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Education

Ph. D. Applied Physics, May 2009.
Columbia University (New York, NY)
Advisor: Professor Gerald A. Navratil
Dissertation: *A Kalman Filter for Active Feedback on Rotating External Kink Instabilities in a Tokamak Plasma*

M. S. Applied Physics, May 2005.
Columbia University (New York, NY)

B. S. Applied Mathematics, Engineering, and Physics, May 2004.
University of Wisconsin-Madison (Madison, WI)

Experience

Department of Applied Physics & Applied Mathematics - Columbia University
Associate Research Scientist, DIII-D National Fusion Facility, May 2011 – present.

- Published research results in peer-reviewed journal articles.
- Made oral presentations at national and international conferences.
- Led collaborative planning and execution of scientific experiments.
- Mentored undergraduate, graduate, and postdoctoral researchers.
- Coauthored successful research grant applications.
- Gained proficiency with plasma equilibrium, transport, and MHD stability codes.
- DIII-D run schedule coordination team, Jan 2019 – present.
- Deputy Leader, “3D & Stability Physics” topical area, Jan 2015 – present.
- DIII-D physics operator, Apr 2014 – present.
- Deputy Leader, “Stability and Disruption Avoidance” topical area, Dec 2012 – Dec 2014.
- DIII-D Research Council member, Jan 2012 – Jul 2013.

Postdoctoral Fellow, DIII-D National Fusion Facility, May 2009 – May 2011.

- Designed and implemented real-time control algorithms in DIII-D plasma control system.
- Simulated eigenvalue and time-domain stability and control problems.
- Jointly affiliated with Oak Ridge Institute for Science and Education.

Research Assistant, High Beta Tokamak-Extended Pulse experiment, Jun 2005 – May 2009.

- Created tokamak plasmas.
- Designed and implemented real-time Kalman filter algorithm for control of plasma instabilities.
- Maintained experimental systems: CAMAC and D-TACQ digitizers, magnet cooling system, power supplies, capacitor banks.
- Administered Linux and VMS data-acquisition and analysis servers.

Teaching Assistant, Computational Mathematics and Physics, Jan 2005 – May 2005.

Teaching Assistant, Applied Linear Algebra, Sep 2004 – Dec 2004.

- Assisted students in understanding course material.
- Proctored written examinations.
- Generated solution sets for weekly assignments.
- Corrected assignments and exams; tabulated grades.

UW-Madison Plasma Physics Group
Lab Assistant, Jan 2001 – Aug 2004.

Computer skills

Adobe Illustrator, Bash, C, Git, HTML/CSS, IDL, LaTeX, Matlab, MDSplus, Microsoft Office, LabVIEW, Linux, Python, VMS.

Plasma equilibrium reconstruction, transport, and stability analysis codes.

Professional development

Certificate, Leadership and Management Program, May 2015.
 University of California, San Diego Extension (San Diego, CA)

Professional activities

Expert group member, Transients Expert Group, APS Division of Plasma Physics Community Planning Process, 2019.

Guest editor, *Plasma Physics and Controlled Fusion* **60**, special issue for 22nd Workshop on MHD Stability Control, 2018.

Breakout group co-leader, US Magnetic Fusion Research Strategic Directions Workshop 2, Austin, TX, 2017.

Program chair, 22nd Workshop on MHD Stability Control, Madison, WI, 2017.

Panel member, DOE Fusion Energy Sciences workshop on Transients in Tokamak Plasmas, 2015.

Peer reviewer, *Fusion Engineering and Design*, *Fusion Science and Technology*, *Journal of Fusion Energy*, *Journal of Plasma Physics*, *Nuclear Fusion*, *Physics of Plasmas*, *Plasma Physics and Controlled Fusion*, *Plasma Science and Technology*, 2011 – present.

Member, American Physical Society, 2005 – present.

Presentations

“Non-ideal stability and control of ITER baseline demonstration discharges,” Invited talk at the 62nd annual meeting of the APS Division of Plasma Physics (virtual), Nov 12, 2020.

“Perturbative response measurements for MHD stability understanding and control,” Invited talk at the 24th Workshop on MHD Stability Control at Columbia University in New York, NY, Oct 29, 2019.

