David Fernández Rivas  
Associate Professor  
Mesoscale Chemical Systems  
TechMed Centre  
MESA+ Institute

Employment

Associate Professor
Mesoscale Chemical Systems  
University of Twente  
1 Jan 2022 → present

Associate Professor
TechMed Centre  
University of Twente  
1 Jul 2021 → present

Associate Professor
MESA+ Institute  
University of Twente  
1 Jan 2018 → present

Invited distinguished professor
Ecole Polytechnique Federale de Lausanne (EPFL)  
Neuchatel, Switzerland  
1 May 2022 – 31 May 2022

Research affiliate
Massachusetts Institute of Technology  
Cambridge, United States  
1 Aug 2017 → present

Visiting scientist
Massachusetts Institute of Technology  
Cambridge, United States  
1 May 2017 – 1 Aug 2017

Research outputs

Bubble collapse near porous plates
Andrews, E. D., Rivas, D. F. & Peters, I. R., 7 Oct 2022, ArXiv.

Potential response of single successive constant-current-driven electrolytic hydrogen bubbles spatially separated from the electrode
Raman, A., Peñas, P., van der Meer, D., Lohse, D., Gardeniers, H. & Fernandez Rivas, D., 1 Sep 2022, In: Electrochimica acta. 425, 140691.

Empathic Entrepreneurial Engineering: The Missing Ingrediant
Fernandez Rivas, D., 22 Aug 2022, De Gruyter.
**Microfluidic jet impact: spreading, splashing, soft substrate deformation and injection**
Ven, D. L. V. D., Morrone, D., Quetzeri-Santiago, M. A. & Rivas, D. F., 25 Jul 2022.

**Cavity dynamics after the injection of a microfluidic jet in capillary bridges**
Quetzeri-Santiago, M. A. & Fernandez Rivas, D., 6 Jul 2022, ArXiv.

**Empathy, Persuasiveness and Knowledge promote innovative engineering and entrepreneurial skills**
Fernandez Rivas, D. & Husein, S., Jul 2022, In: Education for Chemical Engineers. 40, p. 45-55 11 p.

**On an intensification factor for green chemistry and engineering: The value of an operationally simple decision-making tool in process assessment**
Fernandez Rivas, D. & Cintas, P., Jun 2022, In: Sustainable Chemistry and Pharmacy. 27, 100651.

**Jet injectors: Perspectives for small volume delivery with lasers**
Schoppink, J. & Fernandez Rivas, D., Mar 2022, In: Advanced drug delivery reviews. 182, 114109.

**Miniature robust high-bandwidth force sensor with mechanically amplified piezoresistive readout**
Alveringh, D., van der Ven, D. L., Veltkamp, H.-W., Batenburg, K. M., Sanders, R. G. P., Fernandez Rivas, D. & Wiegerink, R. J., 11 Feb 2022, 2022 IEEE 35th International Conference on Micro Electro Mechanical Systems Conference (MEMS). Tokyo, Japan: IEEE, p. 684-687 4 p.

**Open Science – For Whom?**
Dominik, M., Nzweundji, J. G., Ahmed, N., Carnicelli, S., Jalaluddin, N. S. M., Rivas, D. F., Narita, V., Enany, S. & Rojas, C. R., 10 Jan 2022, In: Data Science Journal. 21, 1, p. 1-8

**Correction: Mitigating losses: how scientific organisations can help address the impact of the COVID-19 pandemic on early-career researchers**
Lopez-Verges, S., Urbani, B., Fernandez Rivas, D., Kaur-Ghumaan, S., Coussens, A. K., Moronta-Barrios, F., Bhattarai, S., Niamir, L., Siciliano, V., Molnar, A., Weltman, A., Dhimal, M., Arya, S. S., Cloete, K. J., Awan, A. T., Kohler, S., Sharma, C. S., Rios Rojas, C., Shimpuku, Y., Ganle, J. & 4 others, Matin, M. M., Nzweundji, J. G., Badre, A. & Carmona-Mora, P., 2 Dec 2021, In: Humanities and Social Sciences Communications. 8, 1, 313.

**Mitigating losses: how scientific organisations can help address the impact of the COVID-19 pandemic on early-career researchers**
Lopez-Verges, S. L., Urbani, B., Fernandez Rivas, D. & Carmona-Mora, P., Dec 2021, In: Humanities and Social Sciences Communications. 8, 284.

