", (with Toby Winer), NACUBO/ACE meeting for Chief Academic and Financial Officers, Washington DC, August 2013.

### Awards, Honors:

- Sigma Xi, Member
- Honor Society of Phi Kappa Phi, Faculty Member
- 2004 Golden Key International Honor Society, Faculty Member
- 2006 Buffalo Pathfinders Award. This award is sponsored by Business First, Independent Health, Niagara Frontier Industry Education Council, Buffalo Alliance for Education and Junior Achievement
- 2007 Phi Eta Sigma National Honor Society, Faculty Member
- 2010 Distinguished Achievement Award, Center for Leadership Development, Indianapolis, IN
- 2011 IUPUI Spirit of Philanthropy Award.

### **Teaching:**

- UIC Excellence in Teaching Award, 1996
- Supervised the thesis research of many doctoral and master's students. Constantin Rasinariu's doctoral thesis "Some Aspects of Supersymmetry and Integrable Systems" won UIC's Outstanding Thesis Award.
- Have continued to teach (one regular Physics course every two years) as a Dean and Provost

**Research:** The two broad areas of research of research to which I have contributed are High Energy Phenomenology and Supersymmetric Quantum Mechanics. In 1982, my collaborators and I developed the dual parton model, which has provided a very successful overall description of the extensive experimental data on soft multiparticle production in high energy hadronic collisions. Details can be found in a widely-cited review article published in Physics Reports. The second area of research consists of an application of supersymmetry ideas to nonrelativistic quantum mechanics, which has led to the improvement of several known techniques for handling the eigenvalue problem. This has yielded a deeper understanding of existing results and a large number of new results. My collaborators and I have written a detailed review article and a graduate level textbook on supersymmetric quantum mechanics, both heavily cited in the literature. Recently, we have applied supersymmetric quantum mechanics to periodic potentials and have discovered exciting new cyclic mathematical identities for Jacobi elliptic functions.

### **Grant Support:**

UIC Research Board	\$ 2,000	1981-82
U.S. Department of Energy	\$ 46,000	1983-86
Research Corporation (Cottrell Grant)	\$ 7,300	1983-88
U.S. Department of Energy (with W.Y. Keung)	\$ 247,000	1986-89
U.S. Department of Energy (with W.Y. Keung, H. Aratyn)	\$ 95,000	1989-90
U.S. Department of Energy (with W.Y. Keung, H. Aratyn)	\$ 102,000	1990-91

United Nations Development Program	\$	5,000	1991-92
U.S. Department of Education, Minority Science Improvement Program	\$	20,000	1991-92
(with B. Abayomi, P. Jawaid)			
U.S. Department of Energy (with W.Y. Keung, H. Aratyn)	\$	320,000	1991-94
U.S. Department of Energy (with W.Y.Keung, H. Aratyn, T.Imbo)	\$	410,000	1994-97
U.S. Department of Energy (with W.Y.Keung, T.Imbo)	\$	390,000	1997-00
U.S. Department of Energy (with W.Y.Keung, T.Imbo)	\$	405,000	2000-04
NSF Alliance for Minority Participation (with 8 Illinois universities)	\$2	,500,000	2001-06
International Centre for Theoretical Physics (Trieste) Visiting Scholar Program	\$	2,500	2002-05