“Feedback-Assisted Extension of the Tokamak Operating Space to Low Safety Factor,” Invited talk at the 55th annual meeting of the APS Division of Plasma Physics in Denver, CO, Nov 14, 2013.

“Understanding and controlling resistive wall mode stability on DIII-D,” University of Wisconsin-Madison Plasma Physics Seminar, Apr 22, 2013.

“Understanding and controlling resistive wall mode stability on DIII-D,” Auburn University Physics Colloquium, Nov 15, 2012.

“Uncovering RWM Stability Limits in Tokamaks,” Invited talk at the 16th Workshop on MHD Stability Control at General Atomics, San Diego, CA, Nov 21, 2011.

“Feedback Control of Rotating External Kink Modes using a Kalman Filter,” University of Wisconsin-Madison Plasma Physics Seminar, Jan 26, 2009.

“Feedback Suppression of Rotating External Kink Modes in the Presence of Noise,” Invited talk at the 50th annual meeting of the APS Division of Plasma Physics in Dallas, TX, Nov 17, 2008.

Honors

Robert Simon Memorial Prize, May 2010.

Awarded annually by the Department of Applied Physics and Applied Mathematics to the graduate student who has completed the most outstanding dissertation.

(APAM Department, Columbia University)

U.S. Department of Energy Fusion Energy Sciences Postdoctoral Research Program appointment, May 2009.

The Fusion Energy Postdoctoral Research Program offers recent doctoral degree recipients the opportunity to conduct research in the U.S. Department of Energy’s fusion energy research and development programs.

(Office of Fusion Energy Sciences, U.S. Department of Energy)

Extraordinary Teaching Assistant Award, December 2005.

Awarded for exceptional effort as a teaching assistant and excellence in undergraduate education.

(School of Engineering and Applied Science, Columbia University)

AMEP Leadership Prize, May 2004.

Awarded yearly to outstanding students pursuing a degree in Applied Mathematics, Engineering, and Physics (AMEP). (University of Wisconsin–Madison)

Publications

Citation count: 1828 (Google Scholar, Feb 2023).

H-index: 25 (Google Scholar, Feb 2023).

Lead-author publications

J. M. Hanson, F. Turco, T. C. Luce, G. A. Navratil, and E. J. Strait, “Resistive contributions to the stability of DIII-D ITER baseline demonstration discharges,” *Physics of Plasmas* **28**, 042502 (2021).

J. M. Hanson, J. W. Berkery, J. Bialek, M. Clement, J. R. Ferron, A. M. Garofalo, C. T. Holcomb, R. J. La Haye, M. J. Lanctot, T. C. Luce, G. A. Navratil, K. E. J. Olofsson, E. J. Strait, F. Turco, and A. D. Turnbull, “Stability of DIII-D high-performance, negative central shear discharges,” *Nuclear Fusion* **57**, 056009 (2017).

J. M. Hanson, J. Bialek, F. Turco, J. King, G. A. Navratil, E. J. Strait, and A. Turnbull, “Validation of conducting wall models using magnetic measurements,” *Nuclear Fusion* **56**, 106022 (2016).

J. M. Hanson, J. M. Bialek, M. Baruzzo, T. Bolzonella, A. W. Hyatt, G. L. Jackson, J. King, R. J. La Haye, M. J. Lanctot, L. Marrelli, P. Martin, G. A. Navratil, M. Okabayashi, K. E. J. Olofsson, C. Paz-Soldan, P. Piovesan, C. Piron, L. Piron, D. Shiraki, E. J. Strait, D. Terranova, F. Turco, A. D. Turnbull, and P. Zanca, “Feedback-assisted extension of the tokamak operating space to low safety factor,” *Physics of Plasmas* **21**, 072107 (2014).

J. M. Hanson, H. Reimerdes, M. J. Lanctot, Y. In, R. J. La Haye, G. L. Jackson, G. A. Navratil, M. Okabayashi, P. E. Sieck, and E. J. Strait, “Feedback control of the proximity to marginal RWM stability using active MHD spectroscopy,” *Nucl. Fusion* **52**, 013003 (2012).