**Assessment of cytotoxicity and sensitization potential of intradermally injected tattoo inks in reconstructed human skin**
Karregat, J., Rustemeyer, T., van der Bent, S., Spiekstra, S., Thon, M., Fernandez Rivas, D. & Gibbs, S., Sep 2021, In: Contact Dermatitis. 85, 3, p. 324-339 16 p.

**Impact of a microfluidic jet on a pendant droplet**
Quetzeri-Santiago, M. A., Hunter, I. W., van der Meer, D. & Fernandez Rivas, D., 28 Aug 2021, In: Soft matter. 17, 32, p. 7466-7475 10 p.

**Call to action: Supporting Latin American early career researchers on the quest for sustainable development in the region**
Lopez-Verges, S. L., Valiente-Echeverria, F., Godoy-Faúndez, A., Fernandez Rivas, D., Urbani, B., Berger, J. J. & Carmona-Mora, P., 14 May 2021, In: Frontiers in research metrics and analytics. 6, 657120.

**Challenges and opportunities for small volumes delivery into the skin**
Mercuri, M. & Fernandez Rivas, D., 1 Jan 2021, In: Biomicrofluidics. 15, 1, 011301.

**Cavitation intensifying bags improve ultrasonic advanced oxidation with Pd/Al₂O₃ catalyst**
Pappaterra, M., Xu, P., van der Meer, W., Faria, J. A. & Rivas, D. F., Jan 2021, In: Ultrasrsons sonochemistry. 70, 105324.
Process intensification connects scales and disciplines towards sustainability
Boffito, D. C. & Fernandez Rivas, D., Dec 2020, In: Canadian journal of chemical engineering. 98, 12, p. 2489-2506 18 p.

Cavity collapse near slot geometries
Andrews, E. D., Rivas, D. F. & Peters, I. R., 25 Oct 2020, In: Journal of fluid mechanics. 901, A29.

Jet injection system
Fernandez Rivas, D. & Oyarte Galvez, L. A., 11 Sep 2020, IPC No. A61M 5/ 30 A I, Patent No. NL2025071, Priority date 8 Mar 2019, Priority No. EP20190161647

Process Intensification education contributes to sustainable development goals: Part 2
Rivas, D. F., Boffito, D. C., Faria-Albanese, J., Glassey, J., Cantin, J., Afraz, N., Akse, H., Boodhoo, K. V. K., Bos, R., Chiang, Y. W., Commenger, J-M., Dubois, J-L., Galli, F., Harmsen, J., Kalra, S., Keil, F., Morales-Menendez, R., Navarro-Brull, F. J., Noel, T., Ogden, K. & 9 others, Patience, G. S., Reay, D., Santos, R. M., Smith-Schoettker, A., Stankiewicz, A. I., van der Berg, H. V., van Gerven, T., van Gestel, J. & Weber, R. S., 1 Jul 2020, In: Education for Chemical Engineers. 32, p. 15-24 10 p.

Process Intensification education contributes to sustainable development goals: Part 1
Fernandez Rivas, D., Boffito, D. C., Faria-Albanese, J., Glassey, J., Cantin, J. & van den Berg, H., Jul 2020, In: Education for Chemical Engineers. 32, p. 1-14 14 p.

Small bubbles and bubble bags: a scientific knowledge valorisation
Fernandez Rivas, D., 24 Jun 2020, In: The Cuban Scientist. 1, 1, p. 23-24

Influence of Bubbles on the Energy Conversion Efficiency of Electrochemical Reactors
Angulo, A., van der Linde, P., Gardeniers, H., Modestino, M. A. & Fernandez Rivas, D., 18 Mar 2020, In: Joule. 4, 3, p. 555-579 25 p.

Microfluidics control the ballistic energy of thermocavitation liquid jets for needle-free injections
Oyarte Gálvez, L., Fraters, A. B., Offerhaus, H. L., Versluis, M., Hunter, I. W. & Fernández Rivas, D., 14 Mar 2020, In: Journal of Applied Physics. 127, 10, 104901.

Intensifying Learning Processes
Fernandez Rivas, D. & Boffito, D. C., 2020, IChemE Educational Special Interest Group.