# Invited Review Talks at International Conferences, Workshops, Meetings:

- 1. XII Rencontre de Moriond, Flaine, France 1977.
- 2. XIII Rencontre de Moriond, Les Arcs, France 1978.
- 3. XIV Rencontre de Moriond, Les Arcs, France 1979.
- 4. "Dual Topological Unitarization" Workshop, Berkeley, CA 1980.
- 5. "Physics Opportunities at the Tevatron" Workshop, Fermilab, Batavia, IL 1980.
- 6. Europhysics Study Conference, Erice, Sicily 1981.
- 7. XII International Symposium on Multiparticle Dynamics, Notre Dame, IN 1981.
- 8. Workshop on " $A^{\alpha}$  *Physics*", Fermilab, Batavia, IL 1982.
- 9. XIII International Symposium on Multiparticle Dynamics, Volendam, Holland 1982.
- 10. VII Warsaw Symposium on Elementary Particle Physics, Kazimierz, Poland 1984.
- 11. Elastic and Diffractive Scattering Conference, Blois, France 1985.
- 12. XVI International Symposium on Multiparticle Dynamics, Kiryat Anavim, Israel 1985.
- 13. XXI Rencontre de Moriond, Les Arcs, France 1986.
- 14. XIV International Symposium on Multiparticle Dynamics, Arles, France 1988.
- 15. IX High Energy Physics Symposium, Madras, India 1988.
- 16. XIII Warsaw Symposium on Elementary Particle Physics, Kazimierz, Poland 1990 conference summary.
- 17. Workshop on High Energy Physics Phenomenology, Calcutta, India 1991.
- 18. XXII International Symposium on Multiparticle Dynamics, Santiago de Compostela, Spain 1992.
- 19. X High Energy Physics Symposium, Bombay, India 1992.
- 20. V Blois Workshop on Elastic and Diffractive Scattering, Providence, RI 1993.
- 21. Workshop on Quantum Infrared Physics, Paris, France 1994.
- 22. XI High Energy Physics Symposium, Santiniketan, India 1995.
- 23. "Supersymmetry and Integrable Models" Workshop, UIC, Chicago 1997.
- 24. "Integrable Hierarchies and Modern Physical Theories" Workshop, UIC, Chicago 2000.
- 25. XXIII International Colloquium on Group Theoretical Methods in Physics, Dubna, Russia 2000.
- 26. XIV DAE Symposium on High Energy Physics, Hyderabad, India, December 2000.
- 27. Conference on "Progress in Supersymmetric Quantum Mechanics", Valladolid, Spain, July 2003.
- 28. American Mathematical Society meeting, Tucson, Arizona, April 2007.

### Participation in Conference Organization:

- 1. Chairman, "Soft Hadron Physics" session, XIV Rencontre de Moriond, Les Arcs, France 1979.
- 2. Scientific secretary, "International High Energy Physics Conference", Madison, Wisconsin 1980.
- 3. Coordinator and chairman, "Small Transverse Momentum Physics Session", XVIII Rencontre de Moriond, La Plagne, France 1983.
- 4. Chairman, "Unitarity Bounds" session, Elastic and Diffractive Scattering Conference, Blois, France 1985.

- 5. Chairman, "*Electron, Positron and Photon Interactions*", XVIII International Symposium on Multiparticle Dynamics, Tashkent, U.S.S.R. 1987.
- 6. Chairman, "*Higgs Searches*" session, Workshop on High Energy Physics Phenomenology, Tata Institute of Fundamental Research, Bombay, India 1989.
- 7. Organizing Committee, International Conference on Elastic and Diffractive Scattering, Northwestern University, Evanston, Illinois 1989.
- 8. Summary speaker and convener of "*New Developments in Strong Interaction Physics*", XIII International Warsaw Symposium on Elementary Particle Physics, Kazimierz, Poland 1990.
- 9. Chairman, "Color Transparency" session, The Heart of the Matter, Blois, France 1994.
- 10. Supersymmetry and Integrable Models Workshop, UIC, Chicago 1997.
- 11. Particle Distributions in Hadronic and Nuclear Collisions Workshop, UIC, Chicago 1998.
- 12. Chairman, "*Hadronic Physics*" session, International Conference on Multiparticle Dynamics, Brown University, Providence, Rhode Island, August 1999.
- 13. Organizing Committee, NATO Advanced Research Workshop on Integrable Hierarchies, Chicago 2000.
- 14. International Advisory Committee, 7<sup>th</sup> International Wigner Symposium, 2001.
- 15. Organizing Committee, CUMU annual meeting, IUPUI, October 2011.

#### High Energy Physics Seminars and Colloquia (since 1980):

Approximately 100 presentations all over the world since 1980.

### Referee Work:

Have refereed for a large variety of scientific journals: American Journal of Physics, Annals of Physics, Canadian Journal of Physics, Europhysics Letters, Journal of Mathematical Physics, Journal of Physics, Modern Physics Letters A, Nuclear Physics, Physical Review A, Physical Review D, Physical Review Letters, Physical Scripta, Physics Letters A, Physics Letters B, Pramana, Zeitschrift fur Physik. Also refereed many grant proposals for the NSF and the Research Corporation.