J. M. Hanson, B. De Bono, J. P. Levesque, M. E. Mauel, D. A. Maurer, G. A. Navratil, T. Sunn Pedersen, D. Shiraki, and R. W. James, “A Kalman filter for feedback control of rotating external kink instabilities in the presence of noise,” *Physics of Plasmas* **16**, 056112 (2009).

J. M. Hanson, A. J. Klein, M. E. Mauel, D. A. Maurer, G. A. Navratil, and T. Sunn Pedersen, “A digital control system for external magnetohydrodynamic modes in tokamak plasmas,” *Review of Scientific Instruments* **80**, 043503 (2009).

J. M. Hanson, B. De Bono, R. W. James, J. P. Levesque, M. E. Mauel, D. A. Maurer, G. A. Navratil, T. S. Pedersen, and D. Shiraki, “Feedback suppression of rotating external kink instabilities in the presence of noise,” *Physics of Plasmas* **15**, 080704 (2008).

Additional publications

K. Gage, X. Chen, M. Van Zeeland, W. Heidbrink, J. Hanson, B. Lyons, D. Pace, J. Galdon-Quiroga, and M. Garcia-Munoz, “Impact of β_n and spectrum of $n = 1$ applied fields on fast ion losses in DIII-D,” *Nuclear Fusion* **63**, 036002 (2023).