Jet injection system
Fernandez Rivas, D. & Oyarte Galvez, L. A., 2020, IPC No. A61M 5/30 2006.01, Patent No. WO/2020/182665, 6 Mar 2020, Priority date 8 Mar 2019

Decoupling Gas Evolution from Water-Splitting Electrodes
Peñas, P., van der Linde, P., Vijlvaar, W., van der Meer, D., Lohse, D., Huskens, J., Gardeniers, H., Modestino, M. A. & Fernandez Rivas, D., 23 Oct 2019, In: Journal of the Electrochemical Society. 166, 15, p. H769-H776

Delivery Strategies for Skin: Comparison of Nanoliter Jets, Needles and Topical Solutions
Cu, K., Bansal, R., Mitragotri, S. & Fernandez Rivas, D., 15 Oct 2019, In: Annals of biomedical engineering. 48, p. 2028-2039

A Comparison of Drug Delivery into Skin Using Topical Solutions, Needle Injections and Jet Injections
Cu, K., Bansal, R., Mitragotri, S. & Rivas, D. F., 8 Jul 2019, bioRxiv.

In-phase synchronization between two auto-oscillating bubbles
Nguyen, D. M., Sanathanan, M. S., Miao, J., Rivas, D. F. & Ohl, C-D., 22 Apr 2019, In: Physical review fluids. 4, 4, 14 p., 043601.
High speed imaging of solid needle and liquid micro-jet injections
Oyarte Galvez, L. A., Fernandez Rivas, D. & Brio Perez, M., 14 Apr 2019, In: Journal of Applied Physics. 125, 14, 144504.

Acoustophoretic focusing effects on particle synthesis and clogging in microreactors
Dong, Z., Fernandez Rivas, D. & Kuhn, S., 21 Jan 2019, In: Lab on a chip. 19, 2, p. 316-327 12 p.

Controllable production of Janus ligaments by AC fields in a flow-focusing junction
De Castro-Hernández, E., García-Sánchez, P., Leon Rodríguez, M., Fernández Rivas, D. & Ramos, A., 2 Jan 2019, In: Microfluidics and nanofluidics. 23, 1, p. 10 5 p., 10.

Gas bubble evolution on microstructured silicon substrates
van der Linde, P., Peñas-López, P., Moreno Soto, A., van der Meer, D., Lohse, D., Gardeniers, H. & Fernandez Rivas, D., 19 Oct 2018, In: Energy & environmental science. 11, 12, p. 3452-3462 11 p.

Novel swirl flow-focusing microfluidic device for the production of monodisperse microbubbles
Arcos-Turmo, I., Herrada, M. Á., López-Herrera, J. M., Fernandez Rivas, D., Gañán-Calvo, A. M. & Castro-Hernández, E., 20 Jul 2018, In: Microfluidics and nanofluidics. 22, 7 p., 79.

Pathways to Electrochemical Solar-Hydrogen Technologies
Ardo, S., Fernandez Rivas, D., Modestino, M. A., Schulze Greiving, V., Abdi, F. F., Alarcon Llado, E., Artero, V., Ayers, K., Battaglia, C., Becker, J-P., Bederak, D., Berger, A., Buda, F., Chinello, E., Dam, B., Di Palma, V., Edvinsson, T., Fujii, K., Gardeniers, H., Geerlings, H. & 25 others, Hashemi, S. M. H., Haussener, S., Houle, F., Huskens, J., James, B. D., Konrad, K. E., Kudo, A., Kunuru, P. P., Lohse, D., Mei, B. T., Miller, E. L., Moore, G. F., Muller, J., Orchard, K. L., Rosser, T. E., Saadi, F. H., Schüttauf, J-W., Seger, B., Sheehan, S. W., Smith, W. A., Spurgeon, J., Tang, M. H., van de Krol, R., Vesborg, P. C. K. & Westerik, P. J., 19 Jun 2018, In: Energy & environmental science. 11, 10, p. 2768-2783

Cleaning of used rotary nickel-titanium files in an ultrasonic bath by locally intensified acoustic cavitation
Bryson, L. M., Fernandez Rivas, D. & Boutsioukis, C., Apr 2018, In: International endodontic journal. 51, 4, p. 457-468 12 p.

Bubble nucleation from micro-crevices in a shear flow: Experimental determination of nucleation rates and surface nuclei growth
Groß, T. F., Bauer, J., Ludwig, G., Fernandez Rivas, D. & Pelz, P. F., 1 Jan 2018, In: Experiments in fluids. 59, 1, 10 p., 12.

