

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|

|  |  |  |
| --- | --- | --- |
|

|  |  |
| --- | --- |
| New Issue Alert | 16 April 2025 |

 |
|

|  |
| --- |
|    |

 |

 |

 |

 |

 |
|

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|

|  |  |  |  |
| --- | --- | --- | --- |
|

|  |
| --- |
| Dear Reader, |
| We are pleased to deliver your requested table of contents alert for **Welding in the World**. [Volume 69, Issue 5](https://links.springernature.com/f/a/XWb163jDnrVDbEd_4mnuPw~~/AABE5hA~/oORMEfi1q27UdJtXwum2yN61XIMQQH92Bwjqo3KSGnlOf1ZsMLiL5xZykB76StnMGWzfUHBc6qwdzILgEziioF9A_2mRDM5azfQKiDENzoFpHjEXAXNmMzpSGzxeA58tiyGzSI_3U5Lh_tpaNQBjKJF_QjA1w3njGE6i6uLQHqyXTchmUb2fuRfHzD5CQ0v5NaGlzZsEwZntBgAyA9-CyZIY6F-mCMp-3oKTrJrKMCOvSMae5G7mZdgmsePrVm8qlvpe_Bmqmn2A1r6c_rOxe4-iO93RWryX-iTg2WgLhCUX9DNbXu3xPEFtsPMOgmee) is now available online. |
| Intelligent Welding Manufacturing – Advancements and Challenges |

 |

 |

|  |  |  |
| --- | --- | --- |
|

|  |  |
| --- | --- |
|

|  |
| --- |
| Welding in the World cover image |

 |

 |

 |

 |

 |

 |
|

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|

|  |  |  |  |
| --- | --- | --- | --- |
|

|  |
| --- |
| In this issue |
|

|  |
| --- |
|    |

 |

 |

 |

 |

 |

 |
|

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|

|  |  |
| --- | --- |
|

|  |
| --- |
| Editorial |

 |

 |

|  |  |
| --- | --- |
|

|  |
| --- |
|  |

 |

 |

 |

 |

 |
|

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|

|  |  |  |  |
| --- | --- | --- | --- |
|

|  |  |  |
| --- | --- | --- |
|

|  |
| --- |
| [Editorial: Advances in intelligent welding manufacturing](https://links.springernature.com/f/a/w39oQagNbbY8BAJyOXA7CQ~~/AABE5hA~/pERuRbeKgyTRgK_ogkMfcvtfExJzJZCizAgxsZW2f_YEAQv8ysztng3OBSpurVDGZAy03XdylKxTLDecmL6NXm4dS-qAVyCO-FbIUzJ1Y9RC9teU9GdilJIC7H6NCiM3yZHPNw9mTfBVNMOJW4k9KmBXMO8eWPMx4Fydab-LsQcOS3xXgXl-dcmaKz0SgEh15prXt0x3_0lESL6OWun5gDyRYgTlHYUjypwN96gAvX5S3lv1uZpy2w03fAl2qGc6SKsggK92u0X57KZ5LS-8E7qQsdVT03OqcbZh9mqOnb8mMwvYiJivYM4DJWkwBV0RvQgB-gxRLZtoOhC-Qjx_IQ~~) |
| YuMing Zhang, Stephan Egerland, Zengxi Stephen Pan |

 |

 |

 |

 |

 |
|

|  |  |  |  |
| --- | --- | --- | --- |
|

|  |  |  |
| --- | --- | --- |
|

|  |  |
| --- | --- |
|

|  |
| --- |
| [**» Abstract**](https://links.springernature.com/f/a/w39oQagNbbY8BAJyOXA7CQ~~/AABE5hA~/pERuRbeKgyTRgK_ogkMfcvtfExJzJZCizAgxsZW2f_YEAQv8ysztng3OBSpurVDGZAy03XdylKxTLDecmL6NXm4dS-qAVyCO-FbIUzJ1Y9RC9teU9GdilJIC7H6NCiM3yZHPNw9mTfBVNMOJW4k9KmBXMO8eWPMx4Fydab-LsQcOS3xXgXl-dcmaKz0SgEh15prXt0x3_0lESL6OWun5gDyRYgTlHYUjypwN96gAvX5S3lv1uZpy2w03fAl2qGc6SKsggK92u0X57KZ5LS-8E7qQsdVT03OqcbZh9mqOnb8mMwvYiJivYM4DJWkwBV0RvQgB-gxRLZtoOhC-Qjx_IQ~~)    [**» Full text HTML**](https://links.springernature.com/f/a/w39oQagNbbY8BAJyOXA7CQ~~/AABE5hA~/pERuRbeKgyTRgK_ogkMfcvtfExJzJZCizAgxsZW2f_YEAQv8ysztng3OBSpurVDGZAy03XdylKxTLDecmL6NXm4dS-qAVyCO-FbIUzJ1Y9RC9teU9GdilJIC7H6NCiM3yZHPNw9mTfBVNMOJW4k9KmBXMO8eWPMx4Fydab-LsQcOS3xXgXl-dcmaKz0SgEh15prXt0x3_0lESL6OWun5gDyRYgTlHYUjypwN96gAvX5S3lv1uZpy2w03fAl2qGc6SKsggK92u0X57KZ5LS-8E7qQsdVT03OqcbZh9mqOnb8mMwvYiJivYM4DJWkwBV0RvQgB-gxRLZtoOhC-Qjx_IQ~~) [**» Full text PDF**](https://links.springernature.com/f/a/8Uk6Oa6sOao5j28q2rlNdg~~/AABE5hA~/0n3N-sgr2fK-AMEbEHpsKgmnPGS512Houu0PLbYfyGzpf48aQ0Qn4LyYoWvHra7KTqQhI2fBnCPghyMNORUMjPhZY-YpNhIxux0kqybtJ8EImIOndAUz876fCV9tdAYDC3uJKlR_viJVhGwKc4mU8vUj-C6fwq0XcMIhf0lRl8mIUyHajrx23xrSRnat2PjDi9PaIR508SvVJOY0o8jaxKiOJwxhYRdiF3OJnLJffV-xu3bTFefCEcpBvDwnADwOONUeXs91Joyk-N0zIxuujVqqYJzm6SQ2cGh6yhNQ1nAdw_JLeLRBGrSiQ4G_kCCvgTMS7f-CMRusuNNQyxcy0Q~~) |

 |

 |

 |

 |
|

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|

|  |  |  |  |
| --- | --- | --- | --- |
|

|  |  |  |
| --- | --- | --- |
|

|  |  |
| --- | --- |
|

|  |
| --- |
|    |

 |

 |

 |

 |

 |
|

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|

|  |  |
| --- | --- |
|

|  |
| --- |
| Research Paper |

 |

 |

|  |  |
| --- | --- |
|

|  |
| --- |
|  |

 |

 |

 |

 |

 |
|

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|

|  |  |  |  |
| --- | --- | --- | --- |
|

|  |  |  |
| --- | --- | --- |
|

|  |
| --- |
| [Optimization of process prediction models for hot-wire laser metal deposition using transfer learning strategies based on simulation datasets](https://links.springernature.com/f/a/bA58hC9g7zFMAbD9ko-EmA~~/AABE5hA~/pERuRbeKgyTRgK_ogkMfcvtfExJzJZCizAgxsZW2f_YEAQv8ysztng3OBSpurVDGKsjONIrDjRFs9tvl3X-UzaHqvlt8-0zuVhL9BmR-AyY1N4GhLk_JC72yASQEbQ7oow8PexGD48Wo1nxhWNrunU5_lZ7xhowSH5R7zZJdIjuT3m52QnrS1GMblLRC-FgNDPzFVIuiY1hBMmoK8eWku7Ro0lKck8-f6Z6rglF0kGkaddAQwN16QcjWPOS-dyh7xj8KotYhPZJJDIWWGOhLlLlZ-BwwgtpmPwkCCIEdTv1kMVBYFOF1HPRh_9xEAmEeQUxw9UTJGmNyFQFnnl_9AQ~~) |
| Chunkai Li, Yu Pan, Yu Shi, Wenkai Wang |

 |

 |

 |

 |

 |
|

|  |  |  |  |
| --- | --- | --- | --- |
|

|  |  |  |
| --- | --- | --- |
|

|  |  |
| --- | --- |
|

|  |
| --- |
| [**» Abstract**](https://links.springernature.com/f/a/bA58hC9g7zFMAbD9ko-EmA~~/AABE5hA~/pERuRbeKgyTRgK_ogkMfcvtfExJzJZCizAgxsZW2f_YEAQv8ysztng3OBSpurVDGKsjONIrDjRFs9tvl3X-UzaHqvlt8-0zuVhL9BmR-AyY1N4GhLk_JC72yASQEbQ7oow8PexGD48Wo1nxhWNrunU5_lZ7xhowSH5R7zZJdIjuT3m52QnrS1GMblLRC-FgNDPzFVIuiY1hBMmoK8eWku7Ro0lKck8-f6Z6rglF0kGkaddAQwN16QcjWPOS-dyh7xj8KotYhPZJJDIWWGOhLlLlZ-BwwgtpmPwkCCIEdTv1kMVBYFOF1HPRh_9xEAmEeQUxw9UTJGmNyFQFnnl_9AQ~~)    [**» Full text HTML**](https://links.springernature.com/f/a/bA58hC9g7zFMAbD9ko-EmA~~/AABE5hA~/pERuRbeKgyTRgK_ogkMfcvtfExJzJZCizAgxsZW2f_YEAQv8ysztng3OBSpurVDGKsjONIrDjRFs9tvl3X-UzaHqvlt8-0zuVhL9BmR-AyY1N4GhLk_JC72yASQEbQ7oow8PexGD48Wo1nxhWNrunU5_lZ7xhowSH5R7zZJdIjuT3m52QnrS1GMblLRC-FgNDPzFVIuiY1hBMmoK8eWku7Ro0lKck8-f6Z6rglF0kGkaddAQwN16QcjWPOS-dyh7xj8KotYhPZJJDIWWGOhLlLlZ-BwwgtpmPwkCCIEdTv1kMVBYFOF1HPRh_9xEAmEeQUxw9UTJGmNyFQFnnl_9AQ~~) [**» Full text PDF**](https://links.springernature.com/f/a/aBUp2Tj6xGz7kWkc2PG-Xw~~/AABE5hA~/0n3N-sgr2fK-AMEbEHpsKgmnPGS512Houu0PLbYfyGzpf48aQ0Qn4LyYoWvHra7KTqQhI2fBnCPghyMNORUMjFZmRoI7YQiOoesQLa6cp7zGyeDJz8jZW6t8HnOUGMaVHzWUik1OVVdIWlAxploEbxaq8aOD9bWQDUXK-3Lvk1NH6EKhW1vSZOdJmCQ1NWp1hfMXV7DN7vjxxTBN41qTYHj5csjBTHsFJ3ldqT5guMfcAggf6O--B7F8aDVoUC8SEns9Zru-QEgGL4t9Y3Wocnmos2UuB5f5q6AsLbRJA36t-KW_G3ZWggO7P03mw6e98NL-f48XGhC099c6GWTdsw~~) |

 |

 |

 |

 |
|

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|

|  |  |  |  |
| --- | --- | --- | --- |
|

|  |  |  |
| --- | --- | --- |
|

|  |  |
| --- | --- |
|

|  |
| --- |
|    |

 |

 |

 |

 |

 |
|

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|

|  |  |
| --- | --- |
|

|  |
| --- |
| Research Paper |

 |

 |

|  |  |
| --- | --- |
|

|  |
| --- |
|  |

 |

 |

 |

 |

 |
|

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|

|  |  |  |  |
| --- | --- | --- | --- |
|

|  |  |  |
| --- | --- | --- |
|

|  |
| --- |
| [High-quality forming of laser DED components based on a multi-source sensing system](https://links.springernature.com/f/a/M8RIKNU3YbBqJ7RyesxX_w~~/AABE5hA~/pERuRbeKgyTRgK_ogkMfcvtfExJzJZCizAgxsZW2f_YEAQv8ysztng3OBSpurVDGZAy03XdylKxTLDecmL6NXnDNj6TxD6CMDfzYJPiZ4aNVvqi-womVSDml7MZk2NqLKSxstJVXTfGffbXVM6lRkSS6MXoG5V5E-jKTm452neIS6esmwy3s0m64r_e-rqAEpcsbtUdVWzJpFw_vMVYbo6GNhaZrdzyHx4-CemU8s4XehikvZ9zZN93yvcDNsa3XlDRlJ9sHu1EQdg8f1ZjtX01K84yhL87rWqWlCjq3IAzgktRIFU1sscdGUEYSPdz1rQ9YUSKeSshR4yvtFM3AeA~~) |
| Xu Li, Jiehao Shen, Kanghong Zhu, Huabin Chen |