M. E. Fenstermacher, J. Abbate, S. Abe, T. Abrams, M. Adams, B. Adamson, N. Aiba, T. Akiyama, P. Aleynikov, E. Allen, S. Allen, H. Anand, J. Anderson, Y. Andrew, T. Andrews, D. Appelt, R. Arbon, N. Ashikawa, A. Ashourvan, M. Aslin, Y. Asnis, M. Austin, D. Ayala, J. Bak, I. Bandyopadhyay, S. Banerjee, K. Barada, L. Bardoczi, J. Barr, E. Bass, D. Battaglia, A. Battey, W. Baumgartner, L. Baylor, J. Beckers, M. Beidler, E. Belli, J. Berkery, T. Bernard, N. Bertelli, M. Beurskens, R. Bielajew, S. Bilgili, B. Biswas, S. Blondel, J. Boedo, I. Bogatu, R. Boivin, T. Bolzonella, M. Bongard, X. Bonnin, P. Bonoli, M. Bonotto, A. Bortolon, S. Bose, N. Bosviel, S. Bouwmans, M. Boyer, W. Boyes, L. Bradley, R. Brambila, D. Brennan, S. Bringuier, L. Brodsky, M. Brookman, J. Brooks, D. Brower, G. Brown, W. Brown, M. Burke, K. Burrell, K. Butler, R. Buttery, I. Bykov, P. Byrne, A. Cacheris, K. Callahan, J. Callen, G. Campbell, J. Candy, J. Canik, P. Cano-Megias, N. Cao, L. Carayannopoulos, T. Carlstrom, W. Carrig, T. Carter, W. Cary, L. Casali, M. Cengher, G. Cespedes Paz, R. Chaban, V. Chan, B. Chapman, I. Char, A. Chattopadhyay, R. Chen, J. Chen, X. Chen, X. Chen, J. Chen, M. Chen, J. Chen, Z. Chen, M. Choi, W. Choi, G. Choi, L. Chousal, C. Chrobak, C. Chrystal, Y. Chung, R. Churchill, M. Cianciosa, J. Clark, M. Clement, S. Coda, A. Cole, C. Collins, W. Conlin, A. Cooper, J. Cordell, B. Coriton, T. Cote, J. Cothran, A. Creely, N. Crocker, C. Crowe, B. Crowley, T. Crowley, D. Cruz-Zabala, D. Cummings, M. Curie, D. Curreli, A. D. Molin, B. Dannels, A. Dautt-Silva, K. Davda, G. De Tommasi, P. De Vries, G. Degrandchamp, J. Degrassie, D. Demers, S. Denk, S. Depasquale, E. Deshazer, A. Diallo, S. Diem, A. Dimits, R. Ding, S. Ding, W. Ding, T. Do, J. Doane, G. Dong, D. Donovan, J. Drake, W. Drews, J. Drobny, X. Du, H. Du, V. Duarte, D. Dudt, C. Dunn, J. Duran, A. Dvorak, F. Effenberg, N. Eidietis, D. Elder, D. Eldon, R. Ellis, W. Elwasif, D. Ennis, K. Erickson, D. Ernst, M. Fasciana, D. Fedorov, E. Feibush, N. Ferraro, J. Ferreira, J. Ferron, P. Fimognari, D. Finkenthal, R. Fitzpatrick, P. Fox, W. Fox, L. Frassinetti, H. Frerichs, H. Frye, Y. Fu, K. Gage, J. Galdon Quiroga, A. Gallo, Q. Gao, A. Garcia, M. Garcia Munoz, D. Garnier, A. Garofalo, A. Gattuso, D. Geng, K. Gentle, D. Ghosh, L. Giacomelli, S. Gibson, E. Gilson, C. Giroud, F. Glass, A. Glasser, D. Glibert, P. Gohil, R. Gomez, S. Gomez, X. Gong, E. Gonzales, A. Goodman, Y. Gorelov, V. Graber, R. Granetz, T. Gray, D. Green, C. Greenfield, M. Greenwald, B. Grierson, R. Groebner, W. Grosnickle, M. Groth, H. Grunloh, S. Gu, W. Guo, H. Guo, P. Gupta, J. Guterl, W. Guttenfelder, T. Guzman, S. Haar, R. Hager, S. Hahn, M. Halfmoon, T. Hall, K. Hallatschek, F. Halpern, G. Hammett, H. Han, E. Hansen, C. Hansen, M. Hansink, J. Hanson, M. Hanson, G. Hao, A. Harris, R. Harvey, S. Haskey, E. Hassan, A. Hassanein, D. Hatch, R. Hawryluk, W. Hayashi, W. Heidbrink, J. Herfindal, J. Hicok, D. Hill, E. Hinson, C. Holcomb, L. Holland, C. Holland, E. Hollmann, J. Hollocombe, A. Holm, I. Holmes, K. Holtrop, M. Honda, R. Hong, R. Hood, A. Horton, L. Horvath, M. Hosokawa, S. Houshmandyar, N. Howard, E. Howell, D. Hoyt, W. Hu, Y. Hu, Q. Hu, J. Huang, Y. Huang, J. Hughes, T. Human, D. Humphreys, P. Huynh, A. Hyatt, C. Ibanez, L. Ibarra, R. Icasas, K. Ida, V. Igochine, Y. In, S. Inoue, A. Isayama, O. Izacard, V. Izzo, A. Jackson, G. Jacobsen, A. Jaervinen, A. Jalalvand, J. Janhunen, S. Jardin, H. Jarleblad, Y. Jeon, H. Ji, X. Jian, E. Joffrin, A. Johansen, C. Johnson, T. Johnson, C. Jones, I. Joseph, D. Jubas, B. Junge, W. Kalb, R. Kalling, C. Kamath, J. Kang, D. Kaplan, A. Kaptanoglu, S. Kasdorf, J. Kates-Harbeck, P. Kazantzidis, A. Kellman, D. Kellman, C. Kessel, K. Khumthong, E. Kim, H. Kim, J. Kim, S. Kim, J. Kim, H. Kim, K. Kim, C. Kim, W. Kimura, M. King, J. King, J. Kinsey, A. Kirk, B. Kiyan, A. Kleiner, V. Klevarova, R. Knapp, M. Knolker, W. Ko, T. Kobayashi,