Evaluation method for process intensification alternatives
Rivas, D. F., Castro-Hernández, E., Villanueva Perales, A. L. & van der Meer, W., Jan 2018, In: Chemical engineering and processing : process intensification. 123, p. 221-232 12 p.

Is reproducibility inside the bag? Special issue fundamentals and applications of sonochemistry ESS-15
Gomes, F., Thakkar, H., Lähde, A., Verhaagen, B., Pandit, A. B. & Fernandez Rivas, D., Jan 2018, In: Ultrasonics sonochemistry. 40, Part B, p. 163-174 12 p.

Electrolysis-driven and pressure-controlled diffusive growth of successive bubbles on micro-structured surfaces
Linde, P. V. D., Soto, A. M., Peñas-López, P., Rodríguez-Rodríguez, J., Lohse, D., Gardeniers, H., Meer, D. V. D. & Rivas, D. F., 14 Nov 2017, In: Langmuir. 33, 45, p. 12873-12886 14 p.

Streaming flow by oscillating bubbles: Quantitative diagnostics via particle tracking velocimetry
Bolaños-Jiménez, R., Rossi, M., Fernandez Rivas, D., Kähler, C. J. & Marin, A., Jun 2017, In: Journal of fluid mechanics. 820, p. 529-548 20 p.

Emulsification in novel ultrasonic cavitation intensifying bag reactors
van Zwieten, R., Verhaagen, B., Schroen, K. & Fernandez Rivas, D., May 2017, In: Ultrasonics sonochemistry. 36, p. 446-453
Micropits for ultrasonic treatment
Verhaagen, B., Fernandez Rivas, D., Gardeniers, J. G. E. & Versluis, M., 1 Oct 2015, (Submitted) Patent No. WO/2015/144918, Priority date 1 Oct 2015

Enhancing acoustic cavitation using artificial crevice bubbles
Zijlstra, A. G., Fernandez Rivas, D., Gardeniers, J. G. E., Versluis, M. & Lohse, D., Feb 2015, In: Ultrasonics. 56, p. 512-523 12 p.

A novel ultrasonic cavitation enhancer
Fernandez Rivas, D., Verhaagen, B., Galdamez Perez, A., Castro-Hernández, E., van Zwieten, R. & Schroen, K., 2015, In: Journal of physics: Conference series. 656, 1, 4 p., 012112.

Complementary technologies required for 21st century additive manufacturing product insertion.
Fernandez Rivas, D., Verhaagen, B. & Walsh, S. T., 2015, CMM international, 8, 6, p. 30-33.

Cavitation Measurement during Sonic and Ultrasonic Activated Irrigation
Macedo, R. G., Verhaagen, B., Fernandez Rivas, D., Versluis, M., Wesselink, P. R. & van der Sluis, L. W. M., 30 Dec 2014, In: Journal of endodontics. 40, 4, p. 580-583

Sonochemical and high-speed optical characterization of cavitation generated by an ultrasonically oscillating dental file in root canal models
Macedo, R. G., Verhaagen, B., Fernandez Rivas, D., Gardeniers, J. G. E., van der Sluis, L. W. M., Wesselink, P. R. & Versluis, M., Jan 2014, In: Ultrasonics sonochemistry. 21, 1, p. 324-335 12 p.

Ultrasound artificially nucleated bubbles and their sonochemical radical production
Fernandez Rivas, D., Stricker, L., Zijlstra, A. G., Gardeniers, J. G. E., Lohse, D. & Prosperetti, A., Jan 2013, In: Ultrasonics sonochemistry. 20, 1, p. 510-524 15 p.

Erosion evolution in mono-crystalline silicon surfaces caused by acoustic cavitation bubbles
Fernandez Rivas, D., Betjes, J., Verhaagen, B., Bouwhuis, W., Bor, T. C., Lohse, D. & Gardeniers, J. G. E., 2013, In: Journal of Applied Physics. 113, 6, p. 1-13 13 p., 064902.

Interacting bubble clouds and their sonochemical production
Stricker, L., Dollet, B., Fernandez Rivas, D. & Lohse, D., 2013, In: Journal of the Acoustical Society of America. 134, 3, p. 1854-1862 1 p.

Sonoluminescence and sonochemiluminescence from a microreactor
Fernandez Rivas, D., Ashokkumar, M., Leong, T., Yasui, K., Tuziuti, T., Kentish, S., Lohse, D. & Gardeniers, J. G. E., Nov 2012, In: Ultrasonics sonochemistry. 19, 6, p. 1252-1259 8 p.