 |

 |

 |

 |

 |
|

|  |  |  |  |
| --- | --- | --- | --- |
|

|  |  |  |
| --- | --- | --- |
|

|  |  |
| --- | --- |
|

|  |
| --- |
| [**» Abstract**](https://links.springernature.com/f/a/M8RIKNU3YbBqJ7RyesxX_w~~/AABE5hA~/pERuRbeKgyTRgK_ogkMfcvtfExJzJZCizAgxsZW2f_YEAQv8ysztng3OBSpurVDGZAy03XdylKxTLDecmL6NXnDNj6TxD6CMDfzYJPiZ4aNVvqi-womVSDml7MZk2NqLKSxstJVXTfGffbXVM6lRkSS6MXoG5V5E-jKTm452neIS6esmwy3s0m64r_e-rqAEpcsbtUdVWzJpFw_vMVYbo6GNhaZrdzyHx4-CemU8s4XehikvZ9zZN93yvcDNsa3XlDRlJ9sHu1EQdg8f1ZjtX01K84yhL87rWqWlCjq3IAzgktRIFU1sscdGUEYSPdz1rQ9YUSKeSshR4yvtFM3AeA~~)    [**» Full text HTML**](https://links.springernature.com/f/a/M8RIKNU3YbBqJ7RyesxX_w~~/AABE5hA~/pERuRbeKgyTRgK_ogkMfcvtfExJzJZCizAgxsZW2f_YEAQv8ysztng3OBSpurVDGZAy03XdylKxTLDecmL6NXnDNj6TxD6CMDfzYJPiZ4aNVvqi-womVSDml7MZk2NqLKSxstJVXTfGffbXVM6lRkSS6MXoG5V5E-jKTm452neIS6esmwy3s0m64r_e-rqAEpcsbtUdVWzJpFw_vMVYbo6GNhaZrdzyHx4-CemU8s4XehikvZ9zZN93yvcDNsa3XlDRlJ9sHu1EQdg8f1ZjtX01K84yhL87rWqWlCjq3IAzgktRIFU1sscdGUEYSPdz1rQ9YUSKeSshR4yvtFM3AeA~~) [**» Full text PDF**](https://links.springernature.com/f/a/SNLjJjXQGiXOngJ4MDCaZQ~~/AABE5hA~/0n3N-sgr2fK-AMEbEHpsKgmnPGS512Houu0PLbYfyGzpf48aQ0Qn4LyYoWvHra7KTqQhI2fBnCPghyMNORUMjPF0r6TTtG1Z17nbZW29eU0wROufkwv30JgB-H1W8E73AAamrSB5b9pYZ9NT-w-KwLHC7D-Q2-juo7corsXKK81K19DqALQs9B8wovo6BcwwtxDMpDSCyNf6NIq7cJhqiqMvQrVaEPyBlJIgN5jYWhFZ-j0QbfS3On3DO9Xqtekt58BSrRJzSjwh960jbvpcWmAbWs4cNxDvk5bbOO6alIRruwa95sr9RQvaLKTM6ahxayx-gJOcQKYX9-qw8g2U9Q~~) |

 |

 |

 |

 |
|

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|

|  |  |  |  |
| --- | --- | --- | --- |
|

|  |  |  |
| --- | --- | --- |
|

|  |  |
| --- | --- |
|

|  |
| --- |
|    |

 |

 |

 |

 |

 |
|

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|

|  |  |
| --- | --- |
|

|  |
| --- |
| Research Paper |

 |

 |

|  |  |
| --- | --- |
|

|  |
| --- |
|  |

 |

 |

 |

 |

 |
|

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|

|  |  |  |  |
| --- | --- | --- | --- |
|

|  |  |  |
| --- | --- | --- |
|

|  |
| --- |
| [Passive vision-based wire-filling weaving GTAW weld seam tracking](https://links.springernature.com/f/a/LkRD4R5DhREUWUT5zVPdPw~~/AABE5hA~/pERuRbeKgyTRgK_ogkMfcvtfExJzJZCizAgxsZW2f_YEAQv8ysztng3OBSpurVDGZAy03XdylKxTLDecmL6NXlRpi4RDqrQXNdiWjGfVE6OxB1k7wXDq3_dxoCt239WW6eP5Vw6lInpfOYAQFpcCdVOizvItABSGrrMtZVwd5g2omSZuJ5j2OBFpEgZFlM4Ww6i1lUG5HL_ZFrwlXH_K7htM2AStIQiz4072q5OD7sEMcec_Mg7tnZVfO0MLQQaesdF0UKJGHm82O6IRDCOucxe5iS2KAbYffDwQ6aXFduTaoHPPxC1t3CIStzR1j27y0hsrUt4pcXveIE3tTE6E4w~~) |
| Wenkai Wang, Yu Shi, Chunkai Li, Yu Pan, Yufen Gu, Ming Zhu |

 |

 |

 |

 |

 |
|

|  |  |  |  |
| --- | --- | --- | --- |
|

|  |  |  |
| --- | --- | --- |
|

|  |  |
| --- | --- |
|

|  |
| --- |
| [**» Abstract**](https://links.springernature.com/f/a/LkRD4R5DhREUWUT5zVPdPw~~/AABE5hA~/pERuRbeKgyTRgK_ogkMfcvtfExJzJZCizAgxsZW2f_YEAQv8ysztng3OBSpurVDGZAy03XdylKxTLDecmL6NXlRpi4RDqrQXNdiWjGfVE6OxB1k7wXDq3_dxoCt239WW6eP5Vw6lInpfOYAQFpcCdVOizvItABSGrrMtZVwd5g2omSZuJ5j2OBFpEgZFlM4Ww6i1lUG5HL_ZFrwlXH_K7htM2AStIQiz4072q5OD7sEMcec_Mg7tnZVfO0MLQQaesdF0UKJGHm82O6IRDCOucxe5iS2KAbYffDwQ6aXFduTaoHPPxC1t3CIStzR1j27y0hsrUt4pcXveIE3tTE6E4w~~)    [**» Full text HTML**](https://links.springernature.com/f/a/LkRD4R5DhREUWUT5zVPdPw~~/AABE5hA~/pERuRbeKgyTRgK_ogkMfcvtfExJzJZCizAgxsZW2f_YEAQv8ysztng3OBSpurVDGZAy03XdylKxTLDecmL6NXlRpi4RDqrQXNdiWjGfVE6OxB1k7wXDq3_dxoCt239WW6eP5Vw6lInpfOYAQFpcCdVOizvItABSGrrMtZVwd5g2omSZuJ5j2OBFpEgZFlM4Ww6i1lUG5HL_ZFrwlXH_K7htM2AStIQiz4072q5OD7sEMcec_Mg7tnZVfO0MLQQaesdF0UKJGHm82O6IRDCOucxe5iS2KAbYffDwQ6aXFduTaoHPPxC1t3CIStzR1j27y0hsrUt4pcXveIE3tTE6E4w~~) [**» Full text PDF**](https://links.springernature.com/f/a/9t_yg9amLqovngRGgfEoGw~~/AABE5hA~/0n3N-sgr2fK-AMEbEHpsKgmnPGS512Houu0PLbYfyGzpf48aQ0Qn4LyYoWvHra7KTqQhI2fBnCPghyMNORUMjGHEU6ZsXpZJAS6_-_04xwafLpkm4hmqHWROna7hOrQYpH4FAllUZNupfN6RVNaHpLYvqdbwz8BbHDMQUNNlhDRXQwbY-vjgBWLhzhlqIyI3A_BgqkpnQmRuG_oletMuuskGOcCUAJ-IaXdim96-BJPCr9LwWTwNiOqisUcgDAD-HLt9NqwjnHn1sGz-lhu_3JTbzew77naXynKGRjAikGk14SP5liBAtFI8M9jHlXhtAQLqlWM6ysncV-9z29Kt9g~~) |

 |

 |

 |

 |
|

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|

|  |  |  |  |
| --- | --- | --- | --- |
|

|  |  |  |
| --- | --- | --- |
|

|  |  |
| --- | --- |
|

|  |
| --- |
|    |

 |

 |

 |

 |

 |
|

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|

|  |  |
| --- | --- |
|

|  |
| --- |
| Research Paper |

 |

 |

|  |  |
| --- | --- |
|

|  |
| --- |
|  |

 |

 |

 |

 |

 |
|

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|

|  |  |  |  |
| --- | --- | --- | --- |
|

|  |  |  |
| --- | --- | --- |
|

|  |
| --- |
| [Monitoring process parameters and predicting rail steel welded joint microstructure and mechanical property of three-wire fusion nozzle electroslag welding](https://links.springernature.com/f/a/b5xFG5TYnp6ODsSDjemfCA~~/AABE5hA~/pERuRbeKgyTRgK_ogkMfcvtfExJzJZCizAgxsZW2f_YEAQv8ysztng3OBSpurVDGZAy03XdylKxTLDecmL6NXrmEV-uF8HEFKSyO09nVkkJ2E3K3IIAvVIpNTfpdp_Gl2htV8VVhb8Q80mkDeHScDA57ZYcorQVqv3g5s9tCz4-amjxIPO9uCEX2hu_QcEEsM5OfHjXwosqA67HpPYw4jTtDojPB5l8QiAqgBal2X71gM7m3QC0u9C4zgjBEbQici6fq4coxD7H9NHBYJ40PQNNo5btwiZ2hBvpXFoOKvpDkReU7HNXJaxhowJH6OKL0HUosm7v74qkBHw_M_R04vA~~) |
| Shengfu Yu, Yang Wang, Zhongyi Zhang |

 |

 |

 |

 |

 |
|

|  |  |  |  |
| --- | --- | --- | --- |
|

|  |  |  |
| --- | --- | --- |
|

|  |  |
| --- | --- |
|

|  |
| --- |
| [**» Abstract**](https://links.springernature.com/f/a/b5xFG5TYnp6ODsSDjemfCA~~/AABE5hA~/pERuRbeKgyTRgK_ogkMfcvtfExJzJZCizAgxsZW2f_YEAQv8ysztng3OBSpurVDGZAy03XdylKxTLDecmL6NXrmEV-uF8HEFKSyO09nVkkJ2E3K3IIAvVIpNTfpdp_Gl2htV8VVhb8Q80mkDeHScDA57ZYcorQVqv3g5s9tCz4-amjxIPO9uCEX2hu_QcEEsM5OfHjXwosqA67HpPYw4jTtDojPB5l8QiAqgBal2X71gM7m3QC0u9C4zgjBEbQici6fq4coxD7H9NHBYJ40PQNNo5btwiZ2hBvpXFoOKvpDkReU7HNXJaxhowJH6OKL0HUosm7v74qkBHw_M_R04vA~~)    [**» Full text HTML**](https://links.springernature.com/f/a/b5xFG5TYnp6ODsSDjemfCA~~/AABE5hA~/pERuRbeKgyTRgK_ogkMfcvtfExJzJZCizAgxsZW2f_YEAQv8ysztng3OBSpurVDGZAy03XdylKxTLDecmL6NXrmEV-uF8HEFKSyO09nVkkJ2E3K3IIAvVIpNTfpdp_Gl2htV8VVhb8Q80mkDeHScDA57ZYcorQVqv3g5s9tCz4-amjxIPO9uCEX2hu_QcEEsM5OfHjXwosqA67HpPYw4jTtDojPB5l8QiAqgBal2X71gM7m3QC0u9C4zgjBEbQici6fq4coxD7H9NHBYJ40PQNNo5btwiZ2hBvpXFoOKvpDkReU7HNXJaxhowJH6OKL0HUosm7v74qkBHw_M_R04vA~~) [**» Full text PDF**](https://links.springernature.com/f/a/4mr1KMeTNw5P42vqQxwVzw~~/AABE5hA~/0n3N-sgr2fK-AMEbEHpsKgmnPGS512Houu0PLbYfyGzpf48aQ0Qn4LyYoWvHra7KTqQhI2fBnCPghyMNORUMjKWzRyJO4zejP_zjPMpmk9QWO61iYRS-BrNpO24F8SUMz18WhZQjlyPR0ZIR4VPu3tPazt6nMFyGpnlJx4sGLzbJQ97xJzYj_O2hX4yJubLiKcyuZctLVMvUhbge6VafxhKuo1yxx5k4rQgs2nGGByWhc4t8X15d3XpHRrFFy5o2xeSxCFfH2nl6dGRifw82W6VYpwXXtAzc5qwEb_6dCEbxZd7oUQ6w9CH1pi2D-UCHtAi5mHTmERBqWqckbhJX1w~~) |