E. Koch, M. Kochan, B. Koel, M. Koepke, A. Kohn, R. Kolasinski, E. Kolemen, E. Kostadinova, M. Kostuk, G. Kramer, D. Kriete, L. Kripner, S. Kubota, J. Kulchar, K. Kwon, R. La Haye, F. Laggner, H. Lan, R. Lantsov, L. Lao, A. Lasa Esquisabel, C. Lasnier, C. Lau, B. Leard, J. Lee, R. Lee, M. Lee, M. Lee, Y. Lee, C. Lee, J. Lee, S. Lee, M. Lehnen, A. Leonard, E. Leppink, M. Leshner, J. Lestz, J. Leuer, N. Leuthold, X. Li, K. Li, E. Li, G. Li, L. Li, Z. Li, J. Li, Y. Li, Z. Lin, D. Lin, X. Liu, J. Liu, Y. Liu, T. Liu, Y. Liu, C. Liu, Z. Liu, C. Liu, D. Liu, A. Liu, D. Liu, A. Loarte-Prieto, L. Lodestro, N. Logan, J. Lohr, B. Lombardo, J. Lore, Q. Luan, T. Luce, T. Luda Di Cortemiglia, N. Luhmann, R. Lunsford, Z. Luo, A. Lvovskiy, B. Lyons, X. Ma, M. Madruga, B. Madsen, C. Maggi, K. Maheshwari, A. Mail, J. Mailloux, R. Maingi, M. Major, M. Makowski, R. Manchanda, C. Marini, A. Marinoni, A. Maris, T. Markovic, L. Marrelli, E. Martin, J. Mateja, G. Matsunaga, R. Maurizio, P. Mauzey, D. Mauzey, G. Mcardle, J. Mcclenaghan, K. Mccollam, C. Mcdevitt, K. Mckay, G. Mckee, A. Mclean, V. Mehta, E. Meier, J. Menard, O. Meneghini, G. Merlo, S. Messer, W. Meyer, C. Michael, C. Michoski, P. Milne, G. Minet, A. Misleh, Y. Mitrishkin, C. Moeller, K. Montes, M. Morales, S. Mordijck, D. Moreau, S. Morosohk, P. Morris, L. Morton, A. Moser, R. Moyer, C. Moynihan, T. Mrazkova, D. Mueller, S. Munaretto, J. Munoz Burgos, C. Murphy, K. Murphy, C. Muscatello, C. Myers, A. Nagy, G. Nandipati, M. Navarro, F. Nave, G. Navratil, R. Nazikian, A. Neff, G. Neilson, T. Neiser, W. Neiswanger, D. Nelson, A. Nelson, F. Nespoli, R. Nguyen, L. Nguyen, X. Nguyen, J. Nichols, M. Nocente, S. Nogami, S. Noraky, N. Norausky, M. Nornberg, R. Nygren, T. Odstreil, D. Ogas, T. Ogorman, S. Ohdachi, Y. Ohtani, M. Okabayashi, M. Okamoto, L. Olavson, E. Olofsson, M. Omullane, R. Oneill, D. Orlov, W. Orvis, T. Osborne, D. Pace, G. Paganini Canal, A. Pajares Martinez, L. Palacios, C. Pan, Q. Pan, R. Pandit, M. Pandya, A. Pankin, Y. Park, J. Park, J. Park, S. Parker, P. Parks, M. Parsons, B. Patel, C. Pawley, C. Paz-Soldan, W. Peebles, S. Pelton, R. Perillo, C. Petty, Y. Peysson, D. Pierce, A. Pigarov, L. Pigatto, D. Piglowski, S. Pinches, R. Pinsker, P. Piovesan, N. Piper, A. Pironti, R. Pitts, J. Pizzo, U. Plank, M. Podesta, E. Poli, F. Poli, D. Ponce, Z. Popovic, M. Porkolab, G. Porter, C. Powers, S. Powers, R. Prater, Q. Pratt, I. Pusztai, J. Qian, X. Qin, O. Ra, T. Rafiq, T. Raines, R. Raman, J. Rauch, A. Raymond, C. Rea, M. Reich, A. Reiman, S. Reinhold, M. Reinke, R. Reksoatmodjo, Q. Ren, Y. Ren, J. Ren, M. Rensink, J. Renteria, T. Rhodes, J. Rice, R. Roberts, J. Robinson, P. Rodriguez