Hydrodynamic cavitation in micro channels with channel sizes of 100 and 750 micrometers
Rooze, J., André, M., van der Gulik, G-JS., Fernandez Rivas, D., Gardeniers, J. G. E., Rebrov, E. V., Schouten, J. C. & Keurentjes, J. T. F., 26 Oct 2012, In: Microfluidics and nanofluidics. 12, 4-1, p. 499-508 10 p.

Taming acoustic cavitation
Fernandez Rivas, D., 26 Oct 2012, Enschede: University of Twente. 212 p.

Localized removal of layers of metal, polymer, or biomaterial by ultrasound cavitation bubbles
Fernandez Rivas, D., Verhaagen, B., Seddon, J. R. T., Zijlstra, A. G., Jiang, L. M., van der Sluis, L. W. M., Versluis, M., Lohse, D. & Gardeniers, J. G. E., 21 Aug 2012, In: Biomicrofluidics. 6, 3, 20 p., 034114.

Merging microfluidics and sonochemistry: towards greener and more efficient micro-sono-reactors
Fernandez Rivas, D., Cintas, P. & Gardeniers, J. G. E., 2012, In: Chemical communications. 48, 89, p. 10935-10947 13 p.
Microfluidos: nuevas fronteras
Fernandez Rivas, D., 2011, In: Revista Cubana de fisica. 28, 1, p. 60-67

Sonochemical microreactor with microbubbles created on micromachined surfaces
Fernandez Rivas, D., Zijlstra, A. G., Prosperetti, A., Lohse, D. & Gardeniers, J. G. E., 1 Dec 2010, 14th International Conference on Miniaturized Systems for Chemistry and Life Sciences 2010, MicroTAS 2010. Verpoorte, S., Andersson-Svahn, H., Emnæus, J. & Pamme, N. (eds.). The Chemical and Biological Microsystems Society, Vol. 3. p. 2123-2125 3 p. (International Conference on Miniaturized Systems for Chemistry and Life Sciences : [proceedings]; vol. 2010).

Efficient Sonochemistry through Microbubbles Generated with Micromachined Surfaces
Fernandez Rivas, D., Prosperetti, A., Zijlstra, A. G., Lohse, D. & Gardeniers, J. G. E., 2010, In: Angewandte Chemie (international edition). 49, 50, p. 9699-9701 3 p.

On the resilience of PDMS microchannels after violent optical breakdown microbubble cavitation
Fernandez Rivas, D. & Gardeniers, J. G. E., Jun 2008, Proceedings of the Sixth International ASME Conference on Nanochannels, Microchannels and Minichannels. 4 p. ICNMM2008-62385

Microfluidos: cuanto hay de nuevo?
Fernandez Rivas, D., 2008, In: Revista Cubana de fisica. 25, 2B, p. 142-149

Microfluidos: ¿cuánto hay de nuevo?
Fernandez Rivas, D., 2008, In: Revista Cubana de fisica. 25, 2B, p. 142-149

On the hydrodynamics of liquid-liquid slug flow capillary microreactors
Kashid, M. N., Fernandez Rivas, D., Agar, D. W. & Turek, S., 2008, In: Asia-Pacific Journal of Chemical Engineering. 3, 2, p. 151-160 10 p.

Slug flow capillary microreactor hydrodynamic study
Fernandez Rivas, D., Kashid, M. N., Agar, D. W. & Turek, S., 2007, The African Review of Physics: Special Issue (Microfluidics). Vol. 1.

Early Turbulence Transition by Polymer Addition
Fernandez Rivas, D., 20 Sep 2006

La dinámica de fluidos computacional, su aplicación al estudio de las características de un intercambiador de tubos térmicos
Fernandez Rivas, D. & Piedra Diaz, M., 2005, In: Ingeniería mecánica. 8, 3, p. 1-10

Tracer experimental techniques for CFD model verification and validation in sugar crystallizer
Fernández Rivas, D. & Amor Coarasa, A., Nov 2004, Integration of tracing with computational fluid dynamics for industrial process investigation: Final report of a co-ordinated research project 2001-2003. International Atomic Energy Agency (IAEA), p. 67-83

Tracer experimental techniques for CFD model verification and validation in sugar crystallizer
Griffith, J., Borroto, J., Dominguez, J., Derivet, M., Cuesta, J., Flores, P., Fernandez Rivas, D., Amor, A. & Franklin, B., 2004, Integration of tracing with computational fluid dynamics for industrial process investigation: final report of a co-ordinated research project. IAEA, p. 67-83 228 p. (IAEA-TECDOC; vol. 1412).