 |

 |

 |

 |
|

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|

|  |  |  |  |
| --- | --- | --- | --- |
|

|  |  |  |
| --- | --- | --- |
|

|  |  |
| --- | --- |
|

|  |
| --- |
|    |

 |

 |

 |

 |

 |
|

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|

|  |  |
| --- | --- |
|

|  |
| --- |
| Research Paper |

 |

 |

|  |  |
| --- | --- |
|

|  |
| --- |
|  |

 |

 |

 |

 |

 |
|

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|

|  |  |  |  |
| --- | --- | --- | --- |
|

|  |  |  |
| --- | --- | --- |
|

|  |
| --- |
| [Deformable convolutional autoencoder-based feature selection and recognition for acoustic emission monitoring in laser shock peening](https://links.springernature.com/f/a/T6pWxX0zkX4HfWCy2OeKSg~~/AABE5hA~/pERuRbeKgyTRgK_ogkMfcvtfExJzJZCizAgxsZW2f_YEAQv8ysztng3OBSpurVDGZAy03XdylKxTLDecmL6NXnwbRWzLvvzPvcRXgF929-iOo9PcqtA0P7PVp4R0uVf9L7bEE7UTxP0j-nDirD1VGh4XPVdAqdpOyr-uyXLPKpREQDJcV11MjA66zPAtJuua1bDeKavbh1uzN3kBAOqeMobluJlLJgaHtSF6alA7NrlLssAnhzB9H9siaeMNywKwSuJh78mn61RvXc7W8CEECwgqkEUTLLfkCSHzbjGit79fyfkwCbXgnHI5AS0lyLBmfqUTVRTzc2UIurqFOJNlsg~~) |
| Rui Qin, Zhifen Zhang, Jing Huang, Yu Su, Guangrui Wen, Weifeng He, Xuefeng Chen |

 |

 |

 |

 |

 |
|

|  |  |  |  |
| --- | --- | --- | --- |
|

|  |  |  |
| --- | --- | --- |
|

|  |  |
| --- | --- |
|

|  |
| --- |
| [**» Abstract**](https://links.springernature.com/f/a/T6pWxX0zkX4HfWCy2OeKSg~~/AABE5hA~/pERuRbeKgyTRgK_ogkMfcvtfExJzJZCizAgxsZW2f_YEAQv8ysztng3OBSpurVDGZAy03XdylKxTLDecmL6NXnwbRWzLvvzPvcRXgF929-iOo9PcqtA0P7PVp4R0uVf9L7bEE7UTxP0j-nDirD1VGh4XPVdAqdpOyr-uyXLPKpREQDJcV11MjA66zPAtJuua1bDeKavbh1uzN3kBAOqeMobluJlLJgaHtSF6alA7NrlLssAnhzB9H9siaeMNywKwSuJh78mn61RvXc7W8CEECwgqkEUTLLfkCSHzbjGit79fyfkwCbXgnHI5AS0lyLBmfqUTVRTzc2UIurqFOJNlsg~~)    [**» Full text HTML**](https://links.springernature.com/f/a/T6pWxX0zkX4HfWCy2OeKSg~~/AABE5hA~/pERuRbeKgyTRgK_ogkMfcvtfExJzJZCizAgxsZW2f_YEAQv8ysztng3OBSpurVDGZAy03XdylKxTLDecmL6NXnwbRWzLvvzPvcRXgF929-iOo9PcqtA0P7PVp4R0uVf9L7bEE7UTxP0j-nDirD1VGh4XPVdAqdpOyr-uyXLPKpREQDJcV11MjA66zPAtJuua1bDeKavbh1uzN3kBAOqeMobluJlLJgaHtSF6alA7NrlLssAnhzB9H9siaeMNywKwSuJh78mn61RvXc7W8CEECwgqkEUTLLfkCSHzbjGit79fyfkwCbXgnHI5AS0lyLBmfqUTVRTzc2UIurqFOJNlsg~~) [**» Full text PDF**](https://links.springernature.com/f/a/2M2s3f0sXxUyIu2xKi0fRg~~/AABE5hA~/0n3N-sgr2fK-AMEbEHpsKgmnPGS512Houu0PLbYfyGzpf48aQ0Qn4LyYoWvHra7KTqQhI2fBnCPghyMNORUMjKLGogfo8El7a-bwOssu-A3N3pbqJrmAMr4aTgKDWxbqo-DARzo6Yo_yjNmAo9UKeVH0g2B5pBabUSqR5WWpphBJrEAV7t5DXPHwKK4Jd6e_a5doYsaTDaUa3auq21YIIhloBRgkNN_G17RUSFcZu5UALuyCUQNTsx8XYpPX6NGzzzOmth7s7XfQfft-u1JfoIJspkraX2XVM6vNGVcMEI1mQhKRSSlr26wJAveNdBYzvCMNYaCHdzGOavMeRNZOlA~~) |

 |

 |

 |

 |
|

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|

|  |  |  |  |
| --- | --- | --- | --- |
|

|  |  |  |
| --- | --- | --- |
|

|  |  |
| --- | --- |
|

|  |
| --- |
|    |

 |

 |

 |

 |

 |
|

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|

|  |  |
| --- | --- |
|

|  |
| --- |
| Research Paper |

 |

 |

|  |  |
| --- | --- |
|

|  |
| --- |
|  |

 |

 |

 |

 |

 |
|

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|

|  |  |  |  |
| --- | --- | --- | --- |
|

|  |  |  |
| --- | --- | --- |
|

|  |
| --- |
| [Improving accuracy and precisely controlling molten pool of stepped filling wire–assisted DP-GTA-AM](https://links.springernature.com/f/a/zZQooWOoBqJ49f_fzyWCoA~~/AABE5hA~/pERuRbeKgyTRgK_ogkMfcvtfExJzJZCizAgxsZW2f_YEAQv8ysztng3OBSpurVDGZAy03XdylKxTLDecmL6NXsn6GY9Mv7srwn7YIjfyvMB5Wq5DK-5l10A8BpQZKan_S0eK9Z9Ie_h8--QoajJT3dejPnu4BFueg2UFg1xAEMEdojcdu8YQ_zBhVTXtHwpVKgHLUpSxHunXjjpXR3Q1PAxrsECHdN_69EZwzR1gqQK2NU6EUYWU-kL-USHMVId2BRPHzkBmDPeSct9Hb03UIuIrwsn0hnHaZyNnSj52hYlarFyZI2cfPHLPkVyIPZRMiHHtuyU10R2ckuK-qrDm-Q~~) |
| Gang Zhang, Jianbo Wang, Zhen Wen Zhu, Lu Peng Li, Yu Shi |

 |

 |

 |

 |

 |
|

|  |  |  |  |
| --- | --- | --- | --- |
|

|  |  |  |
| --- | --- | --- |
|

|  |  |
| --- | --- |
|

|  |
| --- |
| [**» Abstract**](https://links.springernature.com/f/a/zZQooWOoBqJ49f_fzyWCoA~~/AABE5hA~/pERuRbeKgyTRgK_ogkMfcvtfExJzJZCizAgxsZW2f_YEAQv8ysztng3OBSpurVDGZAy03XdylKxTLDecmL6NXsn6GY9Mv7srwn7YIjfyvMB5Wq5DK-5l10A8BpQZKan_S0eK9Z9Ie_h8--QoajJT3dejPnu4BFueg2UFg1xAEMEdojcdu8YQ_zBhVTXtHwpVKgHLUpSxHunXjjpXR3Q1PAxrsECHdN_69EZwzR1gqQK2NU6EUYWU-kL-USHMVId2BRPHzkBmDPeSct9Hb03UIuIrwsn0hnHaZyNnSj52hYlarFyZI2cfPHLPkVyIPZRMiHHtuyU10R2ckuK-qrDm-Q~~)    [**» Full text HTML**](https://links.springernature.com/f/a/zZQooWOoBqJ49f_fzyWCoA~~/AABE5hA~/pERuRbeKgyTRgK_ogkMfcvtfExJzJZCizAgxsZW2f_YEAQv8ysztng3OBSpurVDGZAy03XdylKxTLDecmL6NXsn6GY9Mv7srwn7YIjfyvMB5Wq5DK-5l10A8BpQZKan_S0eK9Z9Ie_h8--QoajJT3dejPnu4BFueg2UFg1xAEMEdojcdu8YQ_zBhVTXtHwpVKgHLUpSxHunXjjpXR3Q1PAxrsECHdN_69EZwzR1gqQK2NU6EUYWU-kL-USHMVId2BRPHzkBmDPeSct9Hb03UIuIrwsn0hnHaZyNnSj52hYlarFyZI2cfPHLPkVyIPZRMiHHtuyU10R2ckuK-qrDm-Q~~) [**» Full text PDF**](https://links.springernature.com/f/a/C9288o2eLbUDNPEHRE8h1w~~/AABE5hA~/0n3N-sgr2fK-AMEbEHpsKgmnPGS512Houu0PLbYfyGzpf48aQ0Qn4LyYoWvHra7KTqQhI2fBnCPghyMNORUMjG9-qScBymO6tsXfMb0sC_qU0OMNLtU5zT8BOG3AW9UH527DcB7YCJC8ug69_E-Fa6nUgqiqzjvxgtkgUVIvc393ojW97VpCTnAT9grOO58HbUrRGOvDracI2vTR7jsSi0bN9ttV_mafj3zaha7xFDLrILav07wCgEa71zny7ZzOPLAjPZzzd1HnjGmudk7LUk7YhJm4oR-BHY8qVXmhrHnwPzJJL7F0xkgBbb97-vAH4y9vQpCuF2MP4H8tTowJQQ~~) |

 |

 |

 |

 |
|

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|

|  |  |  |  |
| --- | --- | --- | --- |
|

|  |  |  |
| --- | --- | --- |
|

|  |  |
| --- | --- |
|

|  |
| --- |
|    |

 |

 |

 |

 |

 |
|

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|

|  |  |
| --- | --- |
|

|  |
| --- |
| Research Paper |

 |

 |

|  |  |
| --- | --- |
|

|  |
| --- |
|  |

 |

 |

 |

 |

 |
|

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|

|  |  |  |  |
| --- | --- | --- | --- |
|

|  |  |  |
| --- | --- | --- |
|

|  |
| --- |
| [The role of convolutional kernels in automated welding defect detection using t-SNE and DBSCAN clustering](https://links.springernature.com/f/a/8glXxsWBFOcpaJUaiI6AUA~~/AABE5hA~/pERuRbeKgyTRgK_ogkMfcvtfExJzJZCizAgxsZW2f_YEAQv8ysztng3OBSpurVDGZAy03XdylKxTLDecmL6NXmvP802R3veQK-dBQ25UL56MJ4SIjQxNBTB4bDjcdrd9HCuKHZu2tXASXPohew1pOWuzjHxSAIj5QUBvtdcjQDFi-egrcYtqSK7P0NGXmlFPApLGn0kOsRdiwEFfKNGMOVOs0YNGBUlBV52cGhBjF6GNltwtWFZo76Sa5uSmr3TwWAHHH4IjqDlxCjAFW822qtQwhItZyLHq65WNfTXNp4YNB9S4BGRcXVlwPD5ehBEOX5Zn0tF2oZWkVHOszzhDHg~~) |
| Baoxin Zhang, Xuefeng Zhao, Haoyu Wen, Juntao Wu, Xiaopeng Wang, Na Dong, Xinghua Yu |

 |

 |

 |

 |

 |
|

|  |  |  |  |
| --- | --- | --- | --- |
|

|  |  |  |
| --- | --- | --- |
|

|  |  |
| --- | --- |
|

|  |
| --- |
| [**» Abstract**](https://links.springernature.com/f/a/8glXxsWBFOcpaJUaiI6AUA~~/AABE5hA~/pERuRbeKgyTRgK_ogkMfcvtfExJzJZCizAgxsZW2f_YEAQv8ysztng3OBSpurVDGZAy03XdylKxTLDecmL6NXmvP802R3veQK-dBQ25UL56MJ4SIjQxNBTB4bDjcdrd9HCuKHZu2tXASXPohew1pOWuzjHxSAIj5QUBvtdcjQDFi-egrcYtqSK7P0NGXmlFPApLGn0kOsRdiwEFfKNGMOVOs0YNGBUlBV52cGhBjF6GNltwtWFZo76Sa5uSmr3TwWAHHH4IjqDlxCjAFW822qtQwhItZyLHq65WNfTXNp4YNB9S4BGRcXVlwPD5ehBEOX5Zn0tF2oZWkVHOszzhDHg~~)    [**» Full text HTML**](https://links.springernature.com/f/a/8glXxsWBFOcpaJUaiI6AUA~~/AABE5hA~/pERuRbeKgyTRgK_ogkMfcvtfExJzJZCizAgxsZW2f_YEAQv8ysztng3OBSpurVDGZAy03XdylKxTLDecmL6NXmvP802R3veQK-dBQ25UL56MJ4SIjQxNBTB4bDjcdrd9HCuKHZu2tXASXPohew1pOWuzjHxSAIj5QUBvtdcjQDFi-egrcYtqSK7P0NGXmlFPApLGn0kOsRdiwEFfKNGMOVOs0YNGBUlBV52cGhBjF6GNltwtWFZo76Sa5uSmr3TwWAHHH4IjqDlxCjAFW822qtQwhItZyLHq65WNfTXNp4YNB9S4BGRcXVlwPD5ehBEOX5Zn0tF2oZWkVHOszzhDHg~~) [**» Full text PDF**](https://links.springernature.com/f/a/IXc-RcnsRzFINH0Cw3dIlw~~/AABE5hA~/0n3N-sgr2fK-AMEbEHpsKgmnPGS512Houu0PLbYfyGzpf48aQ0Qn4LyYoWvHra7KTqQhI2fBnCPghyMNORUMjHHGOfxtFuTrJg75UPoZu0o68Z91aC_DbL6I-uiYc-Bh39dB_5W0BxjXgtBbw7XiBE18jvDZw7fxOJgmesrE327VVVHpi4REH07C0p3-Ep0C3kLagEXnnmI_n1mJluy42UJrbImxkoFAO1Z5FQ7FeGXoFoGgi5roUGBN0Q12ninXOw1ibEo0AqlTHEARnea51RzOA5eyF_jU2U4xkIVMmNjhlaHQzmmWhBmojwJJ9KjI8jBnSYpOXhCaj3faUISSqQ~~) |