Fernandez, T. Rognlien, A. Rosenthal, S. Rosiello, J. Rost, J. Roveto, W. Rowan, R. Rozenblat, J. Ruane, D. Rudakov, J.R. Ruiz, R. Rupani, S. Saarelma, S. Sabbagh, J. Sachdev, J. Saenz, S. Saib, M. Salewski, A. Salmi, B. Sammulu, C. Samuell, A. Sandorfi, C. Sang, J. Sarff, O. Sauter, K. Schaubel, L. Schmitz, O. Schmitz, J. Schneider, P. Schroeder, K. Schultz, E. Schuster, J. Schwartz, F. Sciortino, F. Scotti, J. Scoville, A. Seltzman, S. Seol, I. Sfiligoi, M. Shafer, S. Sharapov, H. Shen, Z. Sheng, T. Shepard, S. Shi, Y. Shibata, G. Shin, D. Shiraki, R. Shousha, H. Si, P. Simmerling, G. Sinclair, J. Sinha, P. Sinha, G. Sips, T. Sizyuk, C. Skinner, A. Sladkomedova, T. Slendebroek, J. Slief, R. Smirnov, J. Smith, S. Smith, D. Smith, J. Snipes, G. Snoep, A. Snyder, P. Snyder, E. Solano, W. Solomon, J. Song, A. Sontag, V. Soukhanovskii, J. Spendlove, D. Spong, J. Squire, C. Srinivasan, W. Stacey, G. Staebler, L. Stagner, T. Stange, P. Stangeby, R. Stefan, R. Stempok, D. Stephan, J. Stillerman, T. Stoltzfus-Dueck, W. Stonecipher, S. Storment, E. Strait, D. Su, L. Sugiyama, Y. Sun, P. Sun, Z. Sun, A. Sun, D. Sundstrom, C. Sung, J. Sungcoco, W. Suttrop, Y. Suzuki, T. Suzuki, A. Svyatkovskiy, C. Swee, R. Sweeney, C. Sweetnam, G. Szepesi, M. Takechi, T. Tala, K. Tanaka, X. Tang, S. Tang, Y. Tao, R. Tao, D. Taussig, T. Taylor, K. Teixeira, K. Teo, A. Theodorsen, D. Thomas, K. Thome, A. Thorman, A. Thornton, A. Ti, M. Tillack, N. Timchenko, R. Tinguely, R. Tompkins, J. Tooker, A. Torrezan De Sousa, G. Trevisan, S. Tripathi, A. Trujillo Ochoa, D. Truong, C. Tsui, F. Turco, A. Turnbull, M. Umansky, E. Unterberg, P. Vaezi, P. Vail, J. Valdez, W. Valkis, B. Van Compennolle, J. Van Galen, R. Van Kampen, M. Van Zeeland, G. Verdoolaege, N. Vianello, B. Victor, E. Viezzer, S. Vincena, M. Wade, F. Waelbroeck, J. Wai, T. Wakatsuki, M. Walker, G. Wallace, R. Waltz, W. Wampler, L. Wang, H. Wang, Y. Wang, H. Wang, Z. Wang, H. Wang, Z. Wang, Y. Wang, G. Wang, S. Ward, M. Watkins, J. Watkins, W. Wehner, Y. Wei, M. Weiland, D. Weisberg, A. Welander, A. White, R. White, S. Wiesen, R. Wilcox, T. Wilks, M. Willensdorfer, H. Wilson, A. Wingen, M. Wolde, M. Wolff, K. Woller, A. Wolz, H. Wong, S. Woodruff, M. Wu, Y. Wu, S. Wukitch, G. Wurden, W. Xiao, R. Xie, Z. Xing, X. Xu, C. Xu, G. Xu, Z. Yan, X. Yang, S. Yang, T. Yokoyama, R. Yoneda, M. Yoshida, K. You, T. Younkin, J. Yu, M. Yu, G. Yu, Q. Yuan, L. Zaidenberg, L. Zakharov,