#### <u>List of Books</u> (Uday P. Sukhatme):

- 1. "Supersymmetry and Integrable Models", Proc. of a Workshop held in Chicago, June 1997, edited by H. Aratyn, T. Imbo, W.Y. Keung, U. Sukhatme, Springer-Verlag Lecture Notes in Physics 502 (1998).
- 2. "Particle Distributions in Hadronic and Nuclear Collisions", Proc. of a Workshop at UIC, June 1998, edited by M. Adams, R. Betts, T. Imbo, W.Y. Keung, U. Sukhatme, World Scientific Press (1999).
- 3. "Supersymmetry in Quantum Mechanics", F. Cooper, A. Khare, U. Sukhatme, World Scientific Press (2001), 208 pages.

### <u>List of Journal Publications</u> (Uday P. Sukhatme):

[16 of the publications listed below are in the top-cited category (more than 50 citations) in citation databases; 8 publications have 50 to 100 citations, 3 publications have 100 to 250 citations, 2 publications have 250 to 500 citations, and 3 have more than 500 citations. Publication number 77 was included in the list of "most memorable papers" compiled by the American Journal of Physics in 1994. Publication number 129 has appeared in the list of top-cited articles in the math-physics archive in 2004, 2006, 2009.]

- 1. Exact Consequences of Broken O(4) Symmetry III. Factorization and Mass Dependence (with J.B. Bronzan), Phys. Rev. <u>D3</u>, 2506-2515 (1971).
- 2. Dual Resonance Amplitudes for Spinning Particles (with C. Rosenzweig), Nuovo Cimento <u>3A</u>, 511-520 (1971).
- 3. Scattering Amplitudes for Physical States in Dual Resonance Models (with K. Friedman, C.Rosenzweig), Lett. Nuovo Cimento 1, 1109-1113 (1971).
- 4. Dual N-Pion Amplitude, Lett. Nuovo Cimento 3, 537-540 (1972).
- 5. Triple-Regge Vertex in a Dual Resonance Model with Nonlinear Trajectories, Phys. Rev. <u>D6</u>, 2765-2772 (1972).
- 6. Factorizable Dual Resonance Models Without Tachyons (with S. Yu), Lett. Nuovo Cimento <u>5</u>, 513-516 (1972).
- 7. Universal Curve for Meson-Nucleon Elastic Scattering (with S. Blaha, W. Pardee), Phys. Lett. B42, 435 (1972).
- 8. Duality and Proton-Proton Scattering at All Angles (with D. Coon, J. Tran Thanh Van), Phys. Lett. <u>B45</u>, 287 (1973).
- 9. Gribov's Reggeon Calculus and High Energy Elastic Proton-Proton Scattering (with J.N. Ng), Nucl. Phys. <u>B55</u>, 253 (1973).
- 10. WKB Energy Levels for a Class of One Dimensional Potentials, Amer. Jour. Phys. 41, 1015 (1973).
- 11. Consistency of New Meson-Nucleon Elastic Scattering Data with a Previously Conjectured Universal Curve (with S. Blaha), Phys. Rev. <u>D8</u>, 4221-4222 (1973).
- 12. High Energy pp Data and the Reggeon Theory of Diffraction Scattering (with J. N. Ng), Nucl. Phys. <u>B70</u>, 229 (1974).
- 13. Multiperipheral and Diffractive Components of the Total Cross Section in Gribov's Reggeon Calculus (with C. Pajares), Phys. Rev. <u>D9</u>, 2119-2124 (1974).
- 14. Test of a Generalized Chou-Yang Model at Currently Available High Energies (with F. Hayot), Phys. Rev. <u>D10</u>, 2183-2185 (1974).
- 15. Interpreting Data from Polarized Proton Beams (with G.L. Kane), Nucl. Phys. <u>B78</u>, 110 (1974).
- 16. Obtaining Real Parts of Scattering Amplitudes Directly from Cross Section Data Using Derivative Analyticity Relations (with J.B. Bronzan, G.L. Kane), Phys. Lett. <u>B49</u>, 272 (1974).
- 17. An Improvement of Gribov's Reggeon Calculus (with F. Henyey), Nucl. Phys. B85, 39 (1975).
- 18. Real Parts of Forward Elastic Hadronic Amplitudes (with D. Sidhu), Phys. Rev. D11, 1351-1353 (1975).
- 19. Extension of the Chou-Yang Model to Multiparticle Processes (with F. Henyey), Nucl. Phys. <u>B89</u>, 287 (1975).
- 20. Extensions of the Derivative Dispersion Relations for Amplitude Analysis (with G. L. Kane, R. Blankenbecler, M. Davier), Phys. Rev. D12, 3431-3440 (1975).