Activities
Andrew Dickerson
David Fernandez Rivas (Host)
Jan 2022 → …
Global Young Academy (External organisation)
David Fernandez Rivas (Chair)
2020 → 2025

Mesoscale Chemical Systems (Organisational unit)
David Fernandez Rivas (Chair)
2020

Cost Action CA18224 - Green Chemical Engineering Network towards upscaling sustainable processes (External organisation)
David Fernandez Rivas (Chair)
Nov 2019 → Nov 2023

Process Intensification Network NL (PIN NL) (External organisation)
David Fernandez Rivas (Chair)
2017

Localized removal of layers of metal, polymer of biomaterial by ultrasound cavitation microbubbles
B. Verhaagen (Speaker), David Fernandez Rivas (Speaker), Johannes G.E. Gardeniers (Speaker), Michel Versluis (Speaker) & Detlef Lohse (Speaker)
1 Dec 2012

High-speed fluorescence imaging
E.C. Gelderblom (Speaker), F. Wolbers (Speaker), Y. Luan (Speaker), K. Kooiman (Speaker), I. Lentacker (Speaker), H. De Witte (Speaker), B. Geers (Speaker), B. Verhaagen (Speaker), Pascal Sleutel (Speaker), A.G. Zijlstra (Speaker), David Fernandez Rivas (Speaker), N. de Jong (Speaker) & Michel Versluis (Speaker)
12 Jan 2012

Press/Media

'Virtually painless' needle-free injections developed in Netherlands
David Fernandez Rivas, Lea Milovich & Jan Jelle Schoppink
13/10/21
1 Media contribution

A Dutch Scientist Has Invented Needle-Free Injections
David Fernandez Rivas
19/10/21
1 Item of Media coverage

Are you afraid of an injection?
David Fernandez Rivas
19/10/21
1 Media contribution

BNR Radio Interview over Needle-free technology
David Fernandez Rivas
8/05/19
1 Media contribution
Bang voor een prik? Deze onderzoeker wil medicijnen met een laser inspuiten
David Fernandez Rivas
6/03/20
1 Media contribution

Best tech idea 2017
David Fernandez Rivas
16/11/17
1 Media contribution

Cover of prestigious Energy & Environmental Science Journal
David Fernandez Rivas
17/10/18
1 Item of Media coverage

David Fernandez Rivas en Cathy van Beek over injecteren zonder naalden
David Fernandez Rivas
23/03/21
1 Media contribution

De ongekende kracht van belletjes
David Fernandez Rivas
15/03/17
1 Media contribution

Digitale uitreiking zevende Prins Friso Ingenieursprijs
David Fernandez Rivas
17/03/21
1 Media contribution

Doodsbang voor prikken? Het kan straks zonder naald
David Fernandez Rivas
10/03/20
1 Media contribution

Ecco il tatuaggio senza aghi, indolore e intelligente
David Fernandez Rivas
11/06/19
1 Item of Media coverage

Een op de vijf Nederlanders is bang voor naalden
David Fernandez Rivas
18/08/21
1 Item of Media coverage

Empathy: Enabling students to be entrepreneurs
David Fernandez Rivas
31/03/22
1 Media contribution

Eén spuit en het licht gaat uit
David Fernandez Rivas
9/01/21
1 Item of Media coverage
High-speed camera captures a water jet’s splashy impact as it pierces a droplet
David Fernandez Rivas, Miguel Angel Quetzeri Santiago & Ian Hunter
18/08/21
1 item of Media coverage

I want to remain relevant
David Fernandez Rivas
22/10/21
1 item of Media coverage

Ingeniero cubano es candidato al premio Príncipe Friso de Ingeniería
David Fernandez Rivas
14/03/21
1 item of Media coverage

Ingenieur van het jaar David Fernandez Rivas: ‘Erkenning van de samenleving’
David Fernandez Rivas
18/03/21
1 item of Media coverage