 |

 |

 |

 |
|

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|

|  |  |  |  |
| --- | --- | --- | --- |
|

|  |  |  |
| --- | --- | --- |
|

|  |  |
| --- | --- |
|

|  |
| --- |
|    |

 |

 |

 |

 |

 |
|

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|

|  |  |
| --- | --- |
|

|  |
| --- |
| Research Paper |

 |

 |

|  |  |
| --- | --- |
|

|  |
| --- |
|  |

 |

 |

 |

 |

 |
|

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|

|  |  |  |  |
| --- | --- | --- | --- |
|

|  |  |  |
| --- | --- | --- |
|

|  |
| --- |
| [Vision-driven adaptive welding solutions for the top three challenges in welding fabrication](https://links.springernature.com/f/a/WWaly8uDChSiYpFoCU12KA~~/AABE5hA~/pERuRbeKgyTRgK_ogkMfcvtfExJzJZCizAgxsZW2f_YEAQv8ysztng3OBSpurVDGZAy03XdylKxTLDecmL6NXjtlMEOsITzyK02nsgNv6LWmde1GZJg-pDXCs1Zo9YluY5ug39jofQggiSb4dpP0aR_vW5f_e_lYh1Pko0C7n7gfBbg7Ym7rj6jwp9aa8gKkiY_Yj6n6j1GR4JmnuZQR3hyQFxuQ5wkfJdJYL5uiGPUMiLBbcqB4DQ4M1cCgz_c3MR4bA8UhKFy0Y4tPXkMnRNjziJ7BG7Hwcbgyd4wxASHxG76rATz8ccQYqPSMe_r9VzMBN1scjnXiU_2AQCsYOA~~) |
| Mahyar Asadi, Ahmad Ashoori, Mehrnoosh Afshar, Ali Sheikhshab, Todd Scheerer, Austin Kaspardlov, Soroush Bagheri, Sina Firouz, Soroush Karimzadeh |

 |

 |

 |

 |

 |
|

|  |  |  |  |
| --- | --- | --- | --- |
|

|  |  |  |
| --- | --- | --- |
|

|  |  |
| --- | --- |
|

|  |
| --- |
| [**» Abstract**](https://links.springernature.com/f/a/WWaly8uDChSiYpFoCU12KA~~/AABE5hA~/pERuRbeKgyTRgK_ogkMfcvtfExJzJZCizAgxsZW2f_YEAQv8ysztng3OBSpurVDGZAy03XdylKxTLDecmL6NXjtlMEOsITzyK02nsgNv6LWmde1GZJg-pDXCs1Zo9YluY5ug39jofQggiSb4dpP0aR_vW5f_e_lYh1Pko0C7n7gfBbg7Ym7rj6jwp9aa8gKkiY_Yj6n6j1GR4JmnuZQR3hyQFxuQ5wkfJdJYL5uiGPUMiLBbcqB4DQ4M1cCgz_c3MR4bA8UhKFy0Y4tPXkMnRNjziJ7BG7Hwcbgyd4wxASHxG76rATz8ccQYqPSMe_r9VzMBN1scjnXiU_2AQCsYOA~~)    [**» Full text HTML**](https://links.springernature.com/f/a/WWaly8uDChSiYpFoCU12KA~~/AABE5hA~/pERuRbeKgyTRgK_ogkMfcvtfExJzJZCizAgxsZW2f_YEAQv8ysztng3OBSpurVDGZAy03XdylKxTLDecmL6NXjtlMEOsITzyK02nsgNv6LWmde1GZJg-pDXCs1Zo9YluY5ug39jofQggiSb4dpP0aR_vW5f_e_lYh1Pko0C7n7gfBbg7Ym7rj6jwp9aa8gKkiY_Yj6n6j1GR4JmnuZQR3hyQFxuQ5wkfJdJYL5uiGPUMiLBbcqB4DQ4M1cCgz_c3MR4bA8UhKFy0Y4tPXkMnRNjziJ7BG7Hwcbgyd4wxASHxG76rATz8ccQYqPSMe_r9VzMBN1scjnXiU_2AQCsYOA~~) [**» Full text PDF**](https://links.springernature.com/f/a/v9q2grUEzvL4DPk0vGBSJg~~/AABE5hA~/0n3N-sgr2fK-AMEbEHpsKgmnPGS512Houu0PLbYfyGzpf48aQ0Qn4LyYoWvHra7KTqQhI2fBnCPghyMNORUMjE_qHiLC9XL_QpV94wVl5uPo_KWR9Rvnf1XSxj4332CT9Oc1lRow0lPFtCfyxTXMk10pZOWNTKrzQ61yi07yPBxPRR8sfPFcguo8qQq8S5gZV3YPrUhG2kD2U9FEDDpGABJ1r7leGeJgNEziEZY-NeXX4Dz6l7pt92nmOlti5ZTnNRznfqQbhXN6jB-5Ooez_gE-vU2OYIatdxOeZObLMWhYjRZ65FwENVYYjnUdiek6p52D3ei4zU4ZIEeH6eTC3Q~~) |

 |

 |

 |

 |
|

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|

|  |  |  |  |
| --- | --- | --- | --- |
|

|  |  |  |
| --- | --- | --- |
|

|  |  |
| --- | --- |
|

|  |
| --- |
|    |

 |

 |

 |

 |

 |
|

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|

|  |  |
| --- | --- |
|

|  |
| --- |
| Research Paper |

 |

 |

|  |  |
| --- | --- |
|

|  |
| --- |
|  |

 |

 |

 |

 |

 |
|

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|

|  |  |  |  |
| --- | --- | --- | --- |
|

|  |  |  |
| --- | --- | --- |
|

|  |
| --- |
| [Surrogate model and machine learning approaches for thermal field reconstruction from weld pool contour: application to GTA welding](https://links.springernature.com/f/a/FMKNQH9G0o-0lj4K-5dKFQ~~/AABE5hA~/pERuRbeKgyTRgK_ogkMfcvtfExJzJZCizAgxsZW2f_YEAQv8ysztng3OBSpurVDGZAy03XdylKxTLDecmL6NXrqKz9FGehhoLAd8h9AcR2ZN2fmFc0d-dgN1MK_McfcQeE1roYnNxe8GYlt19lWUXekzL5JOWt_RbhuKIppkorZxXaAS4oSFmF7CZUk1Hcx_az3TqFdmbPBASAmopyPVKWdOLg3m85jJ8C2lPs6mU0UDj1bmQiAVX_V48IxBeq8khM5RjpD1T5cjU29TTEUk2me6ImsCVDnVz39LySZPJqrB7DWXLhk3bTvJLAz0t0fPWiNVCOP6OiIk8fQ4CP9Z7A~~) |
| Zaid Boutaleb, Issam Bendaoud, Sébastien Rouquette, Fabien Soulié |

 |

 |

 |

 |

 |
|

|  |  |  |  |
| --- | --- | --- | --- |
|

|  |  |  |
| --- | --- | --- |
|

|  |  |
| --- | --- |
|

|  |
| --- |
| [**» Abstract**](https://links.springernature.com/f/a/FMKNQH9G0o-0lj4K-5dKFQ~~/AABE5hA~/pERuRbeKgyTRgK_ogkMfcvtfExJzJZCizAgxsZW2f_YEAQv8ysztng3OBSpurVDGZAy03XdylKxTLDecmL6NXrqKz9FGehhoLAd8h9AcR2ZN2fmFc0d-dgN1MK_McfcQeE1roYnNxe8GYlt19lWUXekzL5JOWt_RbhuKIppkorZxXaAS4oSFmF7CZUk1Hcx_az3TqFdmbPBASAmopyPVKWdOLg3m85jJ8C2lPs6mU0UDj1bmQiAVX_V48IxBeq8khM5RjpD1T5cjU29TTEUk2me6ImsCVDnVz39LySZPJqrB7DWXLhk3bTvJLAz0t0fPWiNVCOP6OiIk8fQ4CP9Z7A~~)    [**» Full text HTML**](https://links.springernature.com/f/a/FMKNQH9G0o-0lj4K-5dKFQ~~/AABE5hA~/pERuRbeKgyTRgK_ogkMfcvtfExJzJZCizAgxsZW2f_YEAQv8ysztng3OBSpurVDGZAy03XdylKxTLDecmL6NXrqKz9FGehhoLAd8h9AcR2ZN2fmFc0d-dgN1MK_McfcQeE1roYnNxe8GYlt19lWUXekzL5JOWt_RbhuKIppkorZxXaAS4oSFmF7CZUk1Hcx_az3TqFdmbPBASAmopyPVKWdOLg3m85jJ8C2lPs6mU0UDj1bmQiAVX_V48IxBeq8khM5RjpD1T5cjU29TTEUk2me6ImsCVDnVz39LySZPJqrB7DWXLhk3bTvJLAz0t0fPWiNVCOP6OiIk8fQ4CP9Z7A~~) [**» Full text PDF**](https://links.springernature.com/f/a/BSwMRONjEJcc5bzDK0PMUA~~/AABE5hA~/0n3N-sgr2fK-AMEbEHpsKgmnPGS512Houu0PLbYfyGzpf48aQ0Qn4LyYoWvHra7KTqQhI2fBnCPghyMNORUMjKQQ0qbqxh7fbHUK4cjkVmYem0Y9avrQAcZe8ldd3BOojpQLX_c4DtbfzPNK3sw9jQuqSlJSH1sEsecRVjMsCad8yfB70cjIHvo8ncKWqjP5XC-oeMGgNGFexGGF6uRFNIBRlvhIZ_gKk2hl1b4_QbbRSLCPVpQBo8YT0LTLJr9A2qpt_jsG0iJsv5iNY63z4dVeR8CuUYJGfET2MZY_7N44mAMgj5JRa4gjBRdIcZt7uPcXsXe9ZwszImvoXJy12w~~) |

 |

 |

 |

 |
|

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|

|  |  |  |  |
| --- | --- | --- | --- |
|

|  |  |  |
| --- | --- | --- |
|

|  |  |
| --- | --- |
|

|  |
| --- |
|    |

 |

 |

 |

 |

 |
|

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|

|  |  |
| --- | --- |
|

|  |
| --- |
| Research Paper |

 |

 |

|  |  |
| --- | --- |
|

|  |
| --- |
|  |

 |

 |

 |

 |

 |
|

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|

|  |  |  |  |
| --- | --- | --- | --- |
|

|  |  |  |
| --- | --- | --- |
|

|  |
| --- |
| [Improving out-of-distribution generalization for online weld expulsion inspection using physics-informed neural networks](https://links.springernature.com/f/a/_D5UAkZG3vlFOgPeZKIDEw~~/AABE5hA~/pERuRbeKgyTRgK_ogkMfcvtfExJzJZCizAgxsZW2f_YEAQv8ysztng3OBSpurVDGZAy03XdylKxTLDecmL6NXsW-QM0tw4knkDusNaH1ME7T5C2lrRlBxlh9DRpW6v0q5qQDffIi2Y2hLuRVuCbS0b2TK7v9HVa66DedjpNgBe-6IAy_oqj42w32Qa8dI_wc5GRudQipZbencQBZVp0ryJShl5EA5G5JvP_QKQvx_x0CzwYqavPP_z_q4DLIeI6-QL6pm6pZVwe6YeCFkkGRYJ7wwpfoZ7xPRXaSYIqkwtgK3ugBxbLpxYfUfnHB-u490RP6uu3xDdyguJ8kAR97Lg~~) |
| Yu-Jun Xia, Qiang Song, BenGang Yi, TianLe Lyu, ZhiQiang Sun, YongBing Li |