- A. Zamengo, S. Zamperini, M. Zarnstorff, E. Zeger, K. Zeller, L. Zeng, M. Zerbini, L. Zhang, X. Zhang, R. Zhang, B. Zhang, J. Zhang, J. Zhang, L. Zhao, B. Zhao, Y. Zheng, L. Zheng, B. Zhu, J. Zhu, Y. Zhu, Y. Zhu, M. Zsuttu, and M. Zuin, “DIII-D research advancing the physics basis for optimizing the tokamak approach to fusion energy,” *Nuclear Fusion* **62**, 042024 (2022).
- L. Wang, H. Wang, D. Eldon, Q. Yuan, S. Ding, K. Li, A. Garofalo, X. Gong, G. Xu, H. Guo, K. Wu, L. Meng, J. Xu, J. Liu, M. Chen, B. Zhang, Y. Duan, F. Ding, Z. Yang, J. Qian, J. Huang, Q. Ren, A. Leonard, M. Fenstermacher, C. Lasnier, J. Watkins, M. Shafer, J. Barr, D. Weisberg, J. McClenaghan, J. Hanson, A. Hyatt, T. Osborne, D. Thomas, D. Humphreys, R. Buttery, G. N. Luo, B. Xiao, B. Wan, and J. Li, “Achievements of actively controlled divertor detachment compatible with sustained high confinement core in DIII-D and EAST,” *Nuclear Fusion* **62**, 076002 (2022).
- A. Marinoni, M. Austin, A. Hyatt, S. Saarelma, F. Scotti, Z. Yan, C. Chrystal, S. Coda, F. Glass, J. Hanson, A. McLean, D. Pace, C. Paz-Soldan, C. Petty, M. Porkolab, L. Schmitz, F. Sciortino, S. Smith, K. Thome, F. Turco, and the DIII-D Team, “Diverted negative triangularity plasmas on DIII-D: the benefit of high confinement without the liability of an edge pedestal,” *Nuclear Fusion* **61**, 116010 (2021).
- M. Knolker, T. E. Evans, P. B. Snyder, B. Grierson, J. Hanson, A. Jaervinen, X. Jian, J. McClenaghan, T. Osborne, C. Paz-Soldan, W. Solomon, and T. Wilks, “On the stability and stationarity of the Super H-mode combined with an ion transport barrier in the core,” *Plasma Physics and Controlled Fusion* **63**, 025017 (2021).
- M. Okabayashi, S. Inoue, N. Logan, N. Taylor, E. Strait, J. de Grassie, N. Ferraro, J. Hanson, S. Jardin, R. L. Haye, Y. Liu, C. Paz-Soldan, L. Sugiyama, and A. Wingen, “A new stabilizing regime of tearing mode entrainment in the presence of a static error field,” *Nuclear Fusion* **59**, 126015 (2019).
- E. J. Strait, J. L. Barr, M. Baruzzo, J. W. Berkery, R. J. Buttery, P. C. de Vries, N. W. Eidietis, R. S. Granetz, J. M. Hanson, C. T. Holcomb, D. A. Humphreys, J. H. Kim, E. Kolemen, M. Kong, M. J. Lanctot, M. Lehnen, E. Lerche, N. C. Logan, M. Maraschek, M. Okabayashi, J. K. Park, A. Pau, G. Pautasso, F. M. Poli, C. Rea, S. A. Sabbagh, O. Sauter, E. Schuster, U. A. Sheikh, C. Sozzi, F. Turco, A. D. Turnbull, Z. R. Wang, W. P. Wehner, and L. Zeng, “Progress in disruption prevention for ITER,” *Nuclear Fusion* **59**, 112012 (2019).
- V. Igochine, A. Gude, S. Günter, J. M. Hanson, K. Lackner, C. Paz-Soldan, E. Strait, H. Zohm, the ASDEX Upgrade Team, and the DIII-D team, “Seeding of neoclassical tearing modes by internal crash events in the ASDEX Upgrade and DIII-D tokamaks,” *Nuclear Fusion* **59**, 066038 (2019).
- Z. R. Wang, N. C. Logan, S. Munaretto, Y. Q. Liu, Y. W. Sun, S. Gu, J. K. Park, J. M. Hanson, Q. M. Hu, T. Strait, R. Nazikian, E. Kolemen, and J. E. Menard, “Identification of multiple eigenmode growth rates in DIII-D and EAST tokamak plasmas,” *Nuclear Fusion* **59**, 024001 (2019).
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