- 21. A Hadronic Interpretation of and  $\psi'$  and  $\psi$  Decays (with F. Henyey, G. L. Kane), Univ. of Michigan Report 75-13 (1975).
- 22. The Origin of Jets at Large-p<sub>T</sub> (with J. Gasser), Cambridge Univ. report DAMTP 76/3 (1976).
- 23. Unitarity Bounds on Diffraction Dissociation (with F. Henyey), Nucl. Phys. <u>B108</u>, 317 (1976).
- 24. The Size of Inelastic Diffraction Dissociation, Phys. Lett. B65, 151 (1976).
- 25. Fixed Regge Singularities in Exclusive Pion Photoproduction (with J. C. Polkinghorne), Phys. Rev. <u>D15</u>, 3252-3255 (1977).
- 26. Where is the Dip Structure in pp Elastic Scattering?, Phys. Rev. Lett. <u>38</u>, 124-127 (1977).
- 27. Some New Aspects of High Energy pp Elastic Scattering, Invited paper in Proc. XII Rencontre de Moriond, Flaine, France 1977, edited by J. Tran Thanh Van.
- 28. Quark Jets: A Quantitative Description, Cambridge Univ. report DAMTP 77/25 (1977).
- 29. Jets from Quark Fragmentation: Treatment of Flavor and New Power Counting Rules at  $x \rightarrow 1$ , Phys. Lett. <u>B73</u>, 478 (1978).
- 30. Eccentricity of Jet Angular Distributions: A Technique for Detecting New Quark Flavors (with J. Tran Thanh Van), Phys. Lett. <u>B76</u>, 489 (1978).
- 31. Quark Jets, Invited paper in Proc. XIII Rencontre de Moriond, Les Arcs, France 1978, edited by J. Tran Thanh Van.
- 32. Elastic Peak and Hadron Size from a t-Channel Viewpoint (with Chung-I Tan, J. Tran Thanh Van), Zeit. Phys. <u>C1</u>, 95-104 (1979).
- 33. Jets in Small-p<sub>T</sub> Hadronic Collisions, Universality of Quark Fragmentation, and Rising Rapidity Plateaus (with A. Capella, Chung-I Tan, J. Tran Thanh Van), Phys. Lett. B81, 68 (1979).
- 34. Gluon and Quark Jets in a Recursive Model Motivated by QCD, Zeit. Phys. <u>C2</u>, 321-324 (1979).
- 35. Does a Nucleus Act Like a Gluon Filter? (with A. Krzywicki, J. Engels, B. Petersson), Phys. Lett. B85, 407 (1979).
- 36. A Survey of Low-p<sub>T</sub> Hadronic Collisions from a Partonic Viewpoint, Invited paper in Proc. XIV Rencontre de Moriond, Les Arcs, France 1979, edited by J. Tran Thanh Van.
- 37. Universality of Quark Fragmentation (with A. Capella, Chung-I Tan, J. Tran Thanh Van), Proc. XIV Rencontre de Moriond, Les Arcs, France 1979, edited by J. Tran Thanh Van.
- 38. Soft Multihadron Production from Partonic Structure and Fragmentation Functions (with A. Capella, J. Tran Thanh Van), Zeit. Phys. <u>C3</u>, 329-337 (1980).
- 39. Q<sup>2</sup>-Evolution of Multihadron Fragmentation Functions (with K. Lassila), Phys. Rev. D22, 1184-1189 (1980).
- 40. Parton Description of Soft Proton-Antiproton Annihilation, Phys. Rev. Lett. 45, 5-7 (1980).
- 41. The Importance of Diquark and Gluon Jet Experiments, in "*Physics Opportunities for the Fixed-Target Tevatron*", Fermilab 1980, edited by G. L. Kane and N. Gelfand.
- 42. Constraints from Jet Calculus on Quark Recombination (with L. Jones, K. Lassila, D. Willen), Phys. Rev. <u>D23</u>, 717-727 (1981).
- 43. Understanding Inclusive pp→ph<sup>±</sup>X Data with Parton Fragmentation and Structure Functions (with A. Ng, K. Lassila), Phys. Rev. <u>D24</u>, 784-787 (1981).