 |

 |

 |

 |

 |
|

|  |  |  |  |
| --- | --- | --- | --- |
|

|  |  |  |
| --- | --- | --- |
|

|  |  |
| --- | --- |
|

|  |
| --- |
| [**» Abstract**](https://links.springernature.com/f/a/_D5UAkZG3vlFOgPeZKIDEw~~/AABE5hA~/pERuRbeKgyTRgK_ogkMfcvtfExJzJZCizAgxsZW2f_YEAQv8ysztng3OBSpurVDGZAy03XdylKxTLDecmL6NXsW-QM0tw4knkDusNaH1ME7T5C2lrRlBxlh9DRpW6v0q5qQDffIi2Y2hLuRVuCbS0b2TK7v9HVa66DedjpNgBe-6IAy_oqj42w32Qa8dI_wc5GRudQipZbencQBZVp0ryJShl5EA5G5JvP_QKQvx_x0CzwYqavPP_z_q4DLIeI6-QL6pm6pZVwe6YeCFkkGRYJ7wwpfoZ7xPRXaSYIqkwtgK3ugBxbLpxYfUfnHB-u490RP6uu3xDdyguJ8kAR97Lg~~)    [**» Full text HTML**](https://links.springernature.com/f/a/_D5UAkZG3vlFOgPeZKIDEw~~/AABE5hA~/pERuRbeKgyTRgK_ogkMfcvtfExJzJZCizAgxsZW2f_YEAQv8ysztng3OBSpurVDGZAy03XdylKxTLDecmL6NXsW-QM0tw4knkDusNaH1ME7T5C2lrRlBxlh9DRpW6v0q5qQDffIi2Y2hLuRVuCbS0b2TK7v9HVa66DedjpNgBe-6IAy_oqj42w32Qa8dI_wc5GRudQipZbencQBZVp0ryJShl5EA5G5JvP_QKQvx_x0CzwYqavPP_z_q4DLIeI6-QL6pm6pZVwe6YeCFkkGRYJ7wwpfoZ7xPRXaSYIqkwtgK3ugBxbLpxYfUfnHB-u490RP6uu3xDdyguJ8kAR97Lg~~) [**» Full text PDF**](https://links.springernature.com/f/a/XJE0hS5U_upaJWt2Eph67g~~/AABE5hA~/0n3N-sgr2fK-AMEbEHpsKgmnPGS512Houu0PLbYfyGzpf48aQ0Qn4LyYoWvHra7KTqQhI2fBnCPghyMNORUMjGe6gpoDy35l2OkHA35gAfzlX-_nNAM6cxjSmz02kp6XJ5FwwxUsVGkyGl2mwWz6D2JmDKwJ1JuMBKwip7e5X75QBKW3ydAGyzbuE68YzrJJsq3-y2hqa9WaPjzUM8caBv1LlDyxW4uKY9hwyXaLTsKAqf0Ep8vBBxRavrywv_YqLbDynZTysVpxKdrNVCSxW4Rhpo57mtdyJS8OW1kQMCNRYiIU8RQ90tz1CmkHm0CjlGrX8RK0rYusxmgSBiM7ZA~~) |

 |

 |

 |

 |
|

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|

|  |  |  |  |
| --- | --- | --- | --- |
|

|  |  |  |
| --- | --- | --- |
|

|  |  |
| --- | --- |
|

|  |
| --- |
|    |

 |

 |

 |

 |

 |
|

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|

|  |  |
| --- | --- |
|

|  |
| --- |
| Research Paper |

 |

 |

|  |  |
| --- | --- |
|

|  |
| --- |
|  |

 |

 |

 |

 |

 |
|

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|

|  |  |  |  |
| --- | --- | --- | --- |
|

|  |  |  |
| --- | --- | --- |
|

|  |
| --- |
| [Crack detection in laser-welded aluminum alloy based on the integration of generative adversarial networks](https://links.springernature.com/f/a/AOIPQraeKXyWVF50oj1nUA~~/AABE5hA~/pERuRbeKgyTRgK_ogkMfcvtfExJzJZCizAgxsZW2f_YEAQv8ysztng3OBSpurVDGZAy03XdylKxTLDecmL6NXrybeeoc8uZus2JU7owZhK_LOFaX5GsuG99j6aGT2J5V6fK4VgIV-FwE7z40lWXy_B2MSAu5295yvVS-Dx2J_jEwJp_J5afEepBZ_xqqLQLPoX5bSxIALkJLVqMIAwlEAI9txN8D1POMcdNXxf5XL7hRQ9DYy5f0e5WUd-7bv7PhxF6Y_v2havcgkuAcNmOnUnwJ_4kIRKZticaPHxqGXeAIyeoL18LQG6NB-HoR02Ju_q40NHU8P5afgyGL15pcLQ~~) |
| Jeonghun Shin, Sanghoon Kang, Jaewon Yang, Sukjoon Hong, Minjung Kang |

 |

 |

 |

 |

 |
|

|  |  |  |  |
| --- | --- | --- | --- |
|

|  |  |  |
| --- | --- | --- |
|

|  |  |
| --- | --- |
|

|  |
| --- |
| [**» Abstract**](https://links.springernature.com/f/a/AOIPQraeKXyWVF50oj1nUA~~/AABE5hA~/pERuRbeKgyTRgK_ogkMfcvtfExJzJZCizAgxsZW2f_YEAQv8ysztng3OBSpurVDGZAy03XdylKxTLDecmL6NXrybeeoc8uZus2JU7owZhK_LOFaX5GsuG99j6aGT2J5V6fK4VgIV-FwE7z40lWXy_B2MSAu5295yvVS-Dx2J_jEwJp_J5afEepBZ_xqqLQLPoX5bSxIALkJLVqMIAwlEAI9txN8D1POMcdNXxf5XL7hRQ9DYy5f0e5WUd-7bv7PhxF6Y_v2havcgkuAcNmOnUnwJ_4kIRKZticaPHxqGXeAIyeoL18LQG6NB-HoR02Ju_q40NHU8P5afgyGL15pcLQ~~)    [**» Full text HTML**](https://links.springernature.com/f/a/AOIPQraeKXyWVF50oj1nUA~~/AABE5hA~/pERuRbeKgyTRgK_ogkMfcvtfExJzJZCizAgxsZW2f_YEAQv8ysztng3OBSpurVDGZAy03XdylKxTLDecmL6NXrybeeoc8uZus2JU7owZhK_LOFaX5GsuG99j6aGT2J5V6fK4VgIV-FwE7z40lWXy_B2MSAu5295yvVS-Dx2J_jEwJp_J5afEepBZ_xqqLQLPoX5bSxIALkJLVqMIAwlEAI9txN8D1POMcdNXxf5XL7hRQ9DYy5f0e5WUd-7bv7PhxF6Y_v2havcgkuAcNmOnUnwJ_4kIRKZticaPHxqGXeAIyeoL18LQG6NB-HoR02Ju_q40NHU8P5afgyGL15pcLQ~~) [**» Full text PDF**](https://links.springernature.com/f/a/AvtMGRaLDkHtanMpoHjSbw~~/AABE5hA~/0n3N-sgr2fK-AMEbEHpsKgmnPGS512Houu0PLbYfyGzpf48aQ0Qn4LyYoWvHra7KTqQhI2fBnCPghyMNORUMjJb609Blb977wAww5PjD5VDLn2-qhKLeA8fEUe3QxpLYJagHrZCPh-xKAZnytgzYYbTzBB7Ci6CjmwplKxJqfnypj-3ShPSV-0ZGmhCAkUicxNaK_jq4LKeE-pI6oLjmXv2iT0aMh6BUcIqhe76pHTRqX1Y5pm2KKl_ayn0Li9SeWdlBzcFelHZVHW9AsXzpuh5NcxPPObSizr8ObN-qmZBbtTEQH1tTrpeZ8xhuG1r0mWIZnAsOhxKCQudoeh3zng~~) |

 |

 |

 |

 |
|

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|

|  |  |  |  |
| --- | --- | --- | --- |
|

|  |  |  |
| --- | --- | --- |
|

|  |  |
| --- | --- |
|

|  |
| --- |
|    |

 |

 |

 |

 |

 |
|

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|

|  |  |
| --- | --- |
|

|  |
| --- |
| Research Paper |

 |

 |

|  |  |
| --- | --- |
|

|  |
| --- |
|  |

 |

 |

 |

 |

 |
|

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|

|  |  |  |  |
| --- | --- | --- | --- |
|

|  |  |  |
| --- | --- | --- |
|

|  |
| --- |
| [Identifying anomalous welding in the bud: A forecasting approach](https://links.springernature.com/f/a/O-7VPHypVGF_80OcaeV12A~~/AABE5hA~/pERuRbeKgyTRgK_ogkMfcvtfExJzJZCizAgxsZW2f_YEAQv8ysztng3OBSpurVDGZAy03XdylKxTLDecmL6NXtlRhXDl5WqZB0fXLGTVzP8fsoAto6fl9Ag5DBzhEpivMqyc3Zo0qKZbAd5mz0I99jdKQvn3omYKFePe0enG7neqKc_ErJJs3tyy_LSGT_9VohBRhFwhI9JsD44Fkh0ZU9rpEkr2U46ly8MPRMsQ640tqNiurjxsrjttQ-1bsdteMZtTvRCrZ3dlOHK-e1O5sYgfeFQ40t74J6Oz1V2VblPZJ1_AzijovnTKWACtgO-JVy8YnEsydCCMo5hioIUU9A~~) |
| Rundong Lu, Ming Lou, Yujun Xia, Yongbing Li |

 |

 |

 |

 |

 |
|

|  |  |  |  |
| --- | --- | --- | --- |
|

|  |  |  |
| --- | --- | --- |
|

|  |  |
| --- | --- |
|

|  |
| --- |
| [**» Abstract**](https://links.springernature.com/f/a/O-7VPHypVGF_80OcaeV12A~~/AABE5hA~/pERuRbeKgyTRgK_ogkMfcvtfExJzJZCizAgxsZW2f_YEAQv8ysztng3OBSpurVDGZAy03XdylKxTLDecmL6NXtlRhXDl5WqZB0fXLGTVzP8fsoAto6fl9Ag5DBzhEpivMqyc3Zo0qKZbAd5mz0I99jdKQvn3omYKFePe0enG7neqKc_ErJJs3tyy_LSGT_9VohBRhFwhI9JsD44Fkh0ZU9rpEkr2U46ly8MPRMsQ640tqNiurjxsrjttQ-1bsdteMZtTvRCrZ3dlOHK-e1O5sYgfeFQ40t74J6Oz1V2VblPZJ1_AzijovnTKWACtgO-JVy8YnEsydCCMo5hioIUU9A~~)    [**» Full text HTML**](https://links.springernature.com/f/a/O-7VPHypVGF_80OcaeV12A~~/AABE5hA~/pERuRbeKgyTRgK_ogkMfcvtfExJzJZCizAgxsZW2f_YEAQv8ysztng3OBSpurVDGZAy03XdylKxTLDecmL6NXtlRhXDl5WqZB0fXLGTVzP8fsoAto6fl9Ag5DBzhEpivMqyc3Zo0qKZbAd5mz0I99jdKQvn3omYKFePe0enG7neqKc_ErJJs3tyy_LSGT_9VohBRhFwhI9JsD44Fkh0ZU9rpEkr2U46ly8MPRMsQ640tqNiurjxsrjttQ-1bsdteMZtTvRCrZ3dlOHK-e1O5sYgfeFQ40t74J6Oz1V2VblPZJ1_AzijovnTKWACtgO-JVy8YnEsydCCMo5hioIUU9A~~) [**» Full text PDF**](https://links.springernature.com/f/a/mhYcARU7dErlm3pa0b4GXw~~/AABE5hA~/0n3N-sgr2fK-AMEbEHpsKgmnPGS512Houu0PLbYfyGzpf48aQ0Qn4LyYoWvHra7KTqQhI2fBnCPghyMNORUMjLt3hyFG42JagPjO1ZbTF3am2Be5iXJcOLVoWwJIkhi8TChLSiLocTCpvmMC_uQELbRSLU7PrDpYgmtj6o72hFqEQJcSsEWBMuIC94bORaienCREEGtEnB0f6heY-4wf3KiTtuhWWoQSNH93tdFnwYo6PtdOPA_dkGuJXX-wbzQJTO_TWSkPHsQrWfpfpzoXDFmi7vqA5zR_3VDZ1kEEMB2kxW0x70C9qfgOlnE1gtCN3E3-fwxNaWEM3AKTZbMKrw~~) |