Injecting without needles
David Fernandez Rivas
5/05/21
1 Media contribution

Injecting without needles on Dutch National TV
David Fernandez Rivas & Jan Jelle Schoppink
5/05/21
1 Media contribution

Interview Ahora con Oscar Haza
David Fernandez Rivas
19/03/21
1 Media contribution

Interview to BuBble Gun team
David Fernandez Rivas, Diana Laura van der Ven & Jan Jelle Schoppink
10/03/20
1 item of Media coverage

Inyecciones sin agujas: el proyecto candidato a premio de un ingeniero cubano
David Fernandez Rivas
9/03/21
1 Media contribution

Inyectar sin agujas: la solución de un cubano y su equipo en los Países Bajos
David Fernandez Rivas
3/03/21
1 item of Media coverage

LJUSGLIMTAR: Se lasersprutan som ska bota sprutädsla
David Fernandez Rivas
29/10/21
1 item of Media coverage
Laser powers needle-free microjet injection
David Fernandez Rivas
23/04/19
1 Media contribution

Lecture in Universiteit van Nederland
David Fernandez Rivas
8/02/21
1 Media contribution

Lichtgevende tatoeage als waarschuwing
David Fernandez Rivas
4/03/21
1 Media contribution

Microjets and Needle-Free Injection
David Fernandez Rivas, Miguel Angel Quetzeri Santiago & Devaraj van der Meer
8/09/21
1 item of Media coverage

Naaldloos injecteren: het kan
David Fernandez Rivas & Lea Milovich
6/05/21
1 Media contribution

Needle-free injections could become a reality, thanks to lasers and the 'bubble gun'
David Fernandez Rivas, Lea Milovich & Jan Jelle Schoppink
18/10/21
1 item of Media coverage

Nieuwe pleister brengt ons dichter bij draagbare, alles-in-één gezondheidsmeter
David Fernandez Rivas
21/02/21
1 Media contribution

No needle, doc!
David Fernandez Rivas
12/03/21
1 item of Media coverage

Opening up a path for solar energy
David Fernandez Rivas
16/10/18
1 item of Media coverage

Our skin is a platform
David Fernandez Rivas
21/03/19
1 Media contribution
Plots staat Cuba bovenaan in de coronagrafieken, artsen luiden noodklok om tekorten
David Fernandez Rivas
19/08/21
1 Media contribution

Prik angst (fear of injections)
David Fernandez Rivas & Michel Versluis
3/03/21
1 Media contribution

Prikken zonder naald: zuiniger en minder pijnlijk
David Fernandez Rivas & Miguel Angel Quetzeri Santiago
6/04/22
1 Item of Media coverage

Radio NPO1 interview
David Fernandez Rivas
15/03/20
1 Media contribution

Rising star
David Fernandez Rivas
30/08/18
1 Item of Media coverage

SPUITJE ZONDER PRIK; HIER KOMT DE NAALDLOZE INJECTIE
David Fernandez Rivas
6/05/19
1 Media contribution

Sobre inyecciones sin agujas - interview - needle-free injections
David Fernandez Rivas
21/10/21
1 Media contribution

Spreading entrepreneurial ambitions from an academic perspective
David Fernandez Rivas
26/04/17
1 Item of Media coverage

Stembussen beste tech-idee 2017 zijn gesloten!
David Fernandez Rivas
15/09/17
1 Item of Media coverage

Straaltje vloeistof doorboort druppel
David Fernandez Rivas & Miguel Angel Quetzeri Santiago
16/08/21
1 Media contribution

Tubantia Special coverage
David Fernandez Rivas
15/04/19
1 Item of Media coverage
UT hoofddocent met injectie zonder naald genomineerd voor Prins Friso Prijs
David Fernandez Rivas
13/03/21
1 item of Media coverage

Vaccineren zonder naald: een perfecte vinding van UT-docent, maar het kan nog nét niet
David Fernandez Rivas
18/02/21
1 item of Media coverage

Why empathy can make you a better entrepreneur
David Fernandez Rivas
9/06/22
1 Media contribution

Zweetverzamelende pleister kijkt truc af van cactusstekels
David Fernandez Rivas
10/11/21
1 Media contribution

¿Cuáles deberían ser las habilidades de los futuros ingenieros?
David Fernandez Rivas
8/06/22
1 Media contribution

'Slim shirt' houdt het hart in de gaten
David Fernandez Rivas
2/09/21
1 Media contribution

Awards

Projects