- 44. Models for Color Jets and Fragmentation Functions, invited lectures at Europhysics Conference on "*Partons in Soft Hadronic Processes*", Erice, Sicily (1981), edited by R. Van de Walle.
- 45. Diquark Jets, in Proc. XII International Symposium on Multiparticle Dynamics, Notre Dame, Indiana (1981), edited by W.D. Shephard and V. Kenney.
- 46. Diquark Fragmentation (with K. Lassila, R. Orava), Phys. Rev. D25, 2975-2987 (1982).
- 47. The Best Method for Identifying the Jet-Initiating Parton, Phys. Lett. <u>B113</u>, 185 (1982).
- 48. Particle Production at Large Transverse Momentum in Nucleus-Nucleus Collisions (with G. Wilk), Phys. Rev. <u>D25</u>, 1978-1981 (1982).
- 49. Charge Distributions in Hadronic Collisions (with A. Pagnamenta), Zeit. Phys. <u>C14</u>, 79-85 (1982).
- 50. A Parton Approach to Peaks at Large x in Diffractive Inclusive Reactions (with B. Desai), Univ. of California at Riverside report UCR-82-3 (1982).
- 51. Anomalous Nuclear Enhancement and Gluon Filters, in Proc. Workshop on  $A^{\alpha}$  Physics, Fermilab, Batavia, Illinois (1982), Fermilab report 82/29-THY/EXP, edited by L. Voyvodic.
- 52. Quark and Diquark Fragmentation and Recombination in Lepton-Lepton, LeptonHadron and Hadron-Hadron Collisions, invited review talk in Proc. XIII International Symposium on Multiparticle Dynamics, Volendam, The Netherlands (1982), edited by W. Kittel, W. Metzger and A. Stergiou.
- 53. Two Particle Inclusive Distributions in the Dual Parton Model (with A. Capella, J. Tran Thanh Van), Phys. Lett. <u>B119</u>, 220 (1982).
- 54. Evidence for "Held Back" Valence Quarks from Particle Ratios in pp and p Collisions (with A. Capella, J. Tran Thanh Van), Phys. Lett. <u>B125</u>, 330 (1983).
- 55. Shifted 1/N Expansions for Energy Eigenvalues of the Schrödinger Equation (with T. Imbo), Phys. Rev. <u>D28</u>, 418-420 (1983).
- 56. Logarithmic Perturbation Expansions in Non-Relativistic Quantum Mechanics (with T. Imbo), Amer. Jour. Phys. <u>52</u>, 140 (1984).
- 57. A Low  $p_T$  Parton Fragmentation Model with Diffractive Resonance Production: The  $pp \rightarrow (\pi^{\pm}, K^{\pm}) + X$  Inclusive Reactions (with B. Desai), Zeit. Phys. C24, 277-281 (1984).
- 58. Energy Eigenstates of Spherically Symmetric Potentials Using the Shifted 1/N Expansion (with T. Imbo, A. Pagnamenta), Phys. Rev. <u>D29</u>, 1669-1681 (1984).
- 59. Bound States of the Yukawa Potential Via the Shifted 1/N Expansion (with T. Imbo, A. Pagnamenta), Phys. Lett. A105, 183 (1984).
- 60. Do Certain Nondiffractive Interactions Have Forward Peaks? (with B. Lauer), Univ. of Illinois at Chicago report UIC-84-10 (1984).
- 61. Shifted Large N Expansions in Quantum Mechanics, invited talk in Proc. VII Warsaw Symposium on Elementary Particle Physics, Kazimierz, Poland (1984), edited by Z. Ajduk.
- 62. Improved Wave Functions for Large N Expansions (with T. Imbo), Phys. Rev. D31, 2655-2658 (1985).
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