 |

 |

 |

 |
|

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|

|  |  |  |  |
| --- | --- | --- | --- |
|

|  |  |  |
| --- | --- | --- |
|

|  |  |
| --- | --- |
|

|  |
| --- |
|    |

 |

 |

 |

 |

 |
|

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|

|  |  |
| --- | --- |
|

|  |
| --- |
| Research Paper |

 |

 |

|  |  |
| --- | --- |
|

|  |
| --- |
| Open Access |

 |

 |

 |

 |

 |
|

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|

|  |  |  |  |
| --- | --- | --- | --- |
|

|  |  |  |
| --- | --- | --- |
|

|  |
| --- |
| [Applicable and generalizable machine learning for intelligent welding in automotive manufacturing](https://links.springernature.com/f/a/ADVIfi8hHODc3cMlHR2blg~~/AABE5hA~/pERuRbeKgyTRgK_ogkMfcvtfExJzJZCizAgxsZW2f_YEAQv8ysztng3OBSpurVDGZAy03XdylKxTLDecmL6NXsqMXpBIPSi1bEbNiOY_9Ehu9XEUtFWGTKmK8GDdGmSTVbVogcQhQDhmp30yLBgOO2O76aWYDtz7ry3dq5H4XfVxw9IBDgy4iOJjbiLXfSu8BCBbCq0WrTCzrjIWMWiXEtSaV9LMqn6S6KMzG-H96GL4Yb4MWZ5Sq-Jn1yDSmo0YpjMGQfkojjblIXpaYSktQzh1x5F2wKwtbGzjSteo-E7jb5hy2fa4vMwYuVGgLZvsEWdJgOsZp0MuAykjQXpkyQ~~) |
| Peng Edward Wang, Hassan Ghassemi-Armaki, Masoud Pour, Xijia Zhao, Junjie Ma, Kianoosh Sattari, Blair Carlson |

 |

 |

 |

 |

 |
|

|  |  |  |  |
| --- | --- | --- | --- |
|

|  |  |  |
| --- | --- | --- |
|

|  |  |
| --- | --- |
|

|  |
| --- |
| [**» Abstract**](https://links.springernature.com/f/a/ADVIfi8hHODc3cMlHR2blg~~/AABE5hA~/pERuRbeKgyTRgK_ogkMfcvtfExJzJZCizAgxsZW2f_YEAQv8ysztng3OBSpurVDGZAy03XdylKxTLDecmL6NXsqMXpBIPSi1bEbNiOY_9Ehu9XEUtFWGTKmK8GDdGmSTVbVogcQhQDhmp30yLBgOO2O76aWYDtz7ry3dq5H4XfVxw9IBDgy4iOJjbiLXfSu8BCBbCq0WrTCzrjIWMWiXEtSaV9LMqn6S6KMzG-H96GL4Yb4MWZ5Sq-Jn1yDSmo0YpjMGQfkojjblIXpaYSktQzh1x5F2wKwtbGzjSteo-E7jb5hy2fa4vMwYuVGgLZvsEWdJgOsZp0MuAykjQXpkyQ~~)    [**» Full text HTML**](https://links.springernature.com/f/a/ADVIfi8hHODc3cMlHR2blg~~/AABE5hA~/pERuRbeKgyTRgK_ogkMfcvtfExJzJZCizAgxsZW2f_YEAQv8ysztng3OBSpurVDGZAy03XdylKxTLDecmL6NXsqMXpBIPSi1bEbNiOY_9Ehu9XEUtFWGTKmK8GDdGmSTVbVogcQhQDhmp30yLBgOO2O76aWYDtz7ry3dq5H4XfVxw9IBDgy4iOJjbiLXfSu8BCBbCq0WrTCzrjIWMWiXEtSaV9LMqn6S6KMzG-H96GL4Yb4MWZ5Sq-Jn1yDSmo0YpjMGQfkojjblIXpaYSktQzh1x5F2wKwtbGzjSteo-E7jb5hy2fa4vMwYuVGgLZvsEWdJgOsZp0MuAykjQXpkyQ~~) [**» Full text PDF**](https://links.springernature.com/f/a/3i2RtmAfKVqaiRTa0tmQtg~~/AABE5hA~/0n3N-sgr2fK-AMEbEHpsKgmnPGS512Houu0PLbYfyGzpf48aQ0Qn4LyYoWvHra7KTqQhI2fBnCPghyMNORUMjFMLJhWOM1W7WRijUsAaoJ22qR1KadKnY348leDZDsdpo6UTtvdPGVfe0bmqEBCkilLtMnRFxma6e9Uv3M7JuIAaxHdGRtdmAO28mZnxwmBfZAVGKT8HcU0D-HY0LGSbaZ3x1dtxCc9SSyt62GWTn7D0WorwC14bn4B68CyCBQJWUWkQupEXficNR6HvorToBQhbikAqIFQo914yEc4e1MmEg-0NHvstuqz2Hk0INFp9bNQiGioedkIkFezstnOYfQ~~) |

 |

 |

 |

 |
|

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|

|  |  |  |  |
| --- | --- | --- | --- |
|

|  |  |  |
| --- | --- | --- |
|

|  |  |
| --- | --- |
|

|  |
| --- |
|    |

 |

 |

 |

 |

 |
|

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|

|  |  |
| --- | --- |
|

|  |
| --- |
| Research Paper |

 |

 |

|  |  |
| --- | --- |
|

|  |
| --- |
|  |

 |

 |

 |

 |

 |
|

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|

|  |  |  |  |
| --- | --- | --- | --- |
|

|  |  |  |
| --- | --- | --- |
|

|  |
| --- |
| [Laser scanning–based robot welding path planning for complex saddle–shaped weld seams](https://links.springernature.com/f/a/VltcgiJZhf9_6dSSfa_frw~~/AABE5hA~/pERuRbeKgyTRgK_ogkMfcvtfExJzJZCizAgxsZW2f_YEAQv8ysztng3OBSpurVDGKsjONIrDjRFs9tvl3X-UzfQfFz41lm81IfIw4ektpfNYerxHKoItPnIVGl9L63c_SdaiZcpduQY0igEiGMmLlzDt8B6ZUGhbycZKS0m0miXPxQJwsCrYlUxNOTTMAENWrtBZuFZD2mbXG-1T38wCeLZkjHE4qvlPV8Fpt3Xz7yoSDQweIZY6Lhi7mg-MvqbkQjBzk0Q5cMl9Pf1WUlS_VteW4ukw1n6N5VENv3SZ4MArqfEYbUhVaGyKv-z4716WNKQM8CD0y-pN2pki5zVgPA~~) |
| Kai Liu, Zhongxi Sheng, Xiao Yang, Runquan Xiao, Huabin Chen |

 |

 |

 |

 |

 |
|

|  |  |  |  |
| --- | --- | --- | --- |
|

|  |  |  |
| --- | --- | --- |
|

|  |  |
| --- | --- |
|

|  |
| --- |
| [**» Abstract**](https://links.springernature.com/f/a/VltcgiJZhf9_6dSSfa_frw~~/AABE5hA~/pERuRbeKgyTRgK_ogkMfcvtfExJzJZCizAgxsZW2f_YEAQv8ysztng3OBSpurVDGKsjONIrDjRFs9tvl3X-UzfQfFz41lm81IfIw4ektpfNYerxHKoItPnIVGl9L63c_SdaiZcpduQY0igEiGMmLlzDt8B6ZUGhbycZKS0m0miXPxQJwsCrYlUxNOTTMAENWrtBZuFZD2mbXG-1T38wCeLZkjHE4qvlPV8Fpt3Xz7yoSDQweIZY6Lhi7mg-MvqbkQjBzk0Q5cMl9Pf1WUlS_VteW4ukw1n6N5VENv3SZ4MArqfEYbUhVaGyKv-z4716WNKQM8CD0y-pN2pki5zVgPA~~)    [**» Full text HTML**](https://links.springernature.com/f/a/VltcgiJZhf9_6dSSfa_frw~~/AABE5hA~/pERuRbeKgyTRgK_ogkMfcvtfExJzJZCizAgxsZW2f_YEAQv8ysztng3OBSpurVDGKsjONIrDjRFs9tvl3X-UzfQfFz41lm81IfIw4ektpfNYerxHKoItPnIVGl9L63c_SdaiZcpduQY0igEiGMmLlzDt8B6ZUGhbycZKS0m0miXPxQJwsCrYlUxNOTTMAENWrtBZuFZD2mbXG-1T38wCeLZkjHE4qvlPV8Fpt3Xz7yoSDQweIZY6Lhi7mg-MvqbkQjBzk0Q5cMl9Pf1WUlS_VteW4ukw1n6N5VENv3SZ4MArqfEYbUhVaGyKv-z4716WNKQM8CD0y-pN2pki5zVgPA~~) [**» Full text PDF**](https://links.springernature.com/f/a/AEg6qzERB3IPVGvzjSLY-w~~/AABE5hA~/0n3N-sgr2fK-AMEbEHpsKgmnPGS512Houu0PLbYfyGzpf48aQ0Qn4LyYoWvHra7KTqQhI2fBnCPghyMNORUMjDyqbt4i2zf6iFbt3P_D4EU43Q93To4ekqyPh342DubWl70nXmqNIpIeCy4z6eJcI9AHMVaY0X53PkNHuuCyjb0nXO3ILzzLYtQIDzoreaueMKH3LLRE71YNJU3YLl_AUq8hMgiZAGyvyWhx7EvK0EJlLxbmeyZ_WOn4u9voixxerJrSumeillSh5se965LQKqYDEK9kgKyIZrGZzbTzegTyRYCLKJC3EdEPQoZlXO01IPDd0b2m40Lhcm-xM3CC9w~~) |

 |

 |

 |

 |
|

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|

|  |  |  |  |
| --- | --- | --- | --- |
|

|  |  |  |
| --- | --- | --- |
|

|  |  |
| --- | --- |
|

|  |
| --- |
|    |

 |

 |

 |

 |

 |
|

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|

|  |  |
| --- | --- |
|

|  |
| --- |
| Research Paper |

 |

 |

|  |  |
| --- | --- |
|

|  |
| --- |
|  |

 |

 |

 |

 |

 |
|

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|

|  |  |  |  |
| --- | --- | --- | --- |
|

|  |  |  |
| --- | --- | --- |
|

|  |
| --- |
| [Weld penetration state identification based on time series multi-source data fusion](https://links.springernature.com/f/a/cHTF2fQvb8XvZ8wEndzSUg~~/AABE5hA~/pERuRbeKgyTRgK_ogkMfcvtfExJzJZCizAgxsZW2f_YEAQv8ysztng3OBSpurVDGKsjONIrDjRFs9tvl3X-UzakPopwtd78ydZuXaR4UEBShX1lH-DPtCN71wnZZRoewz8UUOPg3Am2DwRJVn_goGhXa4kGAHo2fH7aCs6pLHR8ksCzQ8F6UBczOQA3AK1nDLK6uV0qbgFjvskRp9DrwFA_plZlwJVqmyXFPHqAlgb7rqELKamAEmiU696LOm4nZhZfeJIlhIEcg_xu0ZEk5h6rcnpjHRnCSqoG69doAoRN8ejeGvxRTNHpI91h9-tadiXLW6srkA9SnCe7ur8YdrQ~~) |
| Fei Wang, Yourong Chen, Qiyue Wang, Liyuan Liu, Muhammad Alam, Xudong Zhang, Wenhua Jiao |

 |

 |

 |

 |

 |
|

|  |  |  |  |
| --- | --- | --- | --- |
|

|  |  |  |
| --- | --- | --- |
|

|  |  |
| --- | --- |
|

|  |
| --- |
| [**» Abstract**](https://links.springernature.com/f/a/cHTF2fQvb8XvZ8wEndzSUg~~/AABE5hA~/pERuRbeKgyTRgK_ogkMfcvtfExJzJZCizAgxsZW2f_YEAQv8ysztng3OBSpurVDGKsjONIrDjRFs9tvl3X-UzakPopwtd78ydZuXaR4UEBShX1lH-DPtCN71wnZZRoewz8UUOPg3Am2DwRJVn_goGhXa4kGAHo2fH7aCs6pLHR8ksCzQ8F6UBczOQA3AK1nDLK6uV0qbgFjvskRp9DrwFA_plZlwJVqmyXFPHqAlgb7rqELKamAEmiU696LOm4nZhZfeJIlhIEcg_xu0ZEk5h6rcnpjHRnCSqoG69doAoRN8ejeGvxRTNHpI91h9-tadiXLW6srkA9SnCe7ur8YdrQ~~)    [**» Full text HTML**](https://links.springernature.com/f/a/cHTF2fQvb8XvZ8wEndzSUg~~/AABE5hA~/pERuRbeKgyTRgK_ogkMfcvtfExJzJZCizAgxsZW2f_YEAQv8ysztng3OBSpurVDGKsjONIrDjRFs9tvl3X-UzakPopwtd78ydZuXaR4UEBShX1lH-DPtCN71wnZZRoewz8UUOPg3Am2DwRJVn_goGhXa4kGAHo2fH7aCs6pLHR8ksCzQ8F6UBczOQA3AK1nDLK6uV0qbgFjvskRp9DrwFA_plZlwJVqmyXFPHqAlgb7rqELKamAEmiU696LOm4nZhZfeJIlhIEcg_xu0ZEk5h6rcnpjHRnCSqoG69doAoRN8ejeGvxRTNHpI91h9-tadiXLW6srkA9SnCe7ur8YdrQ~~) [**» Full text PDF**](https://links.springernature.com/f/a/gL2dppkCCXW7AwskNeYnEA~~/AABE5hA~/0n3N-sgr2fK-AMEbEHpsKgmnPGS512Houu0PLbYfyGzpf48aQ0Qn4LyYoWvHra7KTqQhI2fBnCPghyMNORUMjCm08JpfR_DdwgedKo4icjaK_n9jrfgKhhkwRiRqMd3EcGHlQj-m5xx0kPvY6X_bUGKjibO3yr01G_QUsk0JDwFurL6Po_gL8llFI3Gld3Ec3Xn7Sh42LuTx-myQUSyjtSlIdGA-1QD0ABkaaGs3FLg3Gj47KYvaM-5m8Xo0Xdbzr4olsA4xCX7e-bReq77CsDcqGfiD6C5I3cNHuT2JmT3qkVVPvRDlEjhDScQr0i-MK9im4wYpojjvrD03dddgeg~~) |

 |

 |

 |

 |
|

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|

|  |  |  |  |
| --- | --- | --- | --- |
|

|  |  |  |
| --- | --- | --- |
|

|  |  |
| --- | --- |
|

|  |
| --- |
|    |

 |

 |

 |

 |

 |
|

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|

|  |  |
| --- | --- |
|

|  |
| --- |
| Research Paper |

 |

 |

|  |  |
| --- | --- |
|

|  |
| --- |
| Open Access |

 |

 |

 |

 |

 |
|

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|

|  |  |  |  |
| --- | --- | --- | --- |
|

|  |  |  |
| --- | --- | --- |
|

|  |
| --- |
| [AI-driven autonomous adaptative feedback welding machine](https://links.springernature.com/f/a/HQaLNcE2-ePquNuH1LigmA~~/AABE5hA~/pERuRbeKgyTRgK_ogkMfcvtfExJzJZCizAgxsZW2f_YEAQv8ysztng3OBSpurVDGKsjONIrDjRFs9tvl3X-Uzbsdx0eMPo4qDQtmNlYmXau2CgWK9NnXYLxCQnC9Li7zevVFkNV7HU8vJs4ulHQpHs37YGrrapsP8yn5vhWfBlr2_MOLCkEeIDFaVCQUSdfekLwf5JWwKHhFJDmXVPtat6h4bZY0vxAahuN0vM3t4T3oqno_zUB24UeC1f-rkQLeIOC3SlolzFyEXI1aNWxaOrinbLYUYWbDsHRMvudPlL49yTK_ZefAflFlVYJFKeypht_XPYUfxbjLuY0uL2iA3A~~) |
| Benedikt von Querfurth, Shems-Eddine Belhout, Christian Knaak, Stefan Mann, Peter Abels, Carlo Holly, Jonathan Tatman, Darren Barborak, Mitch Hargadine |

 |

 |

 |

 |

 |
|

|  |  |  |  |
| --- | --- | --- | --- |
|

|  |  |  |
| --- | --- | --- |
|

|  |  |
| --- | --- |
|

|  |
| --- |
| [**» Abstract**](https://links.springernature.com/f/a/HQaLNcE2-ePquNuH1LigmA~~/AABE5hA~/pERuRbeKgyTRgK_ogkMfcvtfExJzJZCizAgxsZW2f_YEAQv8ysztng3OBSpurVDGKsjONIrDjRFs9tvl3X-Uzbsdx0eMPo4qDQtmNlYmXau2CgWK9NnXYLxCQnC9Li7zevVFkNV7HU8vJs4ulHQpHs37YGrrapsP8yn5vhWfBlr2_MOLCkEeIDFaVCQUSdfekLwf5JWwKHhFJDmXVPtat6h4bZY0vxAahuN0vM3t4T3oqno_zUB24UeC1f-rkQLeIOC3SlolzFyEXI1aNWxaOrinbLYUYWbDsHRMvudPlL49yTK_ZefAflFlVYJFKeypht_XPYUfxbjLuY0uL2iA3A~~)    [**» Full text HTML**](https://links.springernature.com/f/a/HQaLNcE2-ePquNuH1LigmA~~/AABE5hA~/pERuRbeKgyTRgK_ogkMfcvtfExJzJZCizAgxsZW2f_YEAQv8ysztng3OBSpurVDGKsjONIrDjRFs9tvl3X-Uzbsdx0eMPo4qDQtmNlYmXau2CgWK9NnXYLxCQnC9Li7zevVFkNV7HU8vJs4ulHQpHs37YGrrapsP8yn5vhWfBlr2_MOLCkEeIDFaVCQUSdfekLwf5JWwKHhFJDmXVPtat6h4bZY0vxAahuN0vM3t4T3oqno_zUB24UeC1f-rkQLeIOC3SlolzFyEXI1aNWxaOrinbLYUYWbDsHRMvudPlL49yTK_ZefAflFlVYJFKeypht_XPYUfxbjLuY0uL2iA3A~~) [**» Full text PDF**](https://links.springernature.com/f/a/hpwcgZZHf5oCPtUeIPsCxg~~/AABE5hA~/0n3N-sgr2fK-AMEbEHpsKgmnPGS512Houu0PLbYfyGzpf48aQ0Qn4LyYoWvHra7KTqQhI2fBnCPghyMNORUMjPS_ZCJcf4H3SVeMJOjCd8BZiKsnKRSBgsqJ-iIWN4x2U_HTAdYGp3t7o6aefMWKSdA7m23hssT8MlsqtOZHW6fESYRFMoxbDRkFmk0kPRC48r_lwsJdJTnB6cvfNIL3FNRcf6ntFSgHeLUHbgWIApXlVg2FscwFsRsKBF8cOIUv2KxJHOsuzjUaqssPLor-mYMLwzQrUmhwmRjRD37vFEK6caVp5gkhH5a4CAlqtThkq5TuniO4ASRHAIFAzypPQQ~~) |

 |

 |

 |

 |
|

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|

|  |  |  |  |
| --- | --- | --- | --- |
|

|  |  |  |
| --- | --- | --- |
|

|  |  |
| --- | --- |
|

|  |
| --- |
|    |

 |

 |

 |

 |

 |
|

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|

|  |  |
| --- | --- |
|

|  |
| --- |
| Research Paper |

 |

 |

|  |  |
| --- | --- |
|

|  |
| --- |
|  |

 |

 |

 |

 |

 |
|

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|

|  |  |  |  |
| --- | --- | --- | --- |
|

|  |  |  |
| --- | --- | --- |
|

|  |
| --- |
| [Monitoring of DE-GMAW process in human–robot collaboration](https://links.springernature.com/f/a/PGW2xs6Jw2fd1eqbGvn5xA~~/AABE5hA~/pERuRbeKgyTRgK_ogkMfcvtfExJzJZCizAgxsZW2f_YEAQv8ysztng3OBSpurVDGZAy03XdylKxTLDecmL6NXpE09ZChnihovYcIKBIdkiT-iH6LFo8lo_92tGe7Owvcpf-NAx-qIVl6D1egClqgRTgZPiR6lm9xi3Bg5_Csr07S3hR4OJ4itVQMVbDhu5-EDqUmeurdKTFbFfT5VEQH8sUVY3g6NJ-iLbndIOJ9hxvxQk3tixpkJ-3CgqCykNtLKCtO1h7gN26diN_XRO-M7dzDCDtfwe8bNe5SxM_xD0_TBix_CMBD2h756FqYq1Y7C-RqtIZ8-DOpG-00JseV5A~~) |
| Yue Cao, Heping Chen, YuMing Zhang |

 |

 |

 |

 |

 |
|

|  |  |  |  |
| --- | --- | --- | --- |
|

|  |  |  |
| --- | --- | --- |
|

|  |  |
| --- | --- |
|

|  |
| --- |
| [**» Abstract**](https://links.springernature.com/f/a/PGW2xs6Jw2fd1eqbGvn5xA~~/AABE5hA~/pERuRbeKgyTRgK_ogkMfcvtfExJzJZCizAgxsZW2f_YEAQv8ysztng3OBSpurVDGZAy03XdylKxTLDecmL6NXpE09ZChnihovYcIKBIdkiT-iH6LFo8lo_92tGe7Owvcpf-NAx-qIVl6D1egClqgRTgZPiR6lm9xi3Bg5_Csr07S3hR4OJ4itVQMVbDhu5-EDqUmeurdKTFbFfT5VEQH8sUVY3g6NJ-iLbndIOJ9hxvxQk3tixpkJ-3CgqCykNtLKCtO1h7gN26diN_XRO-M7dzDCDtfwe8bNe5SxM_xD0_TBix_CMBD2h756FqYq1Y7C-RqtIZ8-DOpG-00JseV5A~~)    [**» Full text HTML**](https://links.springernature.com/f/a/PGW2xs6Jw2fd1eqbGvn5xA~~/AABE5hA~/pERuRbeKgyTRgK_ogkMfcvtfExJzJZCizAgxsZW2f_YEAQv8ysztng3OBSpurVDGZAy03XdylKxTLDecmL6NXpE09ZChnihovYcIKBIdkiT-iH6LFo8lo_92tGe7Owvcpf-NAx-qIVl6D1egClqgRTgZPiR6lm9xi3Bg5_Csr07S3hR4OJ4itVQMVbDhu5-EDqUmeurdKTFbFfT5VEQH8sUVY3g6NJ-iLbndIOJ9hxvxQk3tixpkJ-3CgqCykNtLKCtO1h7gN26diN_XRO-M7dzDCDtfwe8bNe5SxM_xD0_TBix_CMBD2h756FqYq1Y7C-RqtIZ8-DOpG-00JseV5A~~) [**» Full text PDF**](https://links.springernature.com/f/a/BfBVVn2T2XfrOPi7C6U9kQ~~/AABE5hA~/0n3N-sgr2fK-AMEbEHpsKgmnPGS512Houu0PLbYfyGzpf48aQ0Qn4LyYoWvHra7KTqQhI2fBnCPghyMNORUMjFFcrjqtG_KzWGP84OKDeghhH3xLOKBaZ2VSSiBQ_DdSIsPcGRqqU91CaXRVupDmX69RNLccNldmtjbcVRpRHy7lZDXT_MIUSv60Eflce6ehaDzOtLlnmWVrA3roqj9e8RQPhX8CAMLCW_41QRzrdxGELAK0zzrOIkdU_r4IEfKr1NzIPljYzY3ycSVkXOIvoDgsrGkjhP8-vWoMbGBAHTvZUnpuWEID1bH9dicOQHjImE3lm2EXNUCiaEOVE2qaOg~~) |

 |

 |

 |

 |
|

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|

|  |  |  |  |
| --- | --- | --- | --- |
|

|  |  |  |
| --- | --- | --- |
|

|  |  |
| --- | --- |
|

|  |
| --- |
|    |

 |

 |

 |

 |

 |
|

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|

|  |  |
| --- | --- |
|

|  |
| --- |
| Research Paper |

 |

 |

|  |  |
| --- | --- |
|

|  |
| --- |
|  |

 |

 |

 |

 |

 |
|

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|

|  |  |  |  |
| --- | --- | --- | --- |
|

|  |  |  |
| --- | --- | --- |
|

|  |
| --- |
| [Intelligent monitoring and fuzzy control of MIG welding seam tracking based on passive visual sensing](https://links.springernature.com/f/a/zEeCmr_T4PjHrNr22Iz6bQ~~/AABE5hA~/pERuRbeKgyTRgK_ogkMfcvtfExJzJZCizAgxsZW2f_YEAQv8ysztng3OBSpurVDGZAy03XdylKxTLDecmL6NXuCKW20nXgMMEpBD5qwMFz53-7V05Rs834gM0WxPQYbqvwbiYUoIv0vQCmwWOJW1hxrQh8TmqegCTymiEHxtWk-0RZVDE9lt8QdJSuh7owm5aSLf0o3xlO8w9PQf22pItzA4223h70ZNOa1b-LyWnRq5T1sXYghljbPHuGNssFPF6jnvwkz5LxMxFEIIVD7R1ugCWoocN0FrX83_OaXgdgL2xaIV5CVcVBDPSCB4Vm6QJ9duP02zYbq-tF0Lk4BPjg~~) |
| Ming Zhu, Qingsong Ma, Runji Lei, Jun Weng, Yu Shi |

 |

 |

 |

 |

 |
|

|  |  |  |  |
| --- | --- | --- | --- |
|

|  |  |  |
| --- | --- | --- |
|

|  |  |
| --- | --- |
|

|  |
| --- |
| [**» Abstract**](https://links.springernature.com/f/a/zEeCmr_T4PjHrNr22Iz6bQ~~/AABE5hA~/pERuRbeKgyTRgK_ogkMfcvtfExJzJZCizAgxsZW2f_YEAQv8ysztng3OBSpurVDGZAy03XdylKxTLDecmL6NXuCKW20nXgMMEpBD5qwMFz53-7V05Rs834gM0WxPQYbqvwbiYUoIv0vQCmwWOJW1hxrQh8TmqegCTymiEHxtWk-0RZVDE9lt8QdJSuh7owm5aSLf0o3xlO8w9PQf22pItzA4223h70ZNOa1b-LyWnRq5T1sXYghljbPHuGNssFPF6jnvwkz5LxMxFEIIVD7R1ugCWoocN0FrX83_OaXgdgL2xaIV5CVcVBDPSCB4Vm6QJ9duP02zYbq-tF0Lk4BPjg~~)    [**» Full text HTML**](https://links.springernature.com/f/a/zEeCmr_T4PjHrNr22Iz6bQ~~/AABE5hA~/pERuRbeKgyTRgK_ogkMfcvtfExJzJZCizAgxsZW2f_YEAQv8ysztng3OBSpurVDGZAy03XdylKxTLDecmL6NXuCKW20nXgMMEpBD5qwMFz53-7V05Rs834gM0WxPQYbqvwbiYUoIv0vQCmwWOJW1hxrQh8TmqegCTymiEHxtWk-0RZVDE9lt8QdJSuh7owm5aSLf0o3xlO8w9PQf22pItzA4223h70ZNOa1b-LyWnRq5T1sXYghljbPHuGNssFPF6jnvwkz5LxMxFEIIVD7R1ugCWoocN0FrX83_OaXgdgL2xaIV5CVcVBDPSCB4Vm6QJ9duP02zYbq-tF0Lk4BPjg~~) [**» Full text PDF**](https://links.springernature.com/f/a/FVVuKERFTCd4igCrR3N48A~~/AABE5hA~/0n3N-sgr2fK-AMEbEHpsKgmnPGS512Houu0PLbYfyGzpf48aQ0Qn4LyYoWvHra7KTqQhI2fBnCPghyMNORUMjHpyqEWIckrBAo-tdiGF7r-9GYbrCVbnXgBFGnJDB0ijPFN7EMD9eEhfpGkLtcHJHJ65OMV1CZ78dZ2acW-t_DnJm39OtYEu_BkrlBMWfyKS7B03_56Ioh0gZmQW1v8RAGVxu9d7dhZuuBx2PFC1RSQNpxE3vNlKtCKECBof60zgrikIlC1BIwzr5KwICdj9NcSNj3wJ4yd_bnSpdGzDGsV157K96SLv4FZGlvhIfhfrbc7SFWSuOrvAUK5ZDhe-eA~~) |

 |

 |

 |

 |
|

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|

|  |  |  |  |
| --- | --- | --- | --- |
|

|  |  |  |
| --- | --- | --- |
|

|  |  |
| --- | --- |
|

|  |
| --- |
|    |

 |

 |

 |

 |

 |
|

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|

|  |  |
| --- | --- |
|

|  |
| --- |
| Research Paper |

 |

 |

|  |  |
| --- | --- |
|

|  |
| --- |
|  |

 |

 |

 |

 |

 |
|

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|

|  |  |  |  |
| --- | --- | --- | --- |
|

|  |  |  |
| --- | --- | --- |
|

|  |
| --- |
| [Virtual reality based programming of human-like torch operation for robotic welding](https://links.springernature.com/f/a/AloMPe87UnV-CKcOI0UwKg~~/AABE5hA~/pERuRbeKgyTRgK_ogkMfcvtfExJzJZCizAgxsZW2f_YEAQv8ysztng3OBSpurVDGZAy03XdylKxTLDecmL6NXoSNpR1lZ4zZuU7Fj6ehnUSR2C1ggUrsw3nItB7TNpVpqBJbPRFCwix11-WBgR0A1VpoM0Y6hnoyghJV5Xdoma5k_5Eutc9fp40ctwOOTWjK4EK6foH23zjROdT4cImHTtXI06p16rfXS_eYgVcr5gtmjCtKBn8tfZlZnmXW9em6E6YIjN-RoWdb_WCQfQQq8g1tA6gcohP3BNbruq3AyxXQMhtJUrDkJWf-GgglszD2Kt0l4ms5EgAsEKOeokam_g~~) |
| Yijie Hu, Jun Xiao, Shujun Chen, Shengnan Gai |

 |

 |

 |

 |

 |
|

|  |  |  |  |
| --- | --- | --- | --- |
|

|  |  |  |
| --- | --- | --- |
|

|  |  |
| --- | --- |
|

|  |
| --- |
| [**» Abstract**](https://links.springernature.com/f/a/AloMPe87UnV-CKcOI0UwKg~~/AABE5hA~/pERuRbeKgyTRgK_ogkMfcvtfExJzJZCizAgxsZW2f_YEAQv8ysztng3OBSpurVDGZAy03XdylKxTLDecmL6NXoSNpR1lZ4zZuU7Fj6ehnUSR2C1ggUrsw3nItB7TNpVpqBJbPRFCwix11-WBgR0A1VpoM0Y6hnoyghJV5Xdoma5k_5Eutc9fp40ctwOOTWjK4EK6foH23zjROdT4cImHTtXI06p16rfXS_eYgVcr5gtmjCtKBn8tfZlZnmXW9em6E6YIjN-RoWdb_WCQfQQq8g1tA6gcohP3BNbruq3AyxXQMhtJUrDkJWf-GgglszD2Kt0l4ms5EgAsEKOeokam_g~~)    [**» Full text HTML**](https://links.springernature.com/f/a/AloMPe87UnV-CKcOI0UwKg~~/AABE5hA~/pERuRbeKgyTRgK_ogkMfcvtfExJzJZCizAgxsZW2f_YEAQv8ysztng3OBSpurVDGZAy03XdylKxTLDecmL6NXoSNpR1lZ4zZuU7Fj6ehnUSR2C1ggUrsw3nItB7TNpVpqBJbPRFCwix11-WBgR0A1VpoM0Y6hnoyghJV5Xdoma5k_5Eutc9fp40ctwOOTWjK4EK6foH23zjROdT4cImHTtXI06p16rfXS_eYgVcr5gtmjCtKBn8tfZlZnmXW9em6E6YIjN-RoWdb_WCQfQQq8g1tA6gcohP3BNbruq3AyxXQMhtJUrDkJWf-GgglszD2Kt0l4ms5EgAsEKOeokam_g~~) [**» Full text PDF**](https://links.springernature.com/f/a/8sQg8uTxkH5Gb4SyKg8img~~/AABE5hA~/0n3N-sgr2fK-AMEbEHpsKgmnPGS512Houu0PLbYfyGzpf48aQ0Qn4LyYoWvHra7KTqQhI2fBnCPghyMNORUMjOHXTOCkrmqjapv6M9RSq-GXdTKWgAahqjcHIhBmkehtNPxQsPrLYL-MrPnw8h41kcTcVZOsU0abTgZ0VRDnVu6d4slgrJ57TTgSiqhhtKAP-wjpHgV9nJmDPkKVqbTRNGsktKUToO_xTyco6EimMXh-Sz7UbBKN0B1a__U_6R0oi4ZbLR0FqZGWSgh5geLt_Jhr36UDHxb-A9n99qJ5S-Z7sok5LPyfhvU7PKBJNj5kizLlSJtbqnB0kWhoOVUA6Q~~) |

 |

 |

 |

 |
|

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|

|  |  |  |  |
| --- | --- | --- | --- |
|

|  |  |  |
| --- | --- | --- |
|

|  |  |
| --- | --- |
|

|  |
| --- |
|    |

 |

 |

 |

 |

 |
|

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|

|  |  |
| --- | --- |
|

|  |
| --- |
| Research Paper |

 |

 |

|  |  |
| --- | --- |
|

|  |
| --- |
|  |

 |

 |

 |

 |

 |
|

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|

|  |  |  |  |
| --- | --- | --- | --- |
|

|  |  |  |
| --- | --- | --- |
|

|  |
| --- |
| [Control of DE-GMAW through human–robot collaboration](https://links.springernature.com/f/a/R5Jxr8yYajeYQwbbFX_9rw~~/AABE5hA~/pERuRbeKgyTRgK_ogkMfcvtfExJzJZCizAgxsZW2f_YEAQv8ysztng3OBSpurVDGZAy03XdylKxTLDecmL6NXrfikLvjwE7wrasqnaF4DndFNBiH7gUkaBrqnLCtpLSD_z5Ph2dLocSj3iH8hLtuOE_wH2kv73Yy_SO16WrwV993AZR7mKjCJwhAexwE0DPX6CbUtwRf6w3W9IJdWh38vAmXrMd3smNl7cqDH9Mr8ZgiBNAVomOfArP8rRbsqfLFff2zZBw0IO5IPom_hS_6hhjy56VYTd-8jVXDD5Zp-gnwMFifbLx2tWUuxV9UKa8yn4bRsShbGkM275JQVw67tQ~~) |
| Yue Cao, YuMing Zhang |

 |

 |

 |

 |

 |
|

|  |  |  |  |
| --- | --- | --- | --- |
|

|  |  |  |
| --- | --- | --- |
|

|  |  |
| --- | --- |
|

|  |
| --- |
| [**» Abstract**](https://links.springernature.com/f/a/R5Jxr8yYajeYQwbbFX_9rw~~/AABE5hA~/pERuRbeKgyTRgK_ogkMfcvtfExJzJZCizAgxsZW2f_YEAQv8ysztng3OBSpurVDGZAy03XdylKxTLDecmL6NXrfikLvjwE7wrasqnaF4DndFNBiH7gUkaBrqnLCtpLSD_z5Ph2dLocSj3iH8hLtuOE_wH2kv73Yy_SO16WrwV993AZR7mKjCJwhAexwE0DPX6CbUtwRf6w3W9IJdWh38vAmXrMd3smNl7cqDH9Mr8ZgiBNAVomOfArP8rRbsqfLFff2zZBw0IO5IPom_hS_6hhjy56VYTd-8jVXDD5Zp-gnwMFifbLx2tWUuxV9UKa8yn4bRsShbGkM275JQVw67tQ~~)    [**» Full text HTML**](https://links.springernature.com/f/a/R5Jxr8yYajeYQwbbFX_9rw~~/AABE5hA~/pERuRbeKgyTRgK_ogkMfcvtfExJzJZCizAgxsZW2f_YEAQv8ysztng3OBSpurVDGZAy03XdylKxTLDecmL6NXrfikLvjwE7wrasqnaF4DndFNBiH7gUkaBrqnLCtpLSD_z5Ph2dLocSj3iH8hLtuOE_wH2kv73Yy_SO16WrwV993AZR7mKjCJwhAexwE0DPX6CbUtwRf6w3W9IJdWh38vAmXrMd3smNl7cqDH9Mr8ZgiBNAVomOfArP8rRbsqfLFff2zZBw0IO5IPom_hS_6hhjy56VYTd-8jVXDD5Zp-gnwMFifbLx2tWUuxV9UKa8yn4bRsShbGkM275JQVw67tQ~~) [**» Full text PDF**](https://links.springernature.com/f/a/xDvCbz3uLa1GsOdXOzyKfg~~/AABE5hA~/0n3N-sgr2fK-AMEbEHpsKgmnPGS512Houu0PLbYfyGzpf48aQ0Qn4LyYoWvHra7KTqQhI2fBnCPghyMNORUMjJLUWO83yTf14Nywvnmxe5h40pLFDD6ZDXwn2QU2y_YuFpCT5_k0EvfLe_BzYGdaKyo7TH9QkbZ50j4GmcW1fsb0ztVfvx-XtzFMIabRuETNiNXViE9hv2xSUWWzG3cVWSFofi51lkHrFKaW5VHOkpZ2ubZV5RVYtMga6lxyUHA2asAvbM8CbtuMDzlHZKvApuPlXhzkHYvaAOBdgPm85wqy1MCl5bZNeSohESfLisC5HyiX30A3yTs3MggZF3x58A~~) |

 |

 |

 |

 |
|

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|

|  |  |  |  |
| --- | --- | --- | --- |
|

|  |  |  |
| --- | --- | --- |
|

|  |  |
| --- | --- |
|

|  |
| --- |
|    |

 |

 |

 |

 